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## IMPROVING TEACHING EFFECTIVENESS IN VIETNAM HIGHER EDUCATION BY MEANS OF APPLYING E-LESSON

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### 1. Why do we need the E-lesson?

The strong economic, social, scientific and technological changes and development seen by mankind when entering the 3<sup>rd</sup> millennium have pushed forward a series of new challenges for higher education system over the world. The new development orientation of higher education can be seen in the following tendency:

- Globalization, integration and open policies impact to the higher education system in the whole and create new “Open Higher Education Space”;
- The strong growth in the number of students and university teachers as compared to the number of universities, colleges....
- Diversification of higher education forms and methods; distant education has entered its third generation, creating a lot of challenges for the traditional teaching-learning theory;
- Information and communication technology has become the essential infrastructure of higher education;
- The phenomena “Multinational professors”, “World students”, “Ageless students”, the academic mobility, international exchanges of excellence, defence of quality in higher education qualification, continuous learning and life-long learning etc.
- Power separation, scientific prestige, the competition between universities and big business groups, corporations: universities as “knowledge enterprises” and enterprises specialized in training highly qualified HR.
- The strong impact of American higher education system and English in the global education system.



So far we have yet to have any official definition on e-lesson. This concept may appear in different names such as “digital lesson”, “Internet lesson”, “on-line lesson” or “connective lesson” etc. However, such definitions on e-lesson are limited only to the way it is presented rather than on its nature. E-lesson can be understood in 2 ways:

- It can be considered as an electronic and *digital product* (for instance, electronic curriculum, electronic teaching material or electronic learning data...), which are designed and organized to meet specific pedagogical targets. These digital products may be in the form of printed hardcopy, sound, images, graphics, signs, simulated experiments... This kind of product can be used independently or integrated with traditional lectures. Instead of going to class with a lot of things, teachers can go to class with only a Pen Driver-USB containing all necessary data, specialized software a laptop and a LCD Projector...). On the other hand, if learners cannot catch up with the lecture for any reason, can review the lecture easily from the computer, CD-Rom, recorder;
- This is a *teaching process* that has been digitalized or electronicalized. This non-traditional teaching process allows learns, teachers interact with each other and with the lecture in a digital environment, more often the Internet everywhere and every when.

In reality, electronic lectures can be delivered in different forms for example, two way TV, through the E-learning, on-line or video Conferencing, Streaming Conferencing, Forum, Chat, e-mail, blogs, forum, wiki etc. for thanks to supporting software’s such as MS PowerPoint, Turning Point, Multimedia, Simulation Software, or packaged software’s such as video tapes, Compact disks, , VCD...

The lectures and learning courses, which are designed and deployed thanks to the support of IT, have experienced overwhelming changes in terms of quality as compared to traditional ones. Learners now can easily interact with the content of the lectures. The content of traditional learning and teaching methods include scientific knowledge exacted and packaged in textbooks, learning material in the form of hard copy and then distributed to learners. In such circumstances, learners have no flexibility in interacting with the content of the lectures. To the contrary, the content of E-lesson

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lies not in the information or the knowledge provided but in the way how such information and knowledge is sought, selected and processed. So far, there remains wrong thinking that the design of E-lesson is only a transfer from *Textbooks* to *E-books*.

E-lesson (E-lecture) can be understood as a product and process which is different from traditional lectures in the followings:

- It is not limited in time and space
- It is more flexible and intractable
- It can create an equal learning environment appropriate to different objects.
- It creates a strong ability in applying IT in learning and teaching technologies.
- It creates basic changes in the concept on the position, role of learners and teachers...

According to us, E-lesson is a combination of products and services designed and operating thanks to the strong application of IT by both learners and teachers in order to reach the targets of learning and teaching and to assure the integrity and unity of the teaching and learning process.

There are now many materials talking about non-traditional education, which is closely related to the concept of E-Lesson.

- *E-course, E-Learning* is a training or teaching method which is based mainly on IT application such as computer based tools (including personal computer or different devices: laptop, Ipad, Tablet PC, PDA etc.), the Internet or Web-based technologies (Content Management System – CMS, Learning Management System – LMS).
- *E-resource, Course-ware* is digital learning resources, which are designed to meet specific pedagogical needs and filed in hard disks or soft disks of PCs, on the Internet, websites, electronic libraries, data warehouses...).
- *E-books* are data which are mainly in the form of documents which have been digitalized and designed according to specific forms with multimedia functions helping readers to use all of their senses during their learning process.
- *E-course* is the plans used to deployed e-lessons in an independent manner or integrated with traditional teaching methods. E-courses are developed according



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to specific pedagogical requirements to assure the logicity of the learning content.

## 2. Principles of developing E-Lessons

Different from traditional etching facilities such as boards, illustrative objects, pictures, TVs, videos, cassettes which can be used monologically or dialogically, *e-lessons can be considered as a multimedia facility acting as an intermediary between learners and teachers and the content of the lectures.*

E-lessons are now understood in both 2 meanings. However, they are developed mainly on computer infrastructure and web-based technologies. Therefore, we need to, first of all, bring into consideration *principles of allocation of teaching data*. Information and content of lectures can be divided into the following 2 big groups, namely the *partial information* possessed and usable by learners at any time such as digital and packaged teaching material and the *decentralized* group of information that requires learners to have certain delegation or possession to use them. This kind of information can be reached only by going through hyperlink from the partial group of information which is filed at data filing organizations having the copyright to use them such as the National Data Department or the Libraries of universities or companies...

Information belonging to the first group including digital documents, E-books, CD-Rom, video clips, packaged learning software's... can be bought completely by learners. Information belonging to the later can be obtained only if learners have access to the websites or such sources of information.

*The principles of interaction and the teaching content:* Digital documents, images, sound, graphs, simulation software or experiments contain teaching content appropriate to the pedagogical purposes of the e-lesson, which can help learners to become active stakeholders of the teaching process. The amount of knowledge and skills obtained by learners will correspond to the degree of integrity, creativity and proactively of the learners. Moreover, each learner will have the opportunity to choose for themselves the necessary content and appropriate learning speed. For instance, a learner can read a lecture as many times as he finds necessary and will not have to follow any compulsory order in this process...

*The principles of multimedia presentation* can help activate multi-senses

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of learners in perceiving, processing and filing information, improving the attention and the feeling of interest in the lessons, because a lesson can be presented in various forms such as documents, images, graphs, video clips, cartoon films... The theory of interactive pedagogy of M. Roy & J. M. Denomme (2005) is based on the scientific researches of the perception nerve science, which has proven that each person has his own filter and his own way of learning. Therefore, thanks to the multimedia function, learners can become the masters of lectures content thanks to various senses appropriate to their own psychology, needs and hobbies...

*The principles of multimedia facilitation* make different opportunities for learners to create open learning space, knowledge contribution and peer-assessment, types of online and/or offline classes activities (Lislie Bowman, 2010).

*The principles of blended learning* provide wide learning formation restructuring and replacing traditional real contact hours with just-in-time toward to optimize students' engagement and share learning experience, materials. Hence, this learning formation will become to mobile learning, ubiquitous learning with the cloud computing technologies (Garrison D.R, Vaughan N.D, 2008).

### **3. The structure of an E-lesson**

From a pedagogical point of view, E-lesson can be considered as a combination of the content and teaching methodology of a lesson or a teaching program. However, an E-lesson is not only the collection of information and data that have been digitalized with multimedia functions. Each E-lesson should be able to help learners become the master of both theoretical and practical content of the lesson itself by means of perception, illustration, investigation, guidelines, practicing, checking and decision making.

Generally speaking, the scope of an E-lesson may include the following parts:

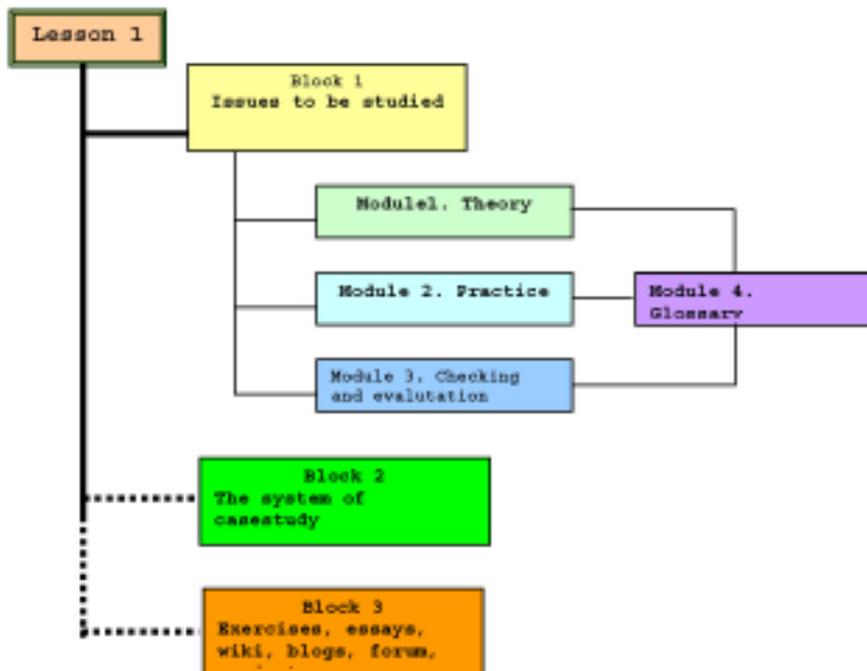
- General information on the lecture (teachers, goals and teaching schedule...)
- E-books, or learning material which have been digitalized
- E- guidebooks for example dictionaries of terms... which have been digitalized.
- Practicing system such as illustration software, imaginable experiments or simulation exercises...

- Checking and evaluating systems (with Web 2.0 technologies: Diggo, Delicious, Wiki, Blog, Google docs etc.).

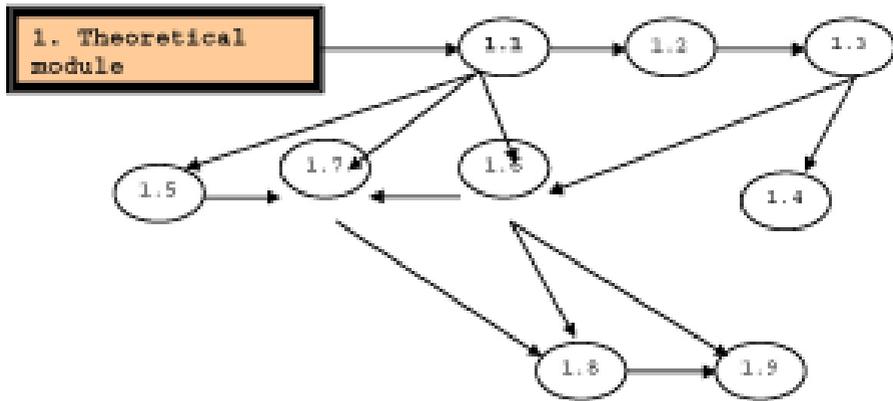
This model can be adjusted in terms of proportion and content appropriate to the specific requirements of each lesson, each subject or industry.

An efficient E-lesson should be designed into sub-lessons with Research Block and Practical Block and Creative Block including all events, definitions, principles, processes... Each block may contain smaller modules which may be online or not online, for instance theoretical module, practical module, experimental or situational module and checking and evaluation module. These modules should be designed in such a way that can assure the ability of free selection, cross linking or non-linear linking, open solution, interaction and feedback...

Diagram 1: The general structure of an E-lesson



**Diagram 2: The structure of partial modules**



#### **4. The procedure for the development of an E-lesson**

The efficiency of an E-lesson depends on 2 factors: pedagogical idea (scenario) and technological idea (scenario). Thus, in order to develop an E-lesson, it is necessary to harmonize the mentioned 2 factors. The procedure of development of an e-lesson can be briefed as follows:

- Design of an E-lesson (development of pedagogical and technological script): The pedagogical script can be considered as the spirit of the e-lesson, which brings about a consistent insight into the content of the lesson, structure of related information, the sequence and comparability of methods and techniques applied during the teaching process and in various forms of interaction and communication between teachers and learners. When developing the pedagogical script, teachers should bring into consideration such issues as the goal of the lesson ( why the lesson is necessary, what to teach, by what means?), the content of the lesson ( How much content is sufficient, what is the core content or the supporting content), the method to deliver the lesson ( what teachers will do, what learners will do, the characteristics of interaction between teachers and learners in each sub-period of the process, what difficulties the learners may face...?); the teaching method ( how can learners learn with this e-lesson?); the general characteristics of learners, the fusibility of technologies used to transfer the content of the lesson... In developing the technological script, it is necessary to choose appropriate multimedia functions to help the efficient transfer of the content of the lesson, to choose a user-friendly interface and bring into consideration the pedagogical,



technical goals of the lesson as well as the economic feasibility.

- Selection and preparation for the learning material: The selection, classification of all the related material should follow criteria of core content that must be known, basic content that should be known and back ground content the may be known and content for reference...
- Digitalized learning material: To choose the appropriate format for digitalizing learning and teaching material which may be in the form of documents, images, sound, pictures, graphs...;
- Selection of multimedia design (selection and combination of appropriate technologies to design digitalized learning material of the lesson).
- Packaging E-lessons according to a predefined standard (Agree with the manager on the packaging standards in order to facilitate learners, mangers in developing training programs and making them appropriate to the needs of the teachers who directly design the lectures...)
- Trial running (A pilot delivery of the e-lesson should be conducted based on the digitalized lectures and integration of the e-lesson with traditional lessons...)

## **5. Meaning of the application of e-lessons**

### **5.1. Creation of a new learning environment**

According to the final report of UNESCO (2004), the application of IT into schools and universities thanks to such pilot projects like Smart School Pilot Project, EdNet, SchoolNet... in some Asian countries such as Malaysia, Philipines, South Korea, Singapore, Thailand... have brought about positive results, helping develop state of the art thinking skills of learners (general thinking, planning, evaluating and critical thinking, problem solving, structuring and modeling obtained knowledge, self-orienting skills and learning management skills...).

When discussing about the future model of learning, Collins (1991) has emphasized on the trend which will change the face of the classes in the 21st century: teaching in the whole class will be changed to teaching in smaller groups. Learners will learn on how to work independently rather then separately. Learners will work in couples or in groups, diversifying their learning strategy through discussion, making

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projects, studying, researching... , implementing their learning tasks in various forms such as doing exercises, representing reports to the class, writing projects, providing guidelines to other groups... During their learning process, learners will use IT to seek and integrate various sources of information, learning material in order to solve problems arising from their projects rather than just learning by heart what is available in the textbooks. E-lessons, e-text books will play the role of not only a facility or condition but also the environment for efficiently running the learning process.

**Table for the comparison of teaching environment**

<i>Traditional learning environment</i>	<i>Modern learning environment</i>
<i>1. Teacher-oriented environment</i>	<i>1. Learners-oriented environment</i>
<i>2. Motivation of single sense</i>	<i>2. Motivation of multi-senses</i>
<i>3. One-way development trend</i>	<i>3. Multi development trends</i>
<i>4. Single or mono function</i>	<i>4. Multi functions</i>
<i>5. Separate working</i>	<i>5. Cooperative and interactive working</i>
<i>6. Information transfer</i>	<i>6. Information exchange</i>
<i>7. Passive learning</i>	<i>7. Active learning and exploring</i>
<i>8. Learning based on events and already available knowledge</i>	<i>8. Learning based on discussion criticism and decision making</i>
<i>9. Teaching based on recalling and reacting of samples</i>	<i>9. Teaching based on predefined activities</i>
<i>10. Separated and impractical situations</i>	<i>10. Practical situations</i>

*(Source "New Learning Environments" – ISTE, 2000)*

Thus, the current learning environment integrated with E-lessons may bring about a new and promising structure with the following features:

*Self-organized system with orientation of teachers. This is an open system.*

Vertical structure of learning without any levels, which is quite different from the traditional teaching triangle structure, which is still of dispute: who is at the top of the triangle? The teacher, the learners or content of the lecture?

*Equal, democratic environment.*

Given such a new structure, there will be strong changes in terms of both the quality and structure of the teaching process, thanks to which the teaching process can be delivered based on self-reactivity and perception of each individual learner. Learners can be more active, creative. This may lead to the creation of such concepts like "wall-less schools, classes" or "ageless students" etc.

## **5.2. Development of the role and position of teachers and learners**

In a new learning environment with the application of state of the art



technologies, learners are placed at the center of the learning process and finally at the center of their own learning. Learners are the masters and explorers of knowledge with their individual activities, interaction and cooperation, diversification of learning style (Moffett J. & Wagner B.J, 1992). Learners can learn anything, at anytime, everywhere. They can learn whatever they are interested in with anybody they want to and at any level appropriate to their ability. Learners have changed from merely a “user-follower” into a “producer-creator” and cooperators of teaching products thanks to IT. In reality, E-lessons can be packaged and run in a web-based environment by using the Internet or Intranet serving distant or E-learning. In the short run, we can immediately integrate e-lessons into the teaching process through a face to face teaching method, regardless of how many learners there are in the group while assuring that all learners can develop their own proactively and creativity.

Firstly, the deployment of e-lessons allow learners balance the accumulation of the content of various subjects and have learning strategies by self-developing their learning strategies, self-organizing, controlling their learning process. Consequently, the teachers will cease to keep the central position of the teaching process and the knowledge warehouse. This does not mean that we totally deny the role of teachers. To the contrary, in order to design E-lessons, teachers have to try their best to find additional sources of information, new teaching methodologies for their lectures. In replacement of one-way method of delivering lectures, teachers will stay in the position of the coordinator or moderator, helping learners to seek and process information, propose solutions for addressing issues arising from the teaching process:

Teaching means “teach how to learn”, by learner’s activities;

Individualize the cooperation and intercalation in the teaching and learning process;

Teaching oriented towards self-learning and self-researching; and Teaching based on evaluation and self-evaluation.

Secondly, the integration of E-lessons into the traditional way of learning has basically changed the activities of learners and teachers as follows:

Changes from giving notice of information to seeking, exploring information and cooperation (that is a change from the phrase: “I know the following issues... to the phrase “I know that I still do not know the following issues...). Learners can use hyperlink in their E-lessons to link enormous warehouses of data...



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Cancellation of the limitation in terms of time, space for the teaching process (learners can hear, see and learn through E-lessons which have been packaged into CD-Rom with as many copies as they want at any time and any location).

Changes from working mainly on good learners to working with all learners through individual contacts or working in small groups to do exercises with provided data and guidelines provided in E-lessons...);

To maximize the activity and creativity of learners (each learner may choose for himself the way to learn, the level of solving their learning tasks);

Evaluation is based on specific targets by applying any methods to reach the set forth targets.

The healthily (fair) competitive approach will master all actions (healthy completion may arise among members of a group, among groups in order to reach learning targets...).

Learners will move from mastering only a mono-knowledge to a multi-knowledge by integrating different kinds of sources of knowledge and information;

Changes from language-based way of thinking to critical and high-order thinking thanks to their teaching process, as learner's can touch the lesson through pictures, images, sound, or lively simulation...

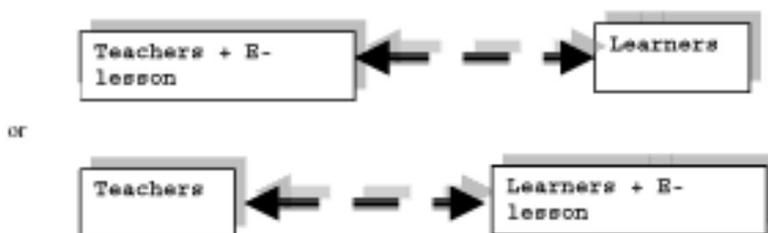
### **5.3. Innovation of teaching methodology and organization of learning process**

Innovation of teaching methodology is both the target and requirement of the integration of E-lessons to the traditional ways of teaching. Given its overwhelming advantages, the application of e-lesson to the traditional way of teaching will, nevertheless, force us to change our way of teaching and learning at the same time. For example, a lesson designed with PowerPoint will remain a precious jewelry, if teachers only read the content of slides. To the contrary, it may motivate the interest and attention as well as orientation of learners if the lecture is delivered with sound, images, graphs, diagrams...and if teachers know how to develop and take advantage of each methodology during the traditional way of teaching.

The application of E-lesson allows the enormous application of the new teaching model, whereby one teacher can deliver lectures to many learners at the same time or individually or many teachers can teach many learners. Thus, learners will have the

opportunity to refer to the lectures of various teachers and find for themselves the best learning methodology.

Application of e-lesson at this point of time may be appropriate with the following integration model:



The integration of e-lesson into the teaching process will have to face with difficulties related to the traditional way of teaching, which is very similar to many people. Clearly, the traditional way of teaching when teachers just go to class and read books or lectures will no long be appropriate with E-lesson.

Teaching in small groups, discussion and presentation, project-styled teaching will become more and more overwhelming than the one-way teaching methodology. As E-lesson is not limited in terms of time and space and is filed in various froms such as CD-Rom, VCD, DVD, video tapes or the Internet..., there may not be the necessity for learners and teachers to meet face to face on a regular basis according to a fixed schedule. For example, in order to prepare for a lesson, learner can just go to the liabrary or the Internet to see, analyze and evaluate the lectures as much as he wants. This has created not only a more relaxed learning spirit, curb limitations of the traditional “face-to-face” learning, provide more time for discussion, and reduce the passiveness of learner...

## 6. Conclusion

Based on the above presentation, it is impossible to conclude that the application of E-lesson for the current learning process is derived from the need of covering certain deficiencies. To the contrary, it can help create a new and more efficient and flexible learning environment in order to take the full advantage of the teaching process. Thanks to the advantages of e-lesson, we can innovate our learning and teach-





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## CORPORATE RESPONSIBILITIES TO VARIOUS SECTORS

### **Dr. Abdul Hakim**

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### **Introduction :**

In modern age the aim of any corporation is not to earn profit only. But corporeity's modern duty is to serve the society in different ways. Today is the age of democracy. So the corporeity's also have to proceed on democratic pattern. There are several sectors in the society. Corporate have to bear the responsibilities towards them. The expectations of different sectors are different types. Corporeity's manage to provide different services accordingly to the needs of those sectors.

To protect the interests of the shareholders and employees, "the primary business of a business is to stay in business". To safeguard the capital of the shareholders and to provide a reasonable dividend, the company has to strengthen and consolidate its position. Hence it should develop and improve its business and build up its financial independence.

Needless to say, to provide dividend, the company should earn sufficient profit. Adequate reserves should be built up so that it will be able to declare a reasonable dividend during a lean period as well.

If a company fails to cope with changes in a changing and dynamic world, its position will be shaken, and the shareholders interests will be affected. By innovation and growth the company should consolidate and improve its position and help strengthen the share prices.

The shareholders are interested not only in the protection of their investment and the return on it but also in the image of the company. It shall, therefore, be the the Endeavour of the company to ensure that its public image is such that the shareholders can feel proud of their company.

It may be mentioned here that the shareholders also have certain responsibilities which they have to discharge to protect their own interests. They shall not only offer



whole-hearted support and co-operation in the positive efforts of the company but shall also guide and control properly its policies and activities. At the same time, they shall appreciate the responsibility of the business to other sections of society - to the workers, consumers and the community.

### **Responsibility to Employees :**

The success of an organization depends to a very large extent on the morale of the employees and their whole-hearted co-operation. Employee morale depends to a large extent on the discharge of the company's responsibilities to them and the employer-employee relationship. The responsibility of the organization to the workers include. The payment of fair wages, the provision of the best possible working conditions, the establishment of fair work standards and norms, the provision of labor welfare facilities to the extent possible and desirable, arrangements for proper training and education of the workers, reasonable chances and proper system for accomplishment and promotion, proper recognition, appreciation and encouragement of special skills and capabilities of the workers, the installation of a efficient grievance handling system, the opportunity for participating in managerial decisions to the extent desirable.

Committee that conducted the social audit of Tata Iron and Steel Company (TISCO) observes that not only should the company carry out its various obligations to the employees as well as larger community as a matter of principle, but this has also led to a higher degree of efficiency in TISCO works and an unparalleled performance in industrial peace and considerable team spirit and discipline which have all resulted in high productivity and utilization of capacity. Thus by discharging its responsibilities to the employees, the business advances its own interests.

It may, however, be pointed out that the expenditure on labor welfare, etc., should have relevance to the financial position of the company and the economic conditions of the nation. This aspect has to be particularly taken note of by public sector enterprises. Such expenditure shall not exceed the socially and economically warranted limits and shall not cause undue burden on the consumers or the general public. It shall not result in the formation of islands of affluence or comfort in the midst of poverty and suffering at the expense of society.



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## **Responsibility to Consumers :**

According to Peter Drucker, “there is only one valid definition of business purpose; to create a customer.” Drucker observes: “The customer is the foundation of a business and keeps it in existence. He alone gives employment. To supply the wants and needs of a consumer, society entrusts wealth-producing resources to the business enterprise”.

It has been widely recognized that customer satisfaction shall be the key to satisfying the organizational goals. Important responsibilities of the business to the customers are :

To improve the efficiency of the functioning of the business so as to (a) increase productivity and reduce prices, (b) improve quality, and (c) smoothen the distribution system to make goods easily available. To do research and development, to improve quality and introduce better and new products. To take appropriate steps to remove the imperfections in the distribution system, including black-marketing or profiteering by middlemen or anti-social elements. To supply goods at reasonable prices even when there is a seller’s market. To provide the required after-sales services. To ensure that the product supplied has no adverse effect on the consumer. To provide sufficient information about the products, including their adverse effects, risks and care to be taken while using the products. To avoid misleading the customers by improper advertisements or otherwise. To provide an opportunity for being heard and to redress genuine grievances. To understand customer needs and to take necessary measures to satisfy these needs.

Despite the popularity of the Marketing Concept and societal marketing concept and the growing awareness of consumer rights, consumers all over the world are, by and large, dissatisfied. Consumers, which is an organized endeavor of the consumers to protect their rights, is a manifestation of this fact. In shortage economies like India many businessmen pay scant attention to their responsibilities to consumers. To protect consumer rights and to make the business discharge its responsibilities to them, the consumers should give up their indifferent attitude and build up a strong consumer movement.

## **Responsibility to the Community :**

A business has a lot of responsibility to the community around its location and

to the society at large. These responsibilities include:

Taking appropriate steps to prevent environmental pollution and to preserve the ecological balance. Rehabilitating the population displaced by the operation of the business, if any. Assisting in the overall development of the locality. Taking steps to conserve scarce resources and developing alternatives, wherever possible. Improving the efficiency of the business operation. Contributing to research and development. Development of backward areas. Promotion of ancillarisation and small-scale industries. Making possible contribution to furthering social causes like the promotion of education and population control. Contributing to the national effort to build up a better society.



**Fig. 1. Claimants of Responsibility of corporeity's**

In fact, the record of the public sector is more dismal than that of the private. As for as pollution of the environment is concerned, the public sector is as guilty as the private.

Many public sector enterprises in India have undoubtedly failed to discharge their primary responsibilities - increase in the productivity and production, efficiency in the provision of the service etc. This is reflected in the mounting losses of many public enterprises. Some may argue that the public sector is not, and should not be, profit-motivated. But gone are the days of such philosophy. It has been clearly laid down that the public sector should generate surplus to finance our future development programme.



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## BRAND MANAGEMENT AND COMPETITIV0ENESS

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### INTRODUCTION

There has been growing interest in the area of branding, more so, because brand represents the goodwill of the firm. In corporate takeovers or mergers, often the value offered to buy out a firm is much more than the book-value of the land, plant and machinery, inventory of finished and semi-finished products and the market value of its shares.. Brand management begins with having a thorough knowledge of the term “brand”. It includes developing a promise, making that promise and maintaining it. It means defining the brand, positioning the brand, and delivering the brand. Brand management is nothing but an art of creating and sustaining the brand. Branding makes customers committed to your business. A strong brand differentiates your products from the competitors. It gives a quality image to your business.

P&G developed a new business technique called “brand management.” Because it focused attention on a product rather than a business function, brand management turned out to be similar in its effects to the multi-divisional structure introduced by Alfred Sloan at General Motors. And it had the same powerful tendency to decentralize decision making.

The shift to brand management began on May 13, 1931, with an internal memorandum from Neil McElroy (1904-1972), an athletic young man who had come to P&G in 1925 right after his graduation from Harvard College. While working on the advertising campaign for Camay soap, McElroy became frustrated with having to compete not only with soaps from Lever and Palmolive, but also with Ivory, P&G’s own flagship product. In a now-famous memo, he argued that more concentrated attention should be paid to Camay and by extension to other P&G brands as well. In addition to having a person in charge of each brand, there should be a substantial team of people devoted to thinking about every aspect of marketing it. This dedicated



group should attend to one brand and it alone. The new unit should include a brand assistant, several “checkup people,” and others with very specific tasks. The concern of these managers would be the brand, which would be marketed as if it were a separate business. In this way the qualities of every brand would be distinguished from those of every other. In ad campaigns, Camay and Ivory would be targeted to different consumer markets, and therefore would become less competitive with each other. Over the years, “product differentiation,” as businesspeople came to call it, would develop into a key element of marketing.

McElroy’s memo ran to a terse three pages, in violation of President Deupree’s model of the “one-page memo,” a P&G custom that had become well known in management circles. But the content of the memo made good sense, and its proposals were approved up the corporate hierarchy and endorsed with enthusiasm by Deupree.

Thus was born the modern system of brand management. It was widely emulated, and in one form or another was still followed in the early twenty-first century by many consumer-products companies throughout the world. Typically, brand managers were energetic young executives marked for bright futures within a company. All of Procter & Gamble’s own CEOs after Deupree had brand-management experience. This group included Neil McElroy himself, who headed the company after Dupree retired in 1948, and who in 1957 became Secretary of Defense under President Eisenhower.

Brand management as a business technique was one of the signal innovations in American marketing during the twentieth century. It epitomized the persistent theme of balancing centralized oversight with decentralized decision making based on who in the company had the best information about the decision at hand.

Brand management includes managing the tangible and intangible characteristics of brand. In case of product brands, the tangibles include the product itself, price, packaging, etc. While in case of service brands, the tangibles include the customers’ experience. The intangibles include emotional connections with the product / service. The difference between the book value plus market value and the price offered for the takeover can be attributed to the intangibles. One such extremely important intangible is the firm’s brand equity.

Branding is assembling of various marketing mix medium into a whole so as

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to give you an identity. It is nothing but capturing your customers mind with your brand name. It gives an image of an experienced, huge and reliable business. It is all about capturing the niche market for your product / service and about creating a confidence in the current and prospective customers' minds that you are the unique solution to their problem.

Brand is the powerful differentiator in a highly competitive market-place. It provides the power to deflect competitive moves. The fact that consumers live by brands is amply demonstrated by the habitual behavior of the housewives who continues to buy the same brands of detergents and food products in her shopping cycles. Brand, therefore, is an integral part of consumer life.

To the company, a strong brand provides credibility and respect among its peers. It certainly gives the company the power to bargain with its intermediaries, suppliers, interest groups and even government bodies. A strong brand means higher market share and ROI and hence, higher shareholder value. It even creates a positive motivational climate in the organization as employees takes pride in remaining associated with it. Companies with strong brands attract the best talent and respect among industry professionals.

## **OBJECTIVE OF THE STUDY**

The objective of the study is to get the concept about brand. To define what is meant by 'a brand'. To consider why brands are so important in marketing strategy and examine what has been the key to the long-term success of some brands. This aims to study how brands and brand management is helps in gaining the competitive advantage in market. The study helps in learning various brand management strategies which leads to competitiveness.

## **RESEARCH METHODOLOGY**

In the present research the data is taken from the secondary sources. Research methodology explains and chooses the best (in terms of quality and economy) way of doing it. The information and data for the research can be collected through primary as well as secondary sources i.e. published articles, journals, news papers, reports, books and websites.” Various graphs and tables have been used.

### **1. CONCEPT OF BRANDING: A BRAND CONSTRUCT**

The different approaches to defining brands construct partly stem from differing



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philosophies and stakeholder perspective: brand may be defined from the Consumer perspective and/or from brand owner's perspective. In addition brands are sometime defined in terms of their purpose and sometimes described by their characteristics. The following examines the diverse approaches to brand definition:

The American Marketing Association (1960) defines the following company oriented definition of brand as:

A name, term, design, symbol, or any other feature that identifies one seller's good or service as distinct from those of other sellers or a group of sellers and to differentiate them from those of competitors.

This definition has been criticized for being too product oriented with emphasis on visual features as differential mechanisms (Arnold, 1992; Cranier, 1995). Despite this criticism the definition has endured to contemporary literature, albeit in modified forms. Watkins (1986) and Kotler et al. (1997) adopt this definition. Dibb et al. (1997) use the Bennett (1998) variant of the definition which is:

The key change to the original definition are the words "any other feature" as this follows for intangibles such as image, to be the point of differentiation. The particular value of the definition is that it focuses on fundamental brand purpose which is differentiating. It should not be forgotten that brand operates in market environment where differentiation is crucially important. Even monopolies exist; companies may choose to position their brand(s) with a view to future competition. The other key feature of the definition is that it takes the corporate perspective rather than emphasizing consumer benefits.

To a consumer, brand means and signifies.

- Source of a product
- Delegating responsibility to the manufacturer of product.
- Lower risk
- Less search cost
- Quality symbol
- Deal or pact with particular manufacturer
- Symbolic device



To a seller, brand means and signifies:

- Basis of competitive advantage
- Way of bestowing products with unique associations
- Ways of identification to easy handling
- Sign of quality to satisfied customer
- Means of financial returns

The aim of branding is to convey brand message vividly, create customer loyalty, persuade the buyer for the product, and establish an emotional connectivity with the customers. Branding forms customer perceptions about the product. It should raise customer expectations about the product. The primary aim of branding is to create differentiation.

Strong brands reduce customers' perceived monetary, social and safety risks in buying goods/services. The customers can better imagine the intangible goods with the help of brand name. Strong brand organizations have a high market share. The brand should be given good support so that it can sustain itself in long run. It is essential to manage all brands and build brand equity over a period of time. Here comes importance and usefulness of brand management. Brand management helps in building a corporate image. A brand manager has to oversee overall brand performance. A successful brand can only be created if the brand management system is competent.

A brand connects the four crucial elements of an enterprise- customers, employees, management and shareholders. Brand is nothing but an assortment of memories in customers mind. Brand represents values, ideas and even personality. It is a set of functional, emotional and rational associations and benefits which have occupied target market's mind. Associations are nothing but the images and symbols associated with the brand or brand benefits, such as, The Nike Swoosh, The Nokia sound, etc. Benefits are the basis for purchase decision.

A good brand name should have the following features:

- It should be unique / distinctive (for instance- Kodak, Mustang)
- It should be extendable.
- It should be easy to easy to pronounce and memorize It should give an idea



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about product quality and benefits.

- It should not portray wrong ideas and feelings..

A strong brand must have following attributes:

1. **RELEVANCY:** - A strong brand must be relevant. It must meet people's expectations and should perform the way they want it to. A good job must be done to persuade consumers to buy the product; else inspite of your product being unique, people will not buy it.
2. **CONSISTENCY:** - A consistent brand signifies what the brand stands for and builds customers trust in brand. A consistent brand is where the company communicates message in a way that does not deviate from the core brand proposition.
3. **PROPER POSITIONING:** - A strong brand should be positioned so that it makes a place in target audience mind and they prefer it over other brands.
4. **SUSTAINABLE:** - A strong brand makes a business competitive. A sustainable brand drives an organization towards innovation and success. Example of sustainable brand is Marks and Spencer's.
5. **CREDIBILITY:** - A strong brand should do what it promises. The way you communicate your brand to the audience/ customers should be realistic. It should not fail to deliver what it promises. Do not exaggerate as customers want to believe in the promises you make to them.
6. **INSPIRATIONAL:** - A strong brand should transcend/ inspire the category it is famous for. For example- Nike transcendent Jersey Polo Shirt.
7. **UNIQUENESS:** - A strong brand should be different and unique. It should set you apart from other competitors in market.
8. **APPEALING:** - A strong brand should be attractive. Customers should be attracted by the promise you make and by the value you deliver.

## APPROACHES TO BRANDING

- A. **INDIVIDUAL BRANDING:** - Under this branding approach, the separate brand name is given to the product/services which is not similar to the existing brand. Marketer here tries to build the awareness of the brand since there was no market presence earlier.



- B. FAMILY BRANDING:** - Under this Branding Approach, new brands are placed under the category of an existing brand. Customers already aware about the brand so they form the general perception about the brand. Family branding is a marketing strategy that involves selling several related products under one brand name. Family branding is also known as umbrella branding.
- C. GENERIC BRANDING:** - Generic brands of consumer products (often supermarket goods) are distinguished by the absence of a brand name. It is often inaccurate to describe these products as “lacking a brand name”, as they usually are branded, albeit with either the brand of the store in which they are sold or a lesser-known brand name which may not be aggressively advertised to the public. They are identified more by product characteristics. Here there is no brand name given i.e product is brand less. They may be manufactured by less prominent companies, or manufactured on the same production line as a ‘named’ brand. Generic brands are usually priced below those products sold by supermarkets under their own brand (frequently referred to as “store brands” or “own brands”). Generally they imitate these more expensive brands, competing on price. Generic brand products are often of equal quality as a branded product; however, the quality may change suddenly in either direction with no change in the packaging if the supplier for the product changes.
- D. CO- BRANDING:** - Here the two firms contract each other and launches the common brand in the market. This approach is focused on the concept of Synergy. Co-branding is an arrangement that associates a single product or service with more than one brand name, or otherwise associates a product with someone other than the principal producer. The typical co-branding agreement involves two or more companies acting in cooperation to associate any of various logos, color schemes, or brand identifiers to a specific product that is contractually designated for this purpose. The object for this is to combine the strength of two brands, in order to increase the premium consumers are willing to pay, make the product or service more resistant to copying by private label manufacturers, or to combine the different perceived properties associated with these brands with a single product.
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## EXAMPLES:

- Pillsbury Brownies with Nestle Chocolate
- Dell Computers with Intel Processors
- Kellogg Pop-tarts with Smucker's fruit
- Samsung hardware with Google software (eg Galaxy Nexus)

**E. PRIVATE BRANDING:** - Private branding means a large distribution channel member (usually a retailer) buys from a manufacturer in bulk and puts its own name on the product. This strategy is, with some exceptions, generally only practical when the retailer does very high levels of volume. The advantages to the retailer are:

- Ø more freedom and flexibility in pricing
- Ø more control over product attributes and quality
- Ø higher margins (or lower selling price)
- Ø eliminates much of the manufacturer's promotional costs

Here in this case, the company uses the other company's brand for selling the product in the market. This is mostly in the case of retail industry.

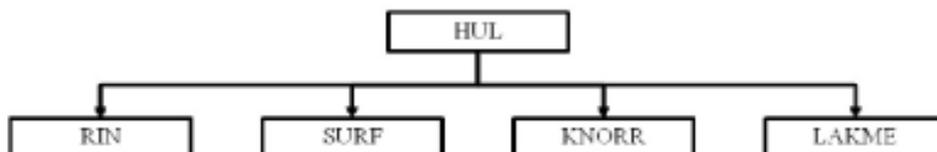
**F. MULTIPLE BRANDING:** - Under this approach, the two or more product are produced under the same brand name. Each product is positioned differently in the minds of the customers.

## BRANDING STRATEGIES

### A. PRODUCT BRANDING

Under this, the separate & unique name is given to the product so as to sell in the market. Marketer establishes the distinct position of the brand in the market. It is the customer friendly approach. The product is positioned differently in the market. With exclusive brand creation, the marketers leave its scope for confusion.

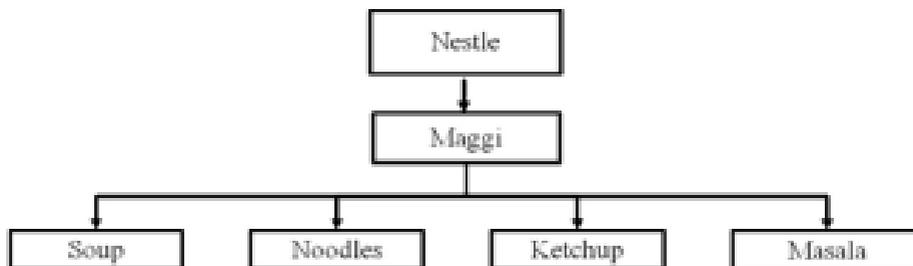
**Example:**



**B. RANGE BRANDING**

Under this strategy, the brand is named with the unique idea and expertise. The brand uses the same expertise in creating the other successive brand.

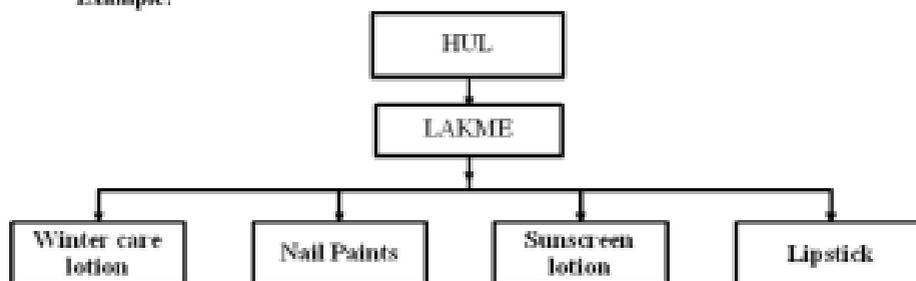
**Example:**



**C. LINE BRANDING**

Brand is launched with the distinct concept i.e : lakme winter care lotion. Here brand appeals to the distinct market segment that appreciates the brand concept. The customer donot tend to be contented with one product. So, they want some additional products.

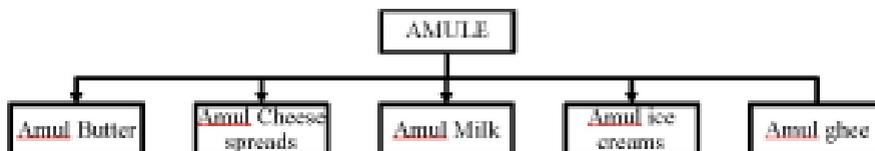
**Example:**



#### D. UMBRELLA BRANDING

Under this strategy, the product is given the brand name under the existing brand name. It has the advantages of awareness, associations and loyalty.

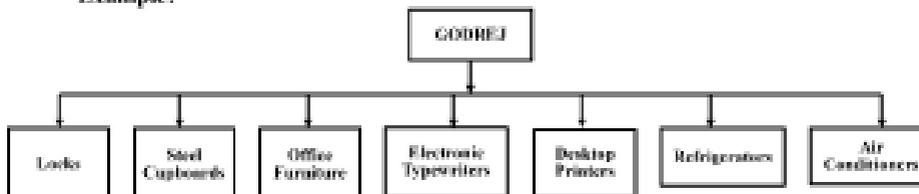
Example: - Amul is an example of umbrella brand.



#### E. DOUBLE BRANDING

Here the brand name is associated with the corporate name. It is the hybrid of umbrella and product strategy.

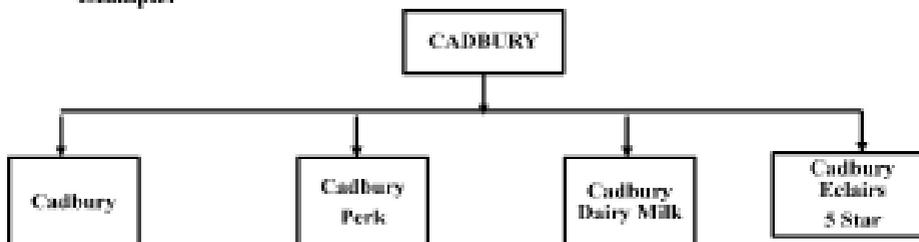
Example:



#### F. ENDORSEMENT BRANDING

Here the Brand name is associated with the corporate name but the brand name is given the more emphasis than the company name. It discloses the identity of the maker, making it a small part of brand.

Example:



## 2. BRAND MANAGEMENT-MEANING

Brand management is the design and implementation of marketing programs to build measure and manage brand Equity. It includes:

- Identify and establish the brand positioning values.
- Plan and implement the brand marketing programs.



- Measure and interpret the brand performance
- Grow and sustain brand Equity.

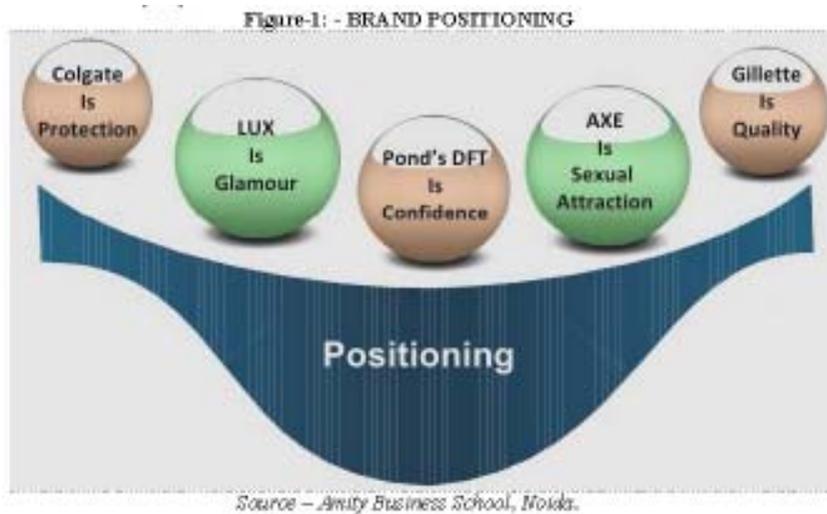
It is a function of marketing that uses techniques to increase the perceived value of a product line or brand over time. Effective brand management enables the price of products to go up and builds loyal customers through positive brand associations and images or a strong awareness of the brand. Developing a strategic plan to maintain brand equity or gain brand value requires a comprehensive understanding of the brand, its target market and the company's overall vision. An effective brand management includes the techniques:

1. Brand Positioning
2. Brand Loyalty
3. Brand Associations
4. Brand Awareness
5. Brand Equity.

#### **A. BRAND POSITIONING**

Another decision in the commercialization of a new product is how to differentiate it in the midst of the already over communicated society of ours where an average consumer screens out most messages. The strategy to differentiate the brand or product is to place it in an appropriate cell of human mind so that whenever the customer recalls the product, the firm's brand is the first to be recalled. This strategy is called Positioning. Positioning is the art of communicating company's offer so that it occupies a distinct and valued place in the consumer's mind.

The concept of Positioning was first developed by Al Ries and Jack trout, two advertising executives, in their articles titled "The positioning Era : A view ten years later" in the advertising Age in 1972, later in his book, positioning : The battle for your mind, in 1982. According to them, "Positioning is not what you do to a product. But what you do to the mind of the prospect."



Brand positioning refers to “target consumer’s” reason to buy your brand in preference to others. It ensures that all brand activity has a common aim; is guided, directed and delivered by the brand’s benefits/reasons to buy; and it focuses at all points of contact with the consumer.

## **WAYS TO POSITION THE BRAND**

The ways to position the brands are:

- i. Use situations
- ii. Emphasizing tangible benefits
- iii. Linking to uses.
- iv. Head on competitive positioning
- v. Life-style positioning
- vi. Benefits offered

### **i. USE SITUATIONS**

The marketer can identify use situations for his brand or product and analyze customer perception of existing competitor brands in different brands in different use situations. Based on this analysis the firm can position its brand.

Example; Rasna



It's Positioning as soft drink when one is fatigued after shopping or a day's work, when you have guests arriving suddenly or when you feel thirsty. The brand's claim that it is so simple to make that even child can do it.

## **ii. EMPHASIZING TANGIBLE BENEFITS**

The brand may even positioned on the basis of tangible benefits that it offers to customers. These are in the form of specific features and sometimes through its price and distribution.

Example: Ariel-Offers specific benefit over cleaning even the dirtiest of clothes because of the micro cleaning system in the product

Colgate - Offers benefits of preventing cavities and ensuring fresh breathe

Nirma- Offered low price

Maruti Suzuki- offers benefits of maximum fuel efficiency and safety

## **iii. LINKING TO USES**

Identify the possible uses which the brand can put to. Here brand is positioned to all possible uses.

## **iv. HEAD ON COMPETITIVE POSITIONING**

This is the strategy of placing the firm's brand next to the leader in the market and trying to uproot it on specific tangible variable. The wheel Brand of detergent powder took a head-on position with Nirma and claimed that it was better as it washed whiter (because of the lemon component in it) and was gentle on hands, a claim which Nirma counters by showing the user using a spoon to take out washing powder from the bag.

## **v. LIFESTYLE POSITIONING**

A firm may even Position the brand as a lifestyle concept- Contemporary or futuristic. Many of today's kitchen appliances, ready-made garments are positioned accordingly. Dimension of lifestyle is aspirations. The brand has to communicate an exclusive image which the consumer is willing to pay for. Also, it should reflect the aspirations of the target market.



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## **vi. BENEFITS OFFERED**

Another way to Position the brand is to highlight the benefits that customers get by using the product. Emotional relationship is one of the strong reasons to buy a brand. Chevrolet optra used this to position its luxury car in the young, successful and upwardly mobile Indian professionals market. Taking the situation of a wife waiting for the moon to appear on Karva chauth, it shows the young Indian male taking her on drive.

## **HOW TO POSITION THE BRAND**

To Position the brand, a technique called Perceptual Mapping is commonly used. This technique involves studying the consumer's perception of the product and competitor's brand's and identifying the vacant slots. This involves the following:

- Studying the ideal product perception by studying both tangible and intangibles.
- Get the customers to ranks these attributes.
- Customer's knowledge of the competitor's brands How the competitor's do brands fare on the ideal product map?
- Identify the vacant slots and the Position.

Brand positioning must make sure that:

- Is it unique/ distinctive vs. competitors?
- Is it significant and encouraging to the niche market?
- Is it appropriate to all major geographic markets and businesses?
- Is the proposition validated with unique, appropriate and original products?
- Is it sustainable - can it be delivered constantly across all points of contact with the consumer?
- Is it helpful for organization to achieve its financial goals?

## **B. BRAND EQUITY**

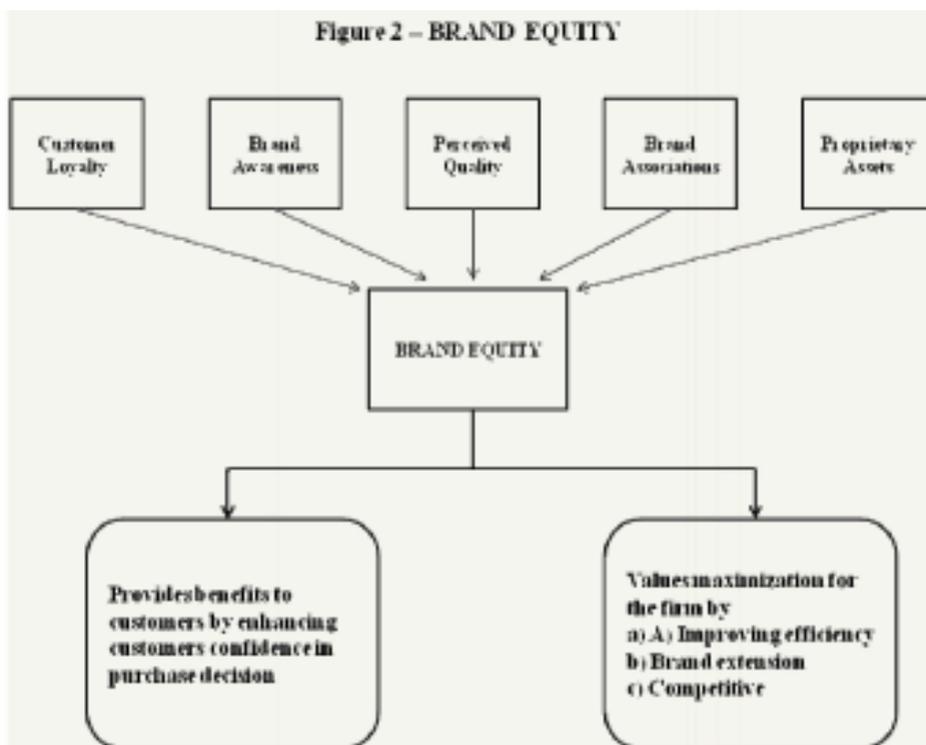
To understand the dynamics of the brand, David Aaker provides a framework called Equity. Brand equity refers to a "a set of assets and liabilities linked to brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and or to competitors." In other words, brand Equity provides (or subtracts) value to a firm in the form of price premiums, trade leverage or competitive

advantage.

Brand assets can be categorized in five groups:

1. Brand Loyalty
2. Brand Name Awareness
3. Brand's perceived Quality
4. Brand association in addition to perceived quality
5. Other proprietary brand assets like patents, trademarks, channel relationships and so on.

A strong brand equity enhances the brand's value which in turn affects share price of its parent firm have shown in figure 2.



## COMPONENTS OF BRAND EQUITY

### A. BRAND LOYALTY

Starting point for understanding brand equity is the extent to which a brand enjoys customers' loyalty. It is important to discriminate between the habitual buying and

brand loyalty. The real issue in brand loyalty is whether the customer is a committed one and real test is if he or she will walk that extra mile to get it. When consumers become committed to your brand and make repeat purchases over time. Brand loyalty is a result of consumer behavior and is affected by a person's preferences. Loyal customers will consistently purchase products from their preferred brands, regardless of convenience or price. Companies will often use different marketing strategies to cultivate loyal customers, be it is through loyalty programs (i.e. rewards programs) or trials and incentives. Customers can be grouped under five categories, depending on their attitude towards the brand. These categories are:



#### MEASURING BRAND LOYALTY

### 1. BUYER BEHAVIOR

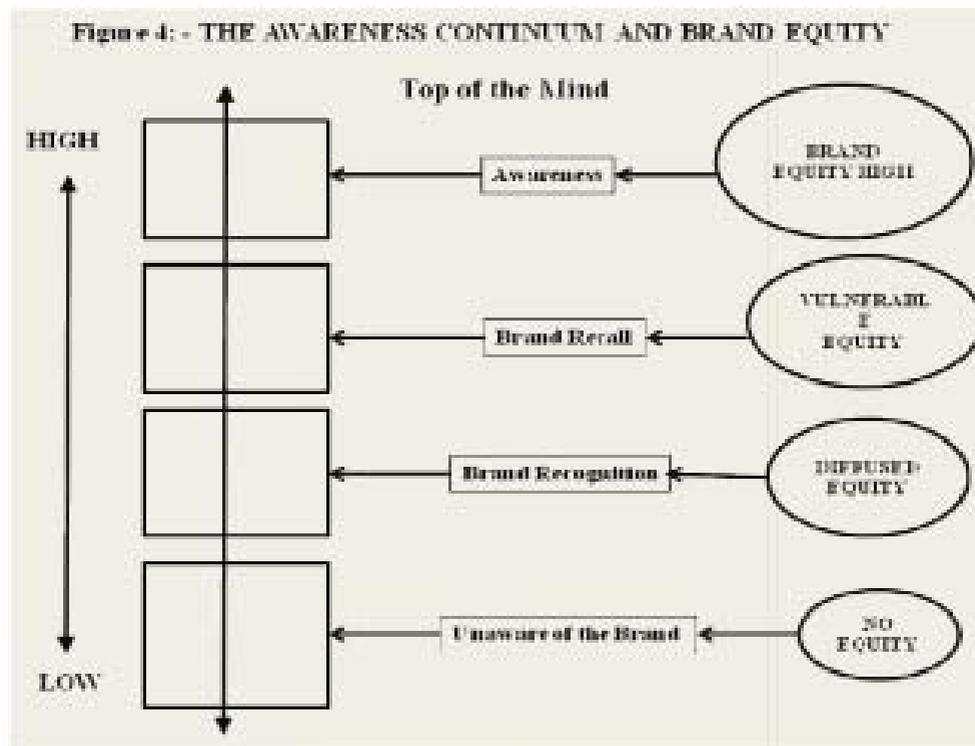
Observe the actual buyer behavior as represented by customers' repeat purchases, one brand as percentage of last few purchases and the number of brands purchased by an average target customer during the last few shopping cycles. Another approach is forced choice method where researcher makes available only a particular brand at selected retail outlets for a specified period of time. Customers buying behavior is then monitored.

## 2. ECONOMIC AND PSYCHOLOGICAL BARRIERS

Another approach in studying barriers is switching. The most important barrier is economic or high switching cost.

### B. BRAND AWARENESS

Brand is the ability of a potential buyer to recognize /recall that a brand is part of product category. Customers should be able to identify the brand in retail outlets or be able to recall its brand whenever he or she thinks. Brand awareness has to be a thought of as “a continuous range from an uncertain feeling that a brand is recognized to a belief that it is only one in the product class.” At the top end of the continuum is the brand that exists at the top of the customer’s mind. This is the happy and most desired conditions that any marketer seeks. The next level is all of the other brands that are recalled by the customer in an unaided form. Brand recognition is the third and perhaps, lowest level. Here customers are aided in recalling or recognizing brands or associating brands with a product class. High brand awareness leads to high brand equity whereas low brand awareness leads to no equity.





To achieve high awareness, Aaker suggest the following communication;

- To be different and memorable
- Involve a slogan and Jingle
- Expose the brand symbol
- Sponsor major event
- Repeat yourself constantly.

### **C. BRAND ASSOCIATIONS**

This enables the customer to pursue expected quality of the product or service in their choice of purchases. Brand association is the relative strength of a consumer's positive feelings towards the brand (Lasser et al, 1995). Every interaction with customers and other stakeholders influences and adds to the accruing brand equity of the firm: the more positive the customers' experience, the stronger the brand, and the greater is the positive reputation for the organization equity of the firm: the more positive the customers' experience, the stronger the brand, and the greater is the positive reputation for the organization.

### **D. PERCEIVED QUALITY**

Perceived quality is defined as the consumer's judgment (perception) about a product's overall excellence or superiority with reference to substitutes. Hence perceived quality is "the perceived ability of a product to provide satisfaction „relative? to the available alternatives". Notably, product quality is a firm's essential resource for achieving competitive advantage.

### **CONCLUSION**

In line with this increased recognition of the significance of brands, the literature on branding has grown proportionately in the last couple of decades. New concepts and new measures of ideas are being developed to enable us to understand, evaluate and make sense of the role of brands in today's world. With this growth, our understanding of the branding process now includes its development, nurture, evaluation and maintenance – all of which enhance the longevity of a brand and the assets emanating from it. Such assets include (but are not limited to) the Reputation and Identity of organizations.



Although concepts such as Reputation and Organization Identity (in and of themselves) are distinctive in terms of their definitional and measurement properties, in relational terms, they are nothing more than part of an array of the ‘sense-making’ ideas that have emerged from the society’s attempt at engaging with contemporary, twenty-first century, economic realities. In the case of identity, both internal and external stakeholders create a brand-based view of organizations, and it is through these that they develop their perceptions of, and perspectives on, the identity of organizations.

The implications of the foregoing are captured by the axiom: ‘brand name alone does not make a brand’. Developing market-leading brand capacities is essential for long-term competitiveness. This, however, requires more than brand communications. The ability of brands to facilitate organization’s development, evolution and competitive advantage epitomizes the emerging role of brand strategy as an underlying resource that enables a firm to create, deliver and capture values faster than they can be competed away. Effective brand strategy is, therefore, a methodological paradigm for explaining, facilitating and developing market-leading capabilities.

Thus, to ensure competitive advantage in Brand management of an organization the following are the brand mantras and brand management strategies.

## **BRAND MANAGEMENT STRATEGIES**

**A. ESTABLISH AND MAINTAIN THE BRAND:** - As a threshold issue, it will be extremely important to establish and maintain the brand. When doing so, the adoption of a holistic approach or an “overall brand strategy” is recommended. Such overall brand strategy should be implemented with full recognition that the brand may traverse numerous different product lines and geographic regions. Adopting an overall brand strategy requires recognition that brands are significant to both the traditional retail and the online market.

**B. ENSURE CONSISTENCY BETWEEN THE BRAND LICENSING STRATEGY AND OVERALL BUSINESS GOALS:** - Effective brand management strategies also necessitate emphasis on ensuring consistency between the brand licensing strategy and the enterprise’s overall business goals. Efforts should be undertaken to ensure that the brand reflects positively on the company, does not detract from other product lines and remains profitable with other parts of company.



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### **C. SELECT PROFITABLE AND INNOVATIVE LICENSE PARTNERS: -**

The importance of consistency should also be reflected in the selection of license partners. Focus should surely be placed upon license partners that enjoy healthy businesses and that offer innovative products. At the same time, however, emphasis should also be placed upon licensee partners with similar cultures and business goals since doing so may help to reduce the amount of time that is expended on reaching the basis business terms. Companies should develop a profile of the ideal license partner but recognize that while many licensors and licensees may enjoy long-term relationships, few of such relationships will be permanent.

**D. BE PRO-ACTIVE ON PRODUCTS & SERVICES: -** Licensors should be not adopt a “hands off” approach when dealing with the licensee’s products and services. Rather, efforts should be undertaken to ensure that the licensee’s products are desirable and up-to-date. Clearly, it will be in the licensor’s interest to ensure that its brand will be affixed to the most popular products and services. Of course, consumer interest can change over time so it will be essential to periodically monitor changes in demand for the licensee’s product and services.

### **BRAND MANTRAS**

- 1) To build a big brand, adopt a short brand name.
- 2) Use benefit segmentation to build brands.
- 3) Sample to sell ample
- 4) Don’t hesitate to communicate. Communication mix: personal selling/ public relations/ direct marketing/ event management/ relationship marketing/ perception management/ sales promotions/ advertisement.
- 5) Like salt, use advertisement in the right proportions
- 6) Focus on consumption rather than purchase. Look at the long-term benefits of marketing and let not your vision be clouded by short-term sales goals
- 7) Brand images are fragile, handle with care
- 8) Your consumer’s needs come first. It is important to identify the specific needs of the customers.



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## THE SIGNIFICANCE OF WOMEN IN BUDDHISM

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### INTRODUCTION

Discrimination against women is a feature common in all societies. Whether in Africa, America, Asia or Europe, the prejudice and obstacles that women have to encounter and surmount seemed almost identical. The peculiar disability attached to women all over the world is based on religious bias. Women's basic disability originates in religion. Women are depicted as temptress and are warned against in almost all religions of the world.

According to certain religious mythological concept, man was introduced as the son of God, but woman never found a similar standing as the daughter of God. Amongst the soul-believers, some held the notion that a soul exists only in man and not in woman. Those who claimed that woman too had a soul would not give credence that her soul could find a place in heaven after her death. Such were the strange beliefs amongst certain religious societies.

Women have also been regarded as the source of all the sins of the world and that they are blamed for the misfortunes on men in this world and the next. There was also the belief that as women, no salvation could be gained - they had to be reincarnated as men before they are able to gain their salvation. Certain fanatical religious cults have also prohibited women from reading the religious scriptures. The punishment for doing so was to have their tongues cut out. They were also discouraged from entering places of worship. If they were at all allowed to participate in religious practices, such participation was only confined within their own homes, attending to household religious ceremonies. Such hindrances and obstructions in the matter of moral and spiritual upliftment of women still exist in varying degrees in certain parts of the world, even though many barriers have been removed.

In contrast to such hindrances and bigoted religious practices, Buddhism can certainly claim to have the least discriminatory attitudes against women.



There is not the slightest doubt that the Buddha was the first religious teacher who had given women equal and unfettered opportunities in the field of spiritual development. Although he had pointed out on several occasions, the natural tendencies and weakness of women, he had also given due credit to their abilities and capabilities. He had truly paved the way for women to lead a full religious life. They were able to develop and purify their minds and realize the bliss of Nibbana in as much as men could. The testimonies of the Theris (Nuns) in the days of the Buddha speak amply of this fact.

The Buddha had opened the gates for the full participation of women in the field of religion by making them eligible for admission to what way known as the Bhikkuni Sangha- the order of Nuns which truly opened to women new avenues of culture and social service and ample opportunities for public life. This had bought them to a recognition of their importance to society and greatly enhanced the status of women.

## **SOCIAL ATTITUDE TOWARDS WOMEN AT THE TIME OF THE BUDDHA**

The social attitude towards women in pre-Buddhist days can be traced from the early Vedic literature, such as the Rigveda. There is evidence indicating the honour and respect which women received in their homes. In the realm of religion too, they had access to the highest knowledge of the Absolute or Brahma. However, such a liberal attitude towards women changed with the course of time, under the influence and dominance of the priestly caste along with their priest crafts, animal sacrifices, and other ritualistic practices. New interpretations were given to the scriptures. Women came to be considered as greatly inferior to men - both physically and mentally.

Women were looked down upon as a mere possession or a thing. Her place was the home, under the complete whims and fancies of her husband. She not only had to perform all the domestic chores, but also had to bring up a large family. Some of the priestly caste Brahmins married and lived with their wives, yet regarded food - cooked by women impure and unfit to eat. A myth was built up - that all women were regarded as sinful and the only way to keep them out of mischief was to keep them occupied endlessly with the task of motherhood and domestic duties.

If a married woman had no children or failed to produce any male offspring,

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she might be superseded by a second or third wife or even turned out of the house; for there was the strong belief that there must be a male child for the continuance of family line and the performance of the 'rites of the ancestors'. The traditional belief was that only a son could carry out such rituals which were thought to be very necessary for bringing peace and security to the father and grandfather after their death, otherwise they might return as ghosts to harry the family. Uncertain were the lives of married women. No less uncertainty await the unmarried ones. As marriage was considered a holy sacrament, a young girl who did not marry was badly criticized and despised by society.

In the field of religious practices, the position which they once enjoyed, was denied to them. A woman was believed to be unable to go to heaven through her own merits. She could not worship by herself, and it was believed that she could only reach heaven through unquestioning obedience to her husband, even if he happened to be a wicked person. The food left over by her husband was often the food for the woman.. It was in the midst of such extreme social discrimination and degrading attitudes towards women that the Buddha made his appearance in India. His teachings on the real nature of life and death -about karma and samsaric wanderings, gave rise to considerable changes in the social attitudes towards women in his days.

According to what the Buddha taught about the Law of Karma, one is responsible for one's own action and its consequence. The well-being of a father or grandfather does not depend upon the action of the son or grandson. They were responsible for their own actions. Such enlightened teachings helped to correct the views of many people and naturally reduced the anxiety of women who were unable to produce sons to perform the 'rites of the ancestors

In early Buddhist period, an unmarried girl could go along, unabused, contented and adequately occupied in caring for parent and younger brothers and sisters. She might even become the owner of great possessions, of slaves, and rich fields; as did Subha, the daughter of a goldsmith, during the time of the Buddha. But when the Dhamma was taught to her by Mahapajapati, Subha realized the nature of all fleeting pleasures and that 'silver and gold lead neither to peace nor to enlightenment', with the result that she entered the Order of Buddhist Nuns. This act was a great boon to the unmarried women..



The teachings of the Buddha had done a great deal to wipe off many superstitious beliefs and meaningless rites and rituals including animal sacrifices, from the minds of many people. When the true nature of life and death and the natural phenomena governing the universe were revealed to them, wisdom and understanding arose. This in turn helped to arrest and correct the prevailing social injustices and prejudices that were rampant against women in the days of the Buddha thus enabling women to lead their own way of life.

## **METHODS**

### **WOMAN'S NATURE**

Despite the fact that the Buddha had elevated the status of women, He was practical in his observations and advice given from time to time in that He realized the social and physiological differences that existed between men and women. These were depicted in the Anguttara Nikaya and Samyutta Nikaya. It was clearly mentioned that a man's duty is his unending quest for knowledge, the improvement and stabilization of his skills and craftsmanship and dedication to his work and ability to find the wherewithal for the maintenance and sustenance of his family. On the other hand it was stated, as a matter of fact, that it was the woman's duty to look after the home, and to look after her husband.

The Anguttara Nikaya contained some valuable advice which the Buddha had given to young girls prior to their marriage. Realizing that there was bound to be difficulties with the new in-laws, the girls were enjoined to give every respect to their mothers-in-law and fathers-in-law, serving them lovingly as they would their own parents. They were requested to honour and respect their husband's relatives and friends, thus creating a congenial and happy atmosphere in their new homes. They were also advised to study and understand their husband's nature, ascertain their activities, character and temperament, and to be useful and co-operative at all times in their new home. They should be polite, kind and watchful in their relationship with the servants and should safe-guard their husband's earnings and see to it that all household expenditures are properly regularized. Such advice given by the Buddha more than twenty five centuries ago stand good even today.

The handicaps and drawbacks under which a woman had to undergo in life were also clearly indicated. The suffering and agony to be borne by a woman in



leaving her family after her marriage, and the difficulties and problems she had to encounter in trying to accommodate herself in a new environment, were the trials and tribulations she had to bear. In addition to these problems, a woman is also subjected to physiological pains and sufferings during her menstrual periods, pregnancy and child-birth. These are natural phenomena depicting the differential handicaps and circumstances prevailing between a man and a woman. Although in certain sections of the Tripitaka, some caustic comments were made on the wiles and behavior of a woman, the Buddha in the Samyutta Nikaya, did bring forth many redeeming features in that, under certain circumstances, women are considered more discerning and wise than men and that women are also capable of attaining perfection or sainthood after treading the Noble Eightfold Path.

The Buddha's attitude on women can also be seen when the news of the birth of a daughter was brought to his friend, King Kosala. The King was displeased at the news as he expected a son, but the Buddha, unlike any other religious teacher paid a glowing tribute to women and mentioned certain characteristics that adorned a woman in the following words :-

*“Some women are indeed better (than man)  
Bring her up, O Lord of man. There Are  
Women who are wise, virtuous, who have  
high regard for mother-in-law, and who are  
Chaste.  
To such a noble wife may be born a valiant  
Son,  
A lord of Realms, who rule a Kingdom.”*

In revealing the nature of women, the Buddha had pointed out not only their weakness but also their potentialities and abilities. Even though some of his statements may appear rather unpleasant, one will find, through careful observation, that what the Buddha had said about women in days gone by generally still hold good today. Although there exist in most countries more enlightened and fairer attitudes, educational and independent career opportunities are open to women. She still has born unpleasant experience and discrimination despite the powers she possess.



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## RESULTS

### BUDDHA'S ADVICE TO MARRIED WOMEN

In advising women about their roles in married life, the Buddha appreciated that the peace and harmony of a home rested largely on a woman's shoulder. His advice was realistic and practical when he quoted a good number of day-to-day characteristics which a woman should and should not emulate. On diverse occasions, the Buddha counseled that a wife:-

- a) should not harbor evil thoughts against her husband;
- b) should not be cruel, harsh or domineering;
- c) should not be a spendthrift but should be economical and live within her means;
- d) should zealously guard and save her husband's property and hard-earned earnings;
- e) Should always be virtuous and chaste in mind and action;
- f) Should be faithful and harbour no thought of any adulterous acts;
- g) Should be refined in speech and polite in action;
- h) should be kind, industrious and hard-working;
- i) should be thoughtful and compassionate towards her husband and her attitude should equate a mother loving and protecting her only son;
- j) should be modest and respectful;
- k) should be cool, calm and understanding - serving not only as a wife but also a friend and adviser to her husband when need arises.

In the days of the Buddha, other religious teachers had also spoken on the duties and obligations of a wife towards her husband - stressing particularly on the duty of a wife bearing an offspring for her husband, rendering faithful service and providing conjugal happiness and heavenly bliss. Confucianism also shares this view. However, although the duties of a wife towards the husband were laid down in the Confucian code of discipline, it did not stress the duties and obligations of the husband towards the wife. The teachings of the Buddha did not have such bias towards the husbands. In the Sigalovada Sutta, the Buddha clearly mentioned the duties of a husband



towards the wife and vice versa.

A husband should be faithful, courteous and not despising. It is the husband's duty to hand over authority to his wife and from time to time, provide her with adornments.

Other useful advice was given to women on different occasions and under different circumstances.

## **TOWARDS EQUALITY AND FREEDOM**

With the advent of the modern era in the 19<sup>th</sup> and 20<sup>th</sup> century, a far cry from the days of the Buddha, women's emancipation and quest for freedom and equality had achieved tremendous strides, particularly in the West. This was the result of modern trends and modern education for women in all seats of higher learning.

Lead by Susan B. Anthony, the American pioneer unfurled the flag of equality for women in the year 1848 - just slightly over 130 years ago. Since then, the movement and struggle, with wider objectives, had forged ahead all over the world under the inspired leadership of many capable and leading pioneer women and women's organizations. They believed that women had a role to play in patriotic fellowship with their men folk in contributing to the building of a better world through building a better society and country.

Since 1848 the world has witnessed innumerable popular organised movements for equal educational opportunities, equal political rights and economic equality for women. In the West, the status of women was enhanced by the conditions generated by the industrial revolution, humanitarian movements and women's movement for equality. In Asia and other countries which were not so industrially advanced, the change was brought about by reformers with a strong religious background.

During the last fifty to sixty years, the steady process of increasing women's participation in the economic, social as well as the political life of their countries had been forging ahead steadily. The success achieved by women in the twentieth century can only be described as phenomenal. Many women had achieved success in their various fields of endeavour - in social science, in business, in economics and in the political field. In some countries, women had even succeeded in capturing the top most political appointments - as Prime Minister of their land - although ironically enough, in certain countries, women have yet to be given the franchise - the right to vote!



International action to raise the status of women began in a small way with the defunct League of Nations, after the First World War. Subsequently the United Nations Charter went further to grant the principles of equality and freedom to all women. An organ of the United Nations, the Commission on the status of women, probed the question of discrimination based on sex and deliberated on questions touching on the political rights of women, equal pay for equal work, the status of women in common law, the nationality of married women, educational and economic opportunities for women, technical assistance and participation by women.

### **CONCLUSION:**

Real freedom is the freedom that is free from all forms of bondage. It can be achieved only through the proper spiritual development and purification of one's own mind - purging and cleansing oneself from all taints of greed, hatred and delusion. No amount of public debates, demonstrations and universal charters could bring true freedom - except through one's own diligence and heedfulness by the regular practice of meditation as taught by the Buddha.

For promoting the cause of women, the Buddha can be considered as the first emancipator of women and promoter of women and promoter of a democratic way of life. It is to the eternal credit of the Buddha-Dhamma that women were not despised and looked down but were given equal status with men in their spiritual endeavor on the way to gain wisdom and the complete deliverance - Nibbana.

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## **SELF-HELP GROUP AND WOMEN EMPOWERMENT: A STUDY WITH SPECIAL REFERENCE TO SCHEDULED CASTE WOMEN IN GOBICHETTIPALAYAM, ERODE DISTRICT, TAMIL NADU**

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### **INTRODUCTION**

Poverty and unemployment are the major problems of any under developed countries, to which India is no exception. In India, at the end of ninth five year plan 26.1 percent of the population was living below poverty line. The overall unemployment rate is estimated to 7.32 percent. The female unemployment rate is 8.5 percent. The rate of growth of women unemployment in the rural area is 9.8 percent. This is because of the low growth rate of new and productive unemployment. In the end of ninth plan the rate of growth of implemented various schemes to reduce poverty and to promote the gainful employment. But the more attractive scheme with less effort (finance) is “Self Help Group”. It is a tool to remove poverty and improve the rural development.

The average growth rate of the ninth plan is about 5.5 percent average growth rate in four years (2003-2007) of the Tenth plan period was aimed as 8%. But it reduced to 7.2 percent at the end. It is aimed that 10 percent to be the growth rate of the eleventh plan at the end. The eleventh plan plans to reduce educated unemployment less than 5 percent and also decides to increase to million work opportunities. This plan allocates Rs.22832 crores for women empowerment programs. As to December 2009, 9.34 lakh SHGs covering 1.07 crore rural women are functioning in the state which nearly 53 percent of them covered under banking linkages programme.

In any society for the betterment of Socio- economic and political condition women plays a significant role. Though women constitute almost half of the total population in the world, they occupy a subordinate status in various aspects. Therefore during the recent years, there has been an increasing awareness of the disadvantaged status of women and the need to promote social equality and recognition of women as equal partners with men in development.



The empowerment of women is one of the central issues in the process of development of countries all over the world. Tamilnadu has a glorious tradition of recognizing the importance of empowering women over several centuries now. The contribution of writers and social reformers has been well documented. The Government of India has made Empowerment of Women as one of the principal objectives of the Ninth Five Year Plan (1997-2002) and also declared 2001 as the year of 'Women's Empowerment'.

Empowerment is a multi-faceted, multi-dimensional and multi-layered concept. Women's empowerment is a process in which women gain greater share of control over resources –material, human and intellectual like knowledge, information, ideas and financial resources like money- and access to money and control over decision-making in the home, community, society and nation and to gain 'power'. According to the Country Report of Government of India, "Empowerment means moving from a position of enforced powerlessness to one of power".

The Empowerment of Rural Women is crucial for the development of Rural India. Bringing women into the mainstream of development is a major concern for the Government of India. India has Population of over one billion and 70 Percent of its people live in the rural areas. Women constitute population of 495.74 million with 360.52 million in the rural areas and 135.22 million in the urban areas. The states with a high Rural Women population (over 20 million) include Bihar, Uttarpradesh, Madhyapradesh, Andhra Pradesh, West Bengal and Maharastra followed by Rajasthan, TamilNadu, Karnataka, Gujarat, Orissa, Kerala, Assam and Jharkand with population of over 10 million Rural Women. <sup>2</sup>

This process would ultimately lead to the strengthening and socio-economic Empowerment of the rural poor women as well as improve their collective bargaining power<sup>4</sup>. In this context in the present project a serious attempt has been made to study the Self-Help Group And Women Empowerment: A Study With Special Reference To Scheduled Caste Women In Gobichettipalayam, Erode District, Tamil Nadu.

### **Objectives of the study.**

**The following are the main objectives of the studies.**

1. To trace out the performance of the and function of the SHG.



2. To find out the socio-economic condition of the Scheduled caste people.
3. To trace the empowerment of Women through Self Help Groups in TamilNadu in general and Gobichettipalayam Taluk in particular
4. To identify the factors for the economic empowerment of women in . Gobichettipalayam Taluk
5. To analyses the political and social aspects of women empowerment.
6. To assess the role of Tamil Nadu Government and NGO's role in empowering the women through SHGs.

#### **4. METHODOLOGY**

The methodology adopted for the project mainly depends on field investigations and informal interview with officials from District collectorate, Panchayat office, NGOs etc., to gather basic information about Women Self Help Groups and their economic activities. In order to identify the factors for the economic empowerment of women and to analyze the social aspects of women self help groups in Gobichettipalayam Taluk about 100 Self Help Groups are selected on the basis of functioning. This study is complied with the help of the primary data. This primary data were collected with the help of specially prepared interview schedule. The questions related to the general information about the members, income, expenditure, savings and loan schemes.



**ANALYSIS OF EMPOWERMENT OF WOMEN AND THROUGH SHG**

Sl. No	Name of the SHG	Total Members	Selected For Members	Panchayat
1.	Poonthalir	16	8	Pulavakalipalayam
2.	Suriyan	20	8	Modachur
3.	Sevanthi	20	8	N.Devapalayam
4.	Deepam	12	8	Ahikuli
5.	Padumilavu	12	8	Ahikuli
6.	Anbu	15	8	Ahikuli
7.	Oothapoo	13	8	Ahikuli
8.	Indira	20	8	Siruvahur
9.	Kuringi	12	8	Kalingam
10.	Pasamalar	12	8	Vellalapalayam
11.	Lotus	13	8	Nathipalayam
12.	Amman	12	8	Lakkanspatti
13.	Venmila	12	8	Kullampalayam
14.	Avaram Poo	16	8	Pariyur
15.	Bannari	12	8	Mevani
16.	Tamil Malar	12	8	Nanjaigobi
17.	Vijayalakshmi	19	8	Kullampalayam
18.	Om sivasakthi	20	8	Perunthalaiyur
19.	Mariamman	14	8	Kadukkampalayam
20.	Malikai	15	8	Pulavikalipalayam
21.	Nandavanam	14	8	Vellalapalayam
22.	Thendral	12	8	Ayalur
23.	Pooncholai	15	8	Kolappalur
24.	Vaigai	20	8	Kullampalayam
25.	Thirumagal	12	8	Savandapur
		<b>TOTAL</b>	<b>200</b>	

Above table high light the name and total membership of the various SHG. The strength of the 25 SHG group ranging from 12-20. From each groups 8 members were selected for study.To assess the Empowerment of Women Through SHGs in Gobichettipalayam 200 interview scheduled were given to members of various SHGs. While selecting the 200 respondents from each of the 50 SHG , particular attention was given in the interview scheduled to assess the major factors like membership, Educational Qualification, Income level, Reasons for joining in the SHGs, Occupation, Savings, Training, Benefits, Role of NGO, Relationship between Banks and SHGs, Confidence level, Attitude towards Decision Making in family affairs and social service.

SHGs are increasingly accepted as the agents of social change development and empowerment among the weaker sections of the society. The concept of SHGs is introduced by NABARD in association with NGOs for the development of the



poor. Since, then, there has been curious interest among the researchers to analyze the performance and the impact SHGs.

**Table – 1**  
**Age Group of Members SHGs**

S.No	Age Group	No.of Respondents	Percentage
1.	Less than 20	13	6.5
2.	20-30	44	22
3.	30-40	52	26
4.	40-50	47	23.5
5.	50-60	27	13.5
6.	Above 60	17	8.5
	<b>Total</b>	<b>200</b>	<b>100.00</b>

**Source:** Computed from primary data

It's seen from the Table-1 that the age group and socio economic activities are inter related. Out of the total number of respondents taken from the study 23.5 per cent of them are in the age group of 40-50 followed by that 6.5 per cent of them are in age group of less than 20. It is clear about the discussion the age higher than 60 are also in the SHGs, their role is also important for SHGs. They can control and solve the problems arise in the groups.

**TABLE –2**  
**Reasons for Joining SHGs**

S.No	Reasons	No. Respondents	Percentage
1.	For getting loan	120	60
2.	For promoting savings	43	21.5
3.	For social status	24	12
4.	For other reasons	13	6.5
	<b>Total</b>	<b>200</b>	<b>100.00</b>

**Source:** Computed from primary data

It is shown on the Table-2 that reasons for joining self help groups the major aim of SHGs is to promote the saving and to credit for productive and consumption purposes. This is true because many people in the study area joins the SHGs for



heading loan and promote their personal savings, in addition to get social status. In the study area many people 60 percent of them have joined the SHGs for getting financial assistance, 21.5 percent of the respondents joined the SHGs for their social status. 12 percent of the respondents have joined for improving their savings. 6.5 percent of the members have joined the SHGs for other reasons such as social, cultural and political improvement, etc.

**Table – 3**  
**Income Level of the Members**

Sl. No	Monthly Income Rs.	Before Joining SHGs		After Joining SHGs	
		No. of Respondents	Percentage	No. of Respondents	Percentage
1.	Less than 1000	25	12.5	9	4.5
2.	1000-2000	34	17	38	19
3.	2000-3000	51	25.5	53	27.5
4.	3000-4000	12	6	37	18.5
5.	4000-5000	15	7.5	25	12.5
6.	5000-6000	14	7	18	9
7.	Above 6000	11	5.5	8	4
8.	Non-earning members	38	19	10	5
	<b>Total</b>	<b>200</b>	<b>100.00</b>	<b>200</b>	<b>100.00</b>

Source: Computed from primary data

Table-3 Presents that, income level of the members in before joining and after joining the SHGs members. Out of the total respondent taken for the study 12.5 percent of the respondents are before joining SHGs and their monthly income less than 1000 rupees. 18.5 percent of them are in the after joining SHGs and their monthly income is above Rs.4000 . Hence, this increases the willingness to participate in the SHGs' activities and many women members independently involve in the economic activities individually and with other group members after joining SHGs. Therefore, they are now economically independent and contribute to increase their household income.

**Table – 4**  
**Repayment of loan by SHGs' Members**

S.No.	Particulars	No. of Respondents	Percentage (%) Loan Repayment
1.	Repayment in time	95	47.5
2.	Repayment in advance	38	19
3.	Repayment not in time	67	33.5
	<b>Total</b>	<b>200</b>	<b>100.00</b>

Source: Computed from primary data



It's clear about the table-4. Repayment of loan by SHGs members. Out of the total respondents 47.5 percent of the respondents repay the amount in time. 19 percent of them repay the loan in advance. 33.5 percent of the respondents are not repaying in time. It is clear about the discussion that most of the respondent's repay the loan in time.

### **Educational Empowerment of Women**

It is after argued that that education is a powerful tool in the emancipation and empowerment. Indeed, different organs of the United Nations like UNICEF and experts on women's liberation argue for women's education as the basic step in women's equality. It has been reported as a crucial factor for development of women as it not only helps women to gain knowledge but also provides the necessary courage and inner strength to face the challenges of life. It will also enable them to procure a job and supplement the income of the family and achieve social status. Education, especially of women, has a major impact on health and nutrition, and is the key of developing a sustainable strategy for population control. More over educated women could play an equally important role as men in national building. Thus there is no denying the fact education empowers women.

Hence, in the present study a particular care was given to assess the educational level of rural women.

<b>EDUCATION</b>	<b>RESPONDENTS</b>	<b>PERCENTAGE</b>
Illiterate	82	41
Below SSLC	83	41.5
SSLC	16	8
+2	11	5.6
Degree	8	4
Total	200	100

Sources: Primary data

It is found from the Table that 50 per cent of the respondent's Educational levels are under the SSLC level, at the SSLC and +2 levels there are 16 and 12 respondents are educated respectively. At the degree level only 8 respondents are educated. The worrisome factor is that 41 percent respondents are uneducated. It appears from data that women with some educational background make use of the empowerment programmes. But, those women with less educational level or no educational background are unable to utilize the empowerment programmes.



## Economic Empowerment of Women

Economic independence or access to an inherited or self-generated income is considered to be the major means of Empowerment of Women.<sup>6</sup> Empowerment of women is a global issue, and it is an active, multidimensional process, which enables women to realize their full identity and powers in all spheres of life. It is also social, political and economic and decision making changes the process of development. The more empowered women become the stronger in residence and produce the needs of the society. Women's work outside the home can be a primary venue of their empowerment. When women have economic independence, they will be able to take firm decisions against their oppression in families and society. Hence, in the present study a particular attention was given to assess the economic empowerment of women and information regarding their income, savings and group deposit are collected. To know the role of SHGs in increasing the income of the members questions were asked about the income of the members before and after joining the SHGs.

REASONS	RESPONDENTS	PERCENTAGE
Increase the family income and for Loan	95	47.5
Poverty	75	37.5
Other reasons	30	15
<b>Total</b>	<b>200</b>	<b>100</b>

Sources: Primary data

It is inferred from table that 47.5 percent respondents have joined the SHGs to increase the family income and for Loan. The worrisome factor is that 75 out of 200 respondents selected SHGs due to poverty factor and other respondents are of the view that for maintenance of family affairs they are selected SHGs.

## CONCLUSION

It is evident from the study of Gobichettipalayam Taluk that Self-Help Group have been playing a vital role in the Empowerment of Scheduled Caste Women in this area. All the members stated that they formed as a group mainly to initiate income generation activities and asset creation efforts. SHGs are necessary to overcome self-reliance in the poor, particularly scheduled caste women.



It is clear that gender strategies in micro finance need to look beyond just increasing women's access to savings and credit and organizing self help groups to look strategically at how programmes can actively promote gender equality and women's empowerment. Moreover, the focus should be on developing a diversified micro finance sector where different type of organization, NGO, MFIs and formal sector banks all should have gender policies adapted to the needs of their particular target groups/ institutional roles and capacities and collaborate and work together to make a significant contribution to gender equality and pro-poor development. Self-help group is an innovative participatory approach to eradication of scheduled caste women poverty. Women self help groups are being played a very active role in eradication of rural poverty.

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## PHENOMENA OF APPEARING ORBS AS THE REVELATION OF EXOTIC PARTICLES:

*A Discourse from the Perspective of Hindu Cosmology, Hindu Pantheism and  
Cosmic Consciousness*

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### I. INTRODUCTION

Since a few years ago till today, the phenomena of appearance of orbs crowded discussions in various publications and electronic media. These phenomena have come to light due to the development of science and technology, especially the technology of digital photography. Nowadays, there are very powerful cameras capable of capturing orbs, a collection of very fine particles, in the form of light resembling the round shape of Moon, Mars, Venus, and other planets; and capturing the orbs was not possible in the past. An orb comes with a variety of colors, sometime in light, sometime in darkness. The number of orbs that appear is unpredictable and uncountable. In short, the appearance of orbs is considered weird and unique; hence it becomes the subject of discussion to many people. There is no agreement or similar views on the phenomenon of the emergence of orbs. Scientists say that orbs are collection of moist dusts that are highlighted by the light of cameras. This view is true, because, physically orb is a collection of glowing dust. On the other hand, the spiritualists and the paranormals call orbs are spirits (gods, ghosts, etc.). On the internet, there are so many pros and cons about the phenomenon of orbs in many websites; this article does not intend to focus on the pros and cons about the orbs, but this article focuses on the efforts to explain the nature of orbs in the perspectives of the Hindu Cosmology, Hindu pantheism and cosmic consciousness.

### II. DISCUSSION

#### 2.1 Various Opinions about the Orbs

On some websites we can find many descriptions of orbs. One of them is <http://asalasah.blogspot.in/2012/03/orbs-dan-makhluk-halus-di-sekitar-kita.html>. This website explains that the orb is a phenomenon of the emergence of a white circle on a photo frame in the figure indicated the presence of beings from another world. The dots on the photo frame sometimes numerous and leave a trail. In digital photography



technology especially in the ultra-compact camera, this phenomenon is referred to as orbs-backscatter. Furthermore, it is stated that orbs-backscatter usually occurs because of the lens construction and the built-in flash which is adjacent to the multi-compact camera that shrink illumination angle to the lens and automatically increases the lighting reflection on the particles that are barely visible to the naked eyes in front of the lens. Therefore, orbs-backscatter may be produced from particles of dusts, powder and liquid particles that fall as rain patten. Sometimes we think that orbs appear probably due to dirty camera lens so as to produce the effect of a white ball, called orb.

Some internet sources explain that orbis a popular name to refer to the sphere shaped anomalies that appear on photographs; in Spanish the orbs are called *canoplas*. In camera and video, orbs appear as balls, gems or spheres of light with an image size as a golf ball till to size of basketball. Orbs are believed to be some spirits or ghosts by paranormal or supernatural human beings, having ability to see the orbs. Some people are able to see orbs with naked eyes; it can be done because of some special talent or through exercise. Cameras with high resolution (at least with 1.3 Mega Pixel) can capture pictures of the orbs. Some internet sources also states that it is easy to capture the picture of orbs going into the house which is considers by society as ghost place, then by using digital camera photographing anything we can find orbs in all directions. We can also take pictures of people alleged to have possessed by Jin or other forces. Usually, whenever we take pictures with a digital camera, orbs always appear around these places and people. Orbs can be refracted like a cloud or collection of smoke, called ectoplasm. Ectoplasm is alleged as the transformation of the second ghost after orbs.

There are different explanations regarding orbs as published in newspapers and magazines and electronic media. Some claim that the appearance of orbs happens because the photographer might have forgot to clean the lens; but many photographers claim that they always keep their camera-lens clean. Again, some photographers claim that they got the image of orbs, a white circular supernatural figure (Ghostly phenomena), after enlarging some pictures. That's why the unseen world became very popular for many people to carry out a series of studies. There is a tool called EVP (Electronic Voice Phenomenon) that can be used to communicate with the supernatural. EVP Digital technology is typically used in certain locations like abandoned houses, common graves, etc. Again, a research states that at the places of positive

energy (such as places of worship: mosques, temples, churches, Synagogues etc.) the orbs appear. Even in those places, orbs can be photographed with the usual pocket camera (1.3 Mega Pixel) without using digital cameras having high-resolution. The cameras having resolution greater than 7 Mega Pixel can take photographs of orbs more perfectly.

Other Internet source, namely <http://www.amazon.com/The-Ghost-Meter-EMF-Sensor/dp/B000ZH7G1E> explains that today there is a tool that can detect the presence of ghosts; the tool is called *The Ghost Meter EMF Sensor*. The manufacturer states that in this era of advanced technology anyone can detect the presence of ghosts or other spirits. The manufacturer outlines that: *The Ghost Meter* has been calibrated to ignore the extremely subtle EMF emissions surrounding the human body, yet is still sensitive enough to detect the small, distinct, erratic EMF energy fluctuations frequently found at reputed haunted locations. The Ghost Meter provides three corroborating indicators of EMF emission strength. A needle based display, LED lights, and an adjustable audio signal. The response time of this meter is excellent, easily outperforming more expensive EMF meters. It can also be operated in silent mode so it doesn't interfere with EVP (Electronic Voice Phenomenon) recordings or distract other investigators during an investigation. Compare the value this meter offers compared to other brands. There is no other offer that comes close to providing these levels of features and performance for the price. You've seen television ghost hunters use similar detectors. Now you can get your own and start investigating the unknown.



Furthermore, the product description of EMF explains: Aside from a camera, the most basic tool for a ghost hunter is the EMF meter. When ghostly activity takes place, electromagnetic anomalies often occur in the environment. This meter can allow you to detect these disturbances. Find hot spots in homes! In cemeteries! In buildings! We guarantee that an evening visit to a cemetery with the meter is an



experience that will thrill you! Go in a small group and you will have a lot of fun and some! Conduct paranormal surveys (comes with instructions). You may charge for those services or do them for pleasure! Though we use language that is fun and casual, The Ghost Meter is an accurate instrument devoted to high quality paranormal activity. Each one is individually calibrated. Even though you may experience nothing via your physical senses, if you take a photo when the Ghost Meter indicates a strange fluctuation, you can sometimes capture a picture of a ghost! The CellSensor Ghost Meter measures paranormal cell activity. It is wonderful for several reasons: It's lightweight and compact. It has needle readout and an adjustable audio tone, allowing you to use it in the dark or without looking at it. Also a light so you can monitor from far away! At a haunted location, strong, erratic, fluctuating readings are commonly found. It seems these energy fields have a connection to the presence of ghosts. When you find a strange, inconsistent reading, that's a great time to make a photo of the area. The developed print may show an apparition. This is the official meter of many Ghost Clubs! Runs on a single 9V battery (not included).

Dave Juliano, <http://theshadowlands.net/ghost/orbs.htm>, describes: What are these balls of transparent light we find in photos taken in allegedly haunted places? I won't tell you I know the answer to this question. No one has the true answer to this question yet, but that's part of the job of researchers and investigator. One of the leading theories concerning what orbs are and the one that I lean towards the most is that they are not the spirit at all. The orb is the energy being transferred from a source (i.e. power lines, heat energy, batteries, people, etc.) to the spirit so they can manifest. This may not even be a conscious thing the spirit is doing; just a natural way they get their energy. This would explain why the orbs are round balls. According to the laws of Physics energy being transferring like that would assume is natural shape of a sphere. This theory can also be tied into the EMF (*electromagnetic field*) readings we get during spirit activity. I always approach things with a bit of skepticism, so when I saw all these websites start showing off these photos as ghosts, I was just as weary as most of you. I just had to try it for myself. I took a 35mm camera that I had used regularly for 6 years in all types of lighting and weather and had never gotten an orb or other unexplainable photo before and went out with a few seasoned field investigators on a cemetery investigation. One of the investigators was psychic and she pointed out a few areas we should take photos, so I did. I also



had ghost footsteps walkup behind me twice and I turned around quickly and took photos of the empty air. When I got my photos developed, I had these orbs and fog in those photos that I was told to take, as well as the footprint ones. All my other photos were normal. Coincidence?

Since we do not know what orbs truly are, just that they seem to be found mainly in areas where there is ghost activity; I will tell you what they are not. On a normal investigation there are about 10 people using 10 different cameras, 35mm and digital, and many speeds and brands of film. They all get their film developed at separate places. Let's say only half of these investigators get some orb photos. Are these water spots or dirt on the lens? That would mean that 5 people all had similar dirt on their lens and all 5 did not clean their lens either. Are these orbs film processing errors? Well the 35mm cameras all had their film developed in different locations and used different film so that is very unlikely. The digital cameras can't have film-processing errors. I am aware that some people feel that the orbs on a digital camera are an error in the digital processing of the image. When that error does occur in digital photos, the objects tend to be square in nature, not round and they cannot be semi-transparent, the pixel behind would have to be corrupted also. I will not even address the precipitation theory; no legitimate researcher takes photos in any form of precipitation. What about dust and dirt being stirred up? Can that be the cause of the orbs? If that were the case, I would think that there would not be normal photos in a sequence of photos from the same camera and location. All of the shots in a sequence should have the dust or dirt in it. We find that most orb photos do not appear in consecutive photos. All photographers present should get orbs if it is dust being stirred up as well. These are just a few things for the skeptics to think of when they are condemning an orb photo as a fake or fraud and some things for investigators to consider when checking their photos for positives.

## 2.2 Orbs in Hindu Cosmology

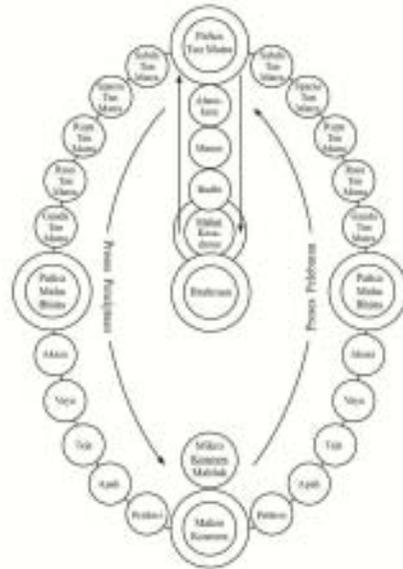
Dr. Malati Sirsikar (1996:97) in the *Cosmic Laws - Physics and Metaphysics* and also Donder (2007:198-199) in *Hindu Cosmology* explained that in the esoteric understanding, the Universe was composed of fourteen world levels. The fourteen worlds can be divided into two groups; the first is the 'Saptatalas' consisting of *Patala, Rasatala, Talatala, Mahatala, Sutala, Vitala, Atala*; and the second is 'Saptalokas' consisting of *Bhuloka, Bhuhvarloka, Swargaloka, Mahaloka,*



*Jñanaloka, Tapoloka, Satyaloka.* Among them *Bhuloka* and *Patala* are two divisions pointing the boundary between the two regions of *Saptalokas* and *Saptatala*. Beginning from the Earth till the top of the seventh level above is called the '*Saptalokas*', while from the *Patala* to the seventh level at the bottom is called the '*Saptatalas*'. It is a holistic study of cosmology that consists of Physical and Metaphysical Cosmology; it can also be said as the study of Materialistic and Spiritualistic Cosmology, the discussion of which involves the presence of the Almighty. It's the difference between the Hindu Cosmology and the Western Cosmology. Many things are not discussed in Western Cosmology but those are seriously discussed in Hindu Cosmology. That's why many experts of Cosmology, for example Prof. Carl Sagan, an expert of Astronomy, are so amazed on Hindu Cosmology.

Carl Sagan, *Professor of Astronomy and Space Sciences from David Duncan and Director, Laboratory for Planetary Studies at Cornell University*, in his book '*Cosmology*' (2000) explains that the Hindu religion is the only one religion in the world that devote itself to the idea that cosmos itself had a large number of events of births and deaths, countless. It is a religion in which the time scales on it are according to the time scale of Modern Cosmology. In Hindu cosmology the concept of the cycle of creation and destruction of the universe occurs repeatedly. The process of creation and destruction of the universe as a cycle is known as the cosmic dance of *Shiva*. In this context, the god *Shiva* is known as *Nataraja* or 'King of Dancers' who has four arms. On the upper right arm He holds the drum as a symbol of 'the sound of creation'; in the upper left arm holding the flame, a symbol that the universe that has been created, billions of years later, will be destroyed. In many Myths there are the seeds of the idea of modern astronomy, such as the idea of the beginning and the end of a period of galaxies. As was stated that if there was more material than we've seen because it is hidden in a black hole or in the hot gas, therefore not visible in between the galaxies, then the universe will cease its own development and follow repeated cycles as takes place in trust in India. And then came the development which is followed by shrinkage of the universe after universe, a cosmos without end. If we live in the cosmos like this, the big bang is not the creation of the cosmos, but it is only the end of the previous cycle. Oscillating universe, the cosmos has no beginning or end (Skt. *anadiananta*) and we were in the middle of the cycle of death and rebirth that took place on an ongoing basis (Sagan, 1997, 2000:337-339).

Donder (2007:107-120) explains that God is the origin of all the elements of the Universe, God is the seed and the source of all beings, God covers the whole of the Universe, God is watching closely over the whole Universe, the Universe is united with the body of God, the Universe is supported by Soul, and then the Universe experienced cycles of birth and death many times, etc. Donder(at 143) also explains the process of creation and destruction of the Universe with a sketch as shown in the picture. Through this sketch the reader can understand the concept of creation and fusion of the Universe that is cyclic nature.



Guided by several of Hindu literatures, Donder explains the creation process briefly as follows: In the beginning the Universe was not there, at that time there was only a blank space and time, there was only God Himself. That was a form of the body of God as *Saguna Brahma*, called *Hiranyagarbha* (Womb of the Lord). This is the embryo of the concept of space and time. In the blank of the space and time, there were only the ‘Creation Energy Materials’, called *Prak?ti*, actually the Energy of God. Therefore God is also referred to as the “Materials Cause” or Causal Materialists of the Universe (Pudja, 1999:251).

In *Hiranyagarbha* there are eight kinds of elements as the *Bhagavadgîta* VII.4 states: ‘*bhùmiràpo ‘nalovàyuákhaýmanobuddhirevaca, ahaòkàraitìyaý me bhinnàprakâtiraûþadhà*’ (Earth, water, fire, air, ether, mind and understanding and self-sense; this is the eightfold division of My nature). The eight elements (*Bhumi, Apah, Anala, Vayu, Kham, Mano, Buddhi, Aha?kara*) are called *aûþaparak?ti*. The process of creation began from the element ‘Buddhi’ (Intellect of God), which then moves into the element ‘Manas’ (mind of God), and then from there emerged the realisation of ‘Aha?kara’ (Ego or God’s will). Furthermore, through the will of God other elements were created; firstly ‘Kham’ (ether), from ‘Kham’ appeared ‘Vayu’(air), from ‘Vayu’ appeared ‘Teja’ (fire), from



'Teja' emerged 'Apah'(water), and from 'Apah' emerged 'Bhum' or 'P?thivi' or earth. Prof. Dr. JidduButchi Venkat Rau (2011:10-12) in *Panchabhûtas* (The Five Divine Elements) explains: "MulaPrak?ti transforms to Mahat (the representative of *Buddhi*), Mahat transforms to Aha?karam and Aha?karam gets classified as *Satvika*, *Rajasika* and *Thamasika*; five senses of knowledge (eyes, ears, touch skin, nose, tongue), five senses of action (speech, hands, legs, genitals, and anal opening) along with their master *manas* (mind) are born from *SatvikaAha?karam*; Five gross elements (*P?thivi* or earth, *Jala* or water, *Tejas* or *Agni* or fire, *Vayu* or wind and *Akasham* or ether) and the five subtle elements (*Sabda*, *Sparsa*, *Rupa*, *Rasa* and *Gandha*) total 10 are born from *TâmasaAha?karam*. *RâjasikaAha?karam* behaves as an overseer). The five gross elements are known as *Pañchabhûtas* and five subtle elements are known as *Pañcatanmatras*. Each subtle element is a quality of a gross element – *Sabda* for *Akasha*, *Sparsa* for *Vayu*, *Rupa* for *Agni*, *Rasa* for *Jalam*, *Gandha* for *P?thivi*.

The abovedescription of Hindu Cosmology does not contradict with the idea of the creation of the Universe according to Modern Cosmology. Similarities between the Hindu Cosmology and Modern Cosmology can be briefly described as follows: when *Vayu* (air) was created then air friction produced, causing condensation, which resulted in the production of heat energy (*Teja*) as the Energy of God. This heat energy caused a very large expansion, so the space *prak?ti* of Lord in the *Hiranyagarbha* and all its contents burst out with Huge explosion; the sound of this Huge explosion was heard as the sound *AUM (OM)*. The sound of *Om* is also called *Pranava*, Word, which is believed to be the sound of the beginning of the universe, so the sound of *Om* is believed to be the Voice of the Creation. From this concept came many concepts that believe the Universe was created from *Vak (Vicara, Sabda, the Word, the Logos or Sound)*. The description of the Hindu cosmology is quite relevant to the Theory of Creation of the Modern Cosmology, especially the Big Bang theory. The difference of Hindu Cosmology from the Modern Cosmology is that Hindu Cosmology involves discourse about God while Modern Cosmology does not involve direct discourse on God. Modern Cosmology claims that it is based only on the laws of nature. This difference is understandable because the Hindu Cosmology uses the holistic approach while Modern Cosmology (Science) uses only logic senses. Nevertheless Modern Cosmology also indirectly talks about God; it uses the name



Prima, Causal, Primordial Energy as the name of God in the language of physics and chemistry. Hinduism allows the name of God by whatever (any) name (*Ekam Sat ViprahVahudavadanti*).

The most important thing to discuss here is that the elements that make this universe are the *Astaprak?ti* from *Hiranyagarbha* (womb of God). Scolding (2007:196) describes that the eight elements, *astaprak?ti*, as the principle constituent of the Universe, are in united state; and these elements cannot be separated from each other. Three elements are very subtle, namely *Buddhi*, *Manas* and *Aha?kara* that come from God to pervade the entire creation and stay inside all electron atoms of all elements in the Universe. These three elements – *Buddhi*, *Manas* and *Aha?kara* are element of the intelligence property of God (material properties). The proportion of these three attributes of God, within each element, will determine the nature and character of each element and finally the character of a creation in this Universe. All elements in the Universe, ranging from dust to the mountains, plants, stars and humans – are all permeated by these three attributes of God. Therefore, one statement in the philosophy, which states – “there is nothing dead in the world”, but, “all things in the world are actually alive”, is true. This statement becomes the basis of the belief that every object has a spirit. Testing of the truth of this statement can be observed in laboratories of Science of Wave Mechanics or Quantum Physics. In the language of science (Quantum Physics), the basic principle of all the elements in the Universe is Energy; while in the language of Hindu Philosophy or Hindu Theology, the basic principle of all things is *Shakti* as the manifestation of God. It is relevant to *ÎûUpaniæad 1* which states: *îûàvàyamida?sarvamyatki?cajagatyàmjagat...* ‘All things that animate or inanimate all of them covered by God...’ (Radhakrishnan, 2008:437). This explanation is relevant to *Bhagavadgîtà IX.4:mayàtatamidaýsarvaý jagadavyaktamùrtinà, matsthànisarva-bhùtàninacàhaýteûvavasthitaá* (By Me all this Universe is pervaded through My unmanifested form. All beings abide in Me but I do not abide in them); and also to the *Bhagavadgîtà IX.10:mayàdhyakûéóaprakâtiásùyatesacaràcaram, hetunànenakaunteyajagadviparivartate*. (Under My guidance, nature (*prakâti*) gives birth to all things, moving and Linmovcing and by this means, O Son of Kunti (Arjuna), the world revolves); and also to the *Bhagavadgîtà IX.29:samo ‘haý sarva-bhùteûu na me dveûyo ‘sti na priyaá, ye bhajanti tu màý bhaktyà mayi te teûu càpy aham* (I am the same in (alike to) all beings. None is hateful nor dear to Me. But



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those who worship Me with devotion they are in Me and I also in them).

Presence of the attributes of God that permeates the entire Universe becomes the basis of the concept of pantheistic theology, although Hindu theologies not only rely on the pantheistic theology alone. Based on the Hindu pantheistic theology, it is believed that the God Almighty has Biggest properties that cover the entire Macrocosm. Likewise God Almighty also has Smallest properties that can enter and stay in the electron of the atoms. Prof. Jiddu (2011:37) describes: *“There are energy giving elements – Existential energy for the sustenance of all beings as manifestation of Parabrahma (Universal consciousness). The Existential energy i.e. Cosmic Energy (Divine Energy) is for man and man calls it as God”*.

The belief that the universe is covered, permeated, supported, controlled and guarded by the Consciousness of God later became the theme called Cosmic Consciousness in the Cosmology. Bhagavan Sri Sathya Sai Baba says, “The world is always guarded by a consciousness of God, therefore no one leaf will fall down by accidentally”. The results of a scientific research by Dr. Masaru Emoto (2009), a scientist from Japan, have proved that in every particle of water there is awareness. The good words and bad words pronounced on the surface of the water were influential to the forms of water crystals in sub-zero temperature. Also there are many research results proving that plants have life and feelings.

Recent studies (<http://www.collegian.psu.edu/archive/2008/12/09>) describe: “Researchers from Michigan State University have discovered that plants have a rudimentary nerve structure, which allows them to feel pain. According to the peer-reviewed journal Plant Physiology, plants are capable of identifying danger, signaling that danger to other plants and marshaling defenses against perceived threats. According to botanist Bill Williams of the Helvetica Institute, “plants not only seem to be aware and to feel pain, they can even communicate.”

Based on the basic concepts above, Hindus believe in One God, outside and as well as inside the smallest particles of the Universe. This concept has led to a variety of Hindu theologies. In the perspective of the faith that God is away from His creation, the Hindu religion provides a monotheistic theology. Then, in the perspective of the belief that God is the Smallest and very Smooth and dwells in the electrons of atoms, the Hindu religion provides a pantheistic theology. Not only these, but Hinduism provides a variety of theologies ranging from the most ancient theology to the most



modern theology. Hindu theology includes animistic awareness to monotheistic according to the evolution of intelligence of each person. Therefore, the Hindu theology will never contradict or at odds with the theology of any religion. A Hindu should not be angry only because of calling him so-called animist; because, it (animistic) is not bad, even it is glorious. For those who are animists will appreciate all of creation, they believe that in every creature there is a spirit or *atman* which is a manifestation of God or *Brahman*. So, none of the faiths is bad or wrong; all faiths will lead to God-consciousness (*Brahmavidyà*, scolding, 2007; and Theology, scolding, 2010).

According to Hinduism, the number of Spirits cannot be calculated; even, Hindu Cosmology states that the Universe at the beginning was a Spirit. If the Spirit can enter into the electrons of atoms of each element, then the world is filled with the Spirit. The number of spirits is same as the number of electrons of all the atoms in the Universe. If the number of the atomic electron is infinite, then the spirits are also innumerable; the Spirit covers the entire Universe. Only human eyes cannot see it, but the *yogis* who mastered *RajaYoga* ('*Brahmavidyà*' or '*Atmavidyà*') knowledge are able to see it.

### 2.3 Orbs, Hindu Pantheism and Cosmic Consciousness

As has been described above that the world is originated from *Hiranyagarbha* or Warehouse of the Universe, which was not visible to the eye. Warehouse of the Universe is a kind of Subtle Body or Spirit of the God, also called Maya of God, from which the Universe was created. The Universe was initially hidden in *Hiranyagarbha* and after its creation it can then be seen by the eyes. However, after transformed into matter, the delicate nature of the basic ingredients remains the same in the Universe. It is also stated in the Hindu theology that one day the world will experience '*pralaya*' or 'apocalypse' and will not be seen again. Creation and destruction will continue repeatedly and endlessly. As stated in the *Bhagavadgîtà* II.28: *avyaktàdñibhùtànimvyakta -madhyàñibhàrata,avyakta-nidhanànyevat atrakàparidevanà* (Beings are un-manifest in their beginnings, manifest in the middles and un-manifest again in their ends, O Bhàrata (Arjuna). What there in this for lamentation?). Again *aèlokain* the *Bhagavadgîtà* (IX.7) states: *sarva bhùtànikaunteyaprakàtiyàntimàmikàm, kalpakûayepunas tànikalpàdauvisàj àmyaham* (All beings, O Son of *Kunti* (Arjuna), pass into nature which is My own at the end of the cycle; and at the beginning of the (next) cycle, I send them forth). And



the *Bhagavadgītā* IX.8 states: *prakāṭiṣvāmavañ*  
*ḥabhyavisāḥāmipunaāpunaā, bhūtagrāmamimaykātśnamavañāyprakātervañāt*  
(Taking hold of nature which is My own, I send forth again and again all this multitude  
of beings which are helpless, being under the control of nature (*Prakāṭi*).

Prof. Dr. B.B. Puri (2003:8) states that our Sages and Saints could see thousands of years ahead. They knew various mysterious and mystical elements of this Universe even before Western Scientists could start finding them out. Dr. B. S. Mavinkurve et al (1995:26) describes: We find Science analysing matters and subdividing it to arrive at the Reality at the base, while Spirituality starts right from the base of all phenomena, and then explains the multifarious types of phenomena in relation to that Reality. Just as Science sees atoms, protons, electrons and so on as the ‘building blocks’ of the physical world, Spirituality, going still deeper to the source, studies the Cosmic Consciousness immanent in all things and beings, and sees that as the essential substratum of the Universe. Today, Science is finding that matter, subdivided into subatomic elements, tapers off into energy and light, whose working finally points to a supreme Intelligence or Consciousness. As Fritjof Capra, the eminent Physicist puts it: “Solid matter does not exist. It is a construct of the human sense and the mind, which does not exist in the Cosmic drama of energy patterns. The power that keeps the Cosmic drama going is, according to Spiritual Science, the Divine Mind. The Dancing ‘*Nataraja*’ of Hindu culture symbolises this Truth”.

KowthaLalith in Gayatri Devi Vasudev’s book (2009:141) describes that each of these directions has a deity called *Dikpālas*. The *Dikpālas* are as follows: East – Indra, South – Yama, West – Varuna, North – Kubera, South-East – Agni, South-West – Nirṭi, North-West – Vāyu, and North-East – Īūāna. The Vedic texts have given different hymns to the eight *Dikpālas*. What has been described by KowthaLalith about *Dikpālas* means that God is present everywhere, also in every atom. Everything in the Universe, if seen as Cosmic Consciousness wave (= 0 Hz), can possibly perform as the subtle material or as the soul. And if everyone possesses Cosmic Consciousness (= 0 Hz), then he/she will see everything as a soul; it is easy to understand if everyone understands the knowledge of *RajaYoga* (the King of Knowledge).

In addition, Japanese scientist Dr. Masaru Emoto, as stated earlier, reported the results of his research that proved that the utterance of any good/bad word can affect the structure of water crystals. He stated that chanting of *mantras* also can



affect the crystals of water in human body, which ultimately has a positive effect on physical and mental health. Other new evidences have also been given by many other researchers. The basic concepts of Quantum physics and modern technology of digital cameras and Kirlian photography and Aura photography have given spirit to explore more and more the effects of Hindu rituals and spiritual disciplines; and it has been proved that Hindu teachings are not mere beliefs, but very scientific truths.

Donder (2009) in a research on “*Exotic Phenomena around Ratu Bagus*” reported that the joy, peace and controlled happiness of human mind and heart effect the emergence of beautiful ‘Orbs’ around the area of “shaking meditation”. The forms and colours of the Orbs are different according to the different states of the mind. Again in “*Bio Energy Meditation - Ratu Bagus*” (2009), it is stated that at the stage of proper contemplation, the mind can invite the ‘Orbs’. The more the level of contemplation becomes high, the more the shapes and colours of “Orbs” become clear. Many authors and researchers describe, in internet, that the Orbs are only “wet dust, exposed to light”. Others say that the Orbs are ‘ghosts’; or, these are due to some ‘problem of lens in camera’. But, Donder concludes that the Orbs are the smallest conscious particles due to the vibrations of the energy of human mind and body. This conclusion corresponds to the concept of pantheism in Hindu theology, that Almighty God pervades the entire universe down to the core of atom. So, the “Orbs” are symptoms of divinity, which appears materially to be uncountable particles. At the solemn and holy atmosphere in the rituals, many Orbs appear, as if, they come to show their joy dancing like *Tandavan?tya* of *ĀivaNatharaj*.

Ida PanditaMpuNabeParamadaksaNathaRatuBagus says that harmony is the law of the Universe. As it is known that the principle of harmony of life among all the dwellers in the Universe is the principal characteristic of Hinduism. As regards Hinduism in Bali, one can find worshipping places at every nook and cranny in mountains, rivers, big trees, phenomenal places, etc. On that account, some ignorant people will say that Hinduism venerates the nature. The Hindus need not get angry or feel inferior to be called a worshipper of nature. The Hindus must inform them that Hinduism seems to be the worshipping of nature, because it completely realises that God pervades over all things, even into the nucleus of atomic electron; and from there God provides the energy of the Universe. The *Vedas* say: ‘*sarvakhaluidam Brahman*’ or ‘all are God’; and the *IsaUpanishad* states: ‘*isavasyamidamsarvamyatkiñcajagatyamjagat*’ or

‘God pervades the whole Universe’. Moreover, the Quantum Physics Theory or New Physics justifies pantheism in the principles of Hinduism. Fritjof Capra says that the *Āivanataraja* or *Tandava* dance represents the dance of God in every single atomic electron. Ida Pandita Mpu Parama Daksa Natha Ratu Bagus is the Master of “Bio Energy Meditation of Ratu Bagus” in Bali, Indonesia. He has disciples in 38 countries in the world. He teaches everyone to grow the cosmic consciousness within. And he said that the one who has the cosmic consciousness can enter into the core of the atom. It proves that the spiritual consciousness of the human condition (*manah* in the microcosm) affects the consciousness of the Universe (*Mahat* in the macrocosm); and vice versa. It also proves the truth of what the Hindu saints claimed, that the natural phenomena are reflections of the human mind.

There is a little difficulty to explain the phenomenon of appearance of Orbs; especially when explained to people without the understanding of Hinduism. Indeed, in the present times, Science and Technology are trying to explain this phenomenon. The only point is that Science uses the term “Primordial Energy”, instead of “God”, behind every phenomena and secrets in the Universe. There are many discourses and debates between believers and non-believers regarding the existence of the Orbs. It would be easy to explain to the people who have basic knowledge of Hindu theology, Hindu philosophy, especially the concept *Pañcamāhabhūta* (the five Divine elements) and the knowledge of Quantum Physics.



Photo: Orbs at Ratu Bagus Ashram, Bali, Indonesia (2009) after *Agnihotra*



Photo: Orbs at Ratu Bagus Ashram, Bali, Indonesia (2009) at the time of the ritual

Through the Hindu theology that sources from the *Catur-Vedas*, *Aranyaka Upanishads*, or *Brahmasutra*, etc., we know about how the universe was created and how the nature of God Almighty exists outside of the universe and covers the

Universe. And the nature of God as Very Small (*Paramànu*) existence can occupy the core of the sub-atom particles in each element. The God life exists within every sub-atom, which, in the language of Physics and Chemistry, is called potential energy of the electrons, and sometimes it is called the Primordial Energy. Indeed, the appearance of Orbs can be explained completely by Hinduism and Science. Swami Vivekananda says: “The control of the mind and manipulation of mental power is at the bottom of most phenomena which cannot be explained by laws of external Nature. *Rajayoga* is the science concerned with this”. Based on the above description, it is clear that the Orbs appear at the time of worship due to collaborative/collective effects of the energies in all ritual procession.



Photo: Orbs at the Guest House, RabindraBharati University, Kolkata (02 May 2011), after Vikram Singh chanted *mantra* for one hour.



Photo: Orbs at the Guest House, RabindraBharati University, Kolkata (27 July 2011) after Vikram Singh chanted *mantra*.

### III. CONCLUSION

As I have mentioned above that I have two times carried out researches on orbs and the results of my research have been published as a book. My research was supported by hundreds of photographs of orbs. The photos of orbs I took at different times and different places. And the data are also supported by the photos of orbs, photographed by Ratu Bagus students who come from different countries. Through my observations and also reports from students of Ratu Bagus, it is understood that the orbs will be coming a lot around us with different shapes and colours when we are in shades of silence and sacredness. Orbs are not only in caves, cemeteries or haunted places. Orbs exist anywhere, at the place of calm conditions. Cosmologically, theologically and physically, orbs are truly collection of dust, but in the dust, there is a sense that controls dust, that's one form of Cosmic Consciousness. This phenomenon is a very good for humans, because by knowing that there are orbs everywhere, it will



make people aware that the manifestation of God is always watching human behaviour everywhere. Hopefully, discourse on orbs will make people more aware of the existence of God.

We have possibility to see the orbs everywhere and at any time directly with the naked eyes, through a method of spiritual practice. But today's digital technology has also prepared tools to see them. We are free to choose any one of them depending on our goals.

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## THE USE PATTERN OF PUBLIC LIBRARY SERVICES: - A SURVEY OF DR RADHA KRISHAN STATE CENTRAL PUBLIC LIBRARY

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### 1. Introduction

The public library is a living, force for popular education and for the growth of international understanding and there by for the promotion of peace. The public library is a product of modern democracy and practical demonstration for democracy's faith in universal education as a life long process. As a democratic institution operated by the people, the public library should be established and maintained under clear authority of law, supported wholly or mainly from public funds, opened for free use on equal terms to all members of the community regardless of occupation, creed, class or race. The Public library of today is fulfill and meet the educational, cultural and informational needs of the public through print & non — print materials. We can trace out different types of libraries that are organized for catering to the requirements of different communities of clientele in a country. Public library is one of them which are open to all irrespective of age, profession, race, literature required.

### 2. Objectives of The study

**The objectives of the present study were:-**

- To study the use pattern of Dr Radha Krishan State central Public Library, Jaipur.
- To know the users purpose of visiting the Dr Radha Krishan State central Public Library, Jaipur.
- To know the regarding books and magazine collections of the Library.
- To assess the opinion on internet services in the Library.
- To assess the opinion of the users about the overall performance of the Library.
- To suggest for improvement of the Dr Radha Krishan State central Public



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## Library, Jaipur.

**3. Methodology of the Study** The present studies' main aim at pertaining the use pattern of Dr Radha Krishan State central Public Library, Jaipur evaluating the usefulness of the services provided by the Dr Radha Krishan State central Public Library, Jaipur.**3.1 Sample selection**For finding of objective the study uses random sampling technique and surveyed 200 peoples who visited the Library at different time intervals during the period of the study. The pre design questionnaires were distributed to the visitors of the Dr Radha Krishan State central Public Library, Jaipur in different days. In the all visitors were including students, senior citizen, women. Children and business man for finding opinion about the Library.

### 3.2 Collection of Data

Regarding the study of the case, all information has been collected from the Library records, annual reports and thorough discussion with the Library staff and users. We personally visit the library to observe and interact with different class of personals for gathering information.

A structured questionnaire was circulated among the users at the time of their visit to the library during month of August and Sep 2012. This was done on different days of weeks at different hours. A Total of 200 questionnaire were distributed to the users out of which 181 (90.5%) were respond

## 4. Public Library Systems in Rajasthan

### 4.1 About Rajasthan:

Rajasthan the first largest state of India (Area: 342 239 sq km) is largely an arid state for most part. Under the British rule it was known as Rajputana, it constituted of 19 Princely State, 3 Chief ship and the Centrally administered province of Ajmer Marwad. The formation of Rajasthan state in its present form started in 1948 and completed in 1956. The state is divided to 7 divisions and 33 districts, 213 Tehsils, 238 Panchyat samities and 340006 village panchayate.

The primary education is imparting to children of age group of 6 to 9 years while upper primary educations is to the age group of 10 to 14. In Rajasthan is a constitutions commitment to provide free universal primary education including upper primary up to age of 14, but this dream has not yet been fulfilled.



## **4.2 Public Library in Rajasthan:**

In Rajasthan public library concept had continued since Rajshahi. At that time Udaipur, Jaipur, Jodhpur, Khetari, Bharatpur, Kota and other main kingdoms followed the tradition of library. After establishment of Rajasthan state all those libraries were occupied by Govt. of Rajasthan and taking responsibilities to enhance its development. At era there are 44 full time public libraries were working under department of Secondary school education, but development of these library was not good. Then state govt. has decided to shift its responsibilities to Dept. of Language from 31 January, 2001 by Gazette notification are now onwards it called as Bhasa evam Pustkalya Vibhag. This department is doing well to develop public libraries with limited resources and staff and today those 44 libraries now extended to 273 public libraries.

Administrative setup of Public library under the Directorate of Bhasa evam Pustkalya Vibhag:

Rajasthan's main Public Libraries are as following:-

### **State Central Public Library**

1. Dr Radhakrishanan State Central Public Library, Gandhi agar, Jaipur

### **Divisional Public Libraries in Rajasthan**

1. Govt. Maharaja Divisional Public Library, Jaipur
2. Govt. Divisional Public Library, Ajmer
3. Govt. Divisional Public Library, Bikaner
4. Govt. Divisional Public Library, Kota
5. Govt. Sumer Divisional Public Library, Jodhpur
6. Govt. Divisional Public Library, Udaipur
7. Govt. Divisional Public Library, Bharat Pur

It is found that one Sate central Library and 7 Divisional Public Libraries are Rajasthan. Various districts are there Districts Libraries are not their head quarter. Jaipur have one State central Library and one Divisional Public Library as Maharaja Public Library. Jaipur Districs Public Library held at Kotputli and Jodhpur District Public Library held at Bilada. Udaipur District Library at Slumber, Ajmer District Library at Kishan Garh, Kota District Library at Ram Ganj Mandi, and Bikaner District



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public Library held at Nokha.

Except this 33 District Public Libraries and 237 sub-divisional Public Libraries are working in Rajasthan. Mostly sub-divisional public libraries are placed in Govt Sr. Schools at tehsil level.

### **Dr Radha Krishan State Central Public Library.**

Dr Radha Krishan Public Libraries have proud for first public Library of Rajasthan Government. The Library was set up in 15 August 1956 as a State central Library of Rajasthan. It was started in Jaipur in a rented accommodation. Then it was transferred to Bikaner and housed in the office of the Deputy Director, Social Education. Again After few years it was shifted back to Jaipur on the ground floor of the Maharaja Public Library. In 1990 it was again shifted to its new own building at Jawahar Lal Nehru Marg, Jaipur. Presently Library has not regular State librarian but have an official State Librarian from 01 august 2012. Presently Library has 91110 Text and 5377 References Books. Library has separate Children Section and available 16399 children Books in this Section. Library has subscribed 10 Journals, 140 Magazines, 6 weekly newspapers and 25 Daily Newspapers. About 480 CD and DVD are also available in the children and general section. Dr Radhakrishan State central Public Library have well furnished A. C. seminal hall on the capacity of 40-50prsons at a time.

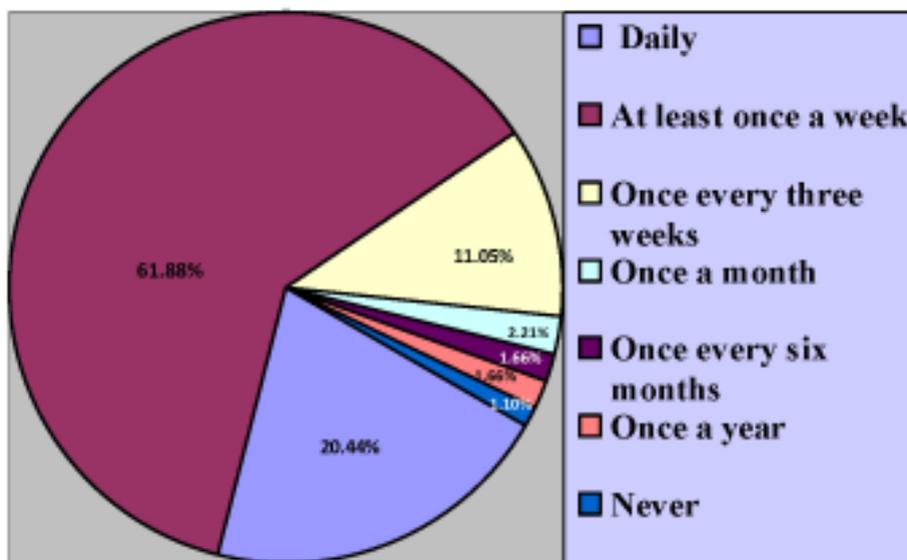
### **5. Survey Findings**

As described in the previous section as State Central Public Library of Rajasthan Dr Radha Krishan State central Public Library is surveying not only the population of Rajahmundry but also many researches coming from different parts of the country In order to collection know the opinions of users about various and services offered by the library. A survey of users of this library has been conducted. A questionnaire was prepared. Areas covered in the questionnaire include frequency of visits to the library, purpose of using the library, reasons for not using the library regularly, extent of availability of required its in the library, opinions about the library services, suggestions regarding improving the existing collection and services, demand for new service, willingness to pay for services and opinion on overall satisfaction level of users about the library as a whole. This section presents the data collected in the form of tables and analysis the findings in the form of percentages. A graphical presentation

of the data also has been done where ever necessary to present the findings in a more effective manner.

### Frequency of use:

The extent of use of the library & lends on various factors. One of the measures to assess the frequency of use is to assess the nature of frequency of visits made to the library by the user. Following Chart#1 presents the Ota on frequency of visits to the library by the respondents.



Chart#1:- Frequency of Visits

The frequency of visits to the library by users depended upon the nature of library, its collection, organization and maintenance. The above pie-char indicates that majority of the users visited the regional library weekly once (61.88%) followed by daily visitors (20.44%). Also a significant percentage (11.05%) of users found to he visiting, the library once in three months.

### Factors that discourage the use of the library

In spite of having various information requirements and necessity to refer the library, many of the users will not utilize the services of public.



Frequency of	Frequency	Percentage
They don't have time	0	0.00
The library hours were not convenient	40	22.10
They read books at home	31	17.13
They got all required information from elsewhere	0	0.00
They got information from Internet	0	0.00
The library is to far	1	0.55
Previously they didn't get what I needed	32	17.68
They think that library would not have what they needed	0	0.00
They don't know where the library is	21	11.60
They don't need a library	56	30.94
It's too difficult for them to get to the library	0	0.00
They don't feel welcome at the library	0	0.00
The service at the library isn't very good	0	0.00
The library is not handicap accessible	0	0.00
<b>Total</b>	<b>181</b>	<b>100.00</b>

**Table#1:- Frequencies of “Why people have not been visited the Public Library”.**

It is evident from Table#1, that the library timings are the main hurdle that is affecting the library use. Nearly 22.10% of the users expressed the opinion that the library hours are not convenient to them. Another important reason that influencing the library use is, in previously visits of users (around 17.68%), the unavailability of the matter what they looking for. other major issues are decreasing book reading habit (nearly 31%) and few (17.13%) may like to study at home. Few (11.6%) also show the unawareness of Library.

### **Purpose of using the library**

The present study has also attempted to find out the purpose of using the library, details as shown below in Table#2.

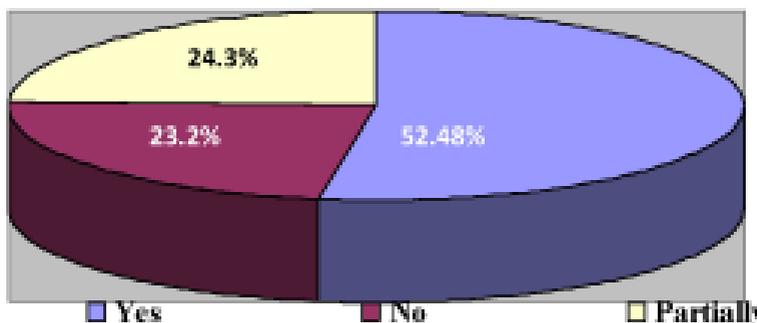
Main reasons for using the Library	Frequency	Percentage
To borrow best sellers	38	20.99
To borrow other fiction	0	0.00
To borrow non-fiction books	0	0.00
For reference/research	6	3.31
To use the children's library	0	0.00
To use the young adult area	0	0.00
To borrow videos, CD's or audio tapes	0	0.00
To use the copy machine	0	0.00
To read magazines	0	0.00
To read newspapers	55	30.39
To get information for a school project	13	7.18
To use government publications	6	3.31
To get information for home/car repairs	0	0.00
To study/work	63	34.81
<b>Total</b>	<b>181</b>	<b>100</b>

**Table#2:- Interest of Visitor**

The analysis of data in Table#2 indicates that a large portion of users (30.39%) are using the library in search of job information (reading News Papers). The highest percent of users (34.81%) are visiting the library for their job or study work. It is quit intrusting to know that on one side the habit of reading books is decreasing day-by-day(as in table#1), on the contrary a large no of library users(20.99%) are using library for their hobby of reading books..Rest (nearly 3-4%) users are interested in references, researches and government publications.

### Degree of Availability of Required Items

Availability and Accessibility of library materials play vital role in proving the necessity and existence of library. Chart#2 presents data related to the extent of availability of library books or information as perceived by the uses.

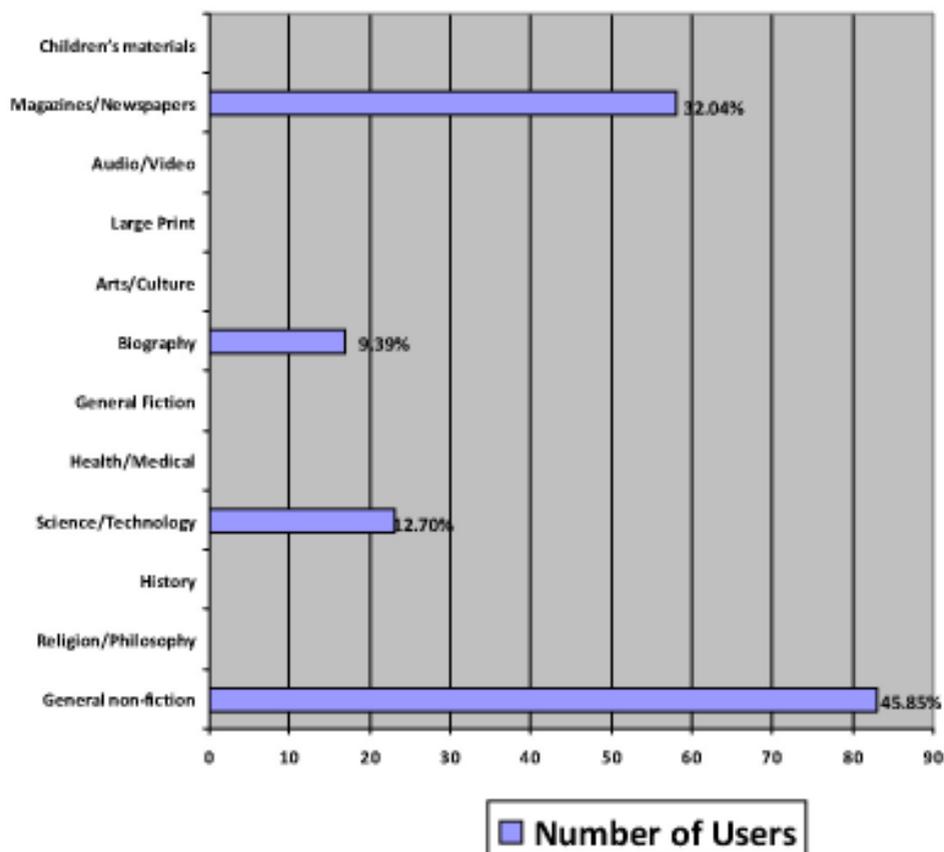


**Chart#2:- Media availability**

The analysis of data reveals interesting findings. Majority (52.48%) felt that usually the required books are available in the library, and 24.3% stated that except few chances they got what they search for. But a large number of users (23.2% also complained of unavailability of material what they looking for. And we think it is a major issue to be focused for improvement.

### Rating of Library Collection

It is the primary duty of library to enhance the collection in every stream of literature to fulfill the requirement of their users. Library staff should also know the main areas of user interests.

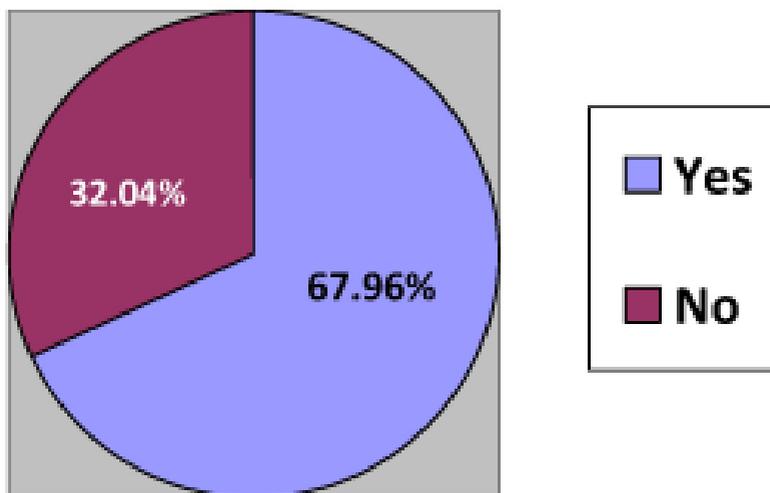


**Chart#3:- Visitors' area of interests where collection should be improved**

The above chart#3 show that a very large group of users i.e. nearly 45.85%, are interested in reading general non-fiction literature, which is followed by nearly 32% users interested in reading Magazines/Newspapers, nearly 13% interested in Science & Technology fictions and around 9.39% users are interested in Biographies.

### **Suggestions for Improvement**

The present study has also tried to seek suggestion from users regarding enhancement in different collections of literature.

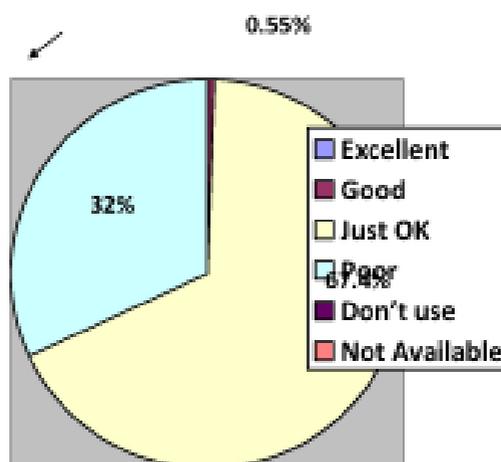


**Chart#3:- Do Library require Enhancement.**

Majority of the users (around 67.96%) requested for enhancement of collections. Mainly the unemployed job seeking and students preparing for competitive examinations put demand of enhancement. Only about 32% users are satisfied with availability of facilities.

### **Suggestions Regarding Facilities and Services**

To know the demands of users for IT based services and other facilities in the library suggestions were asked from users. Chart#4 shows various new services demanded by users.



**Chart#4:- Availability of Internet Computers in the Public Library**



It may be observed from chart#4 that majority of the users (67.4%) wanted Internet access to be provided by the library. Provision of computers for general use is also one of the requests from (32%) of users. The second highest percent of users requested the library to be created a library OPAC.

### Charges for Services

Since the library is not having separate budget for providing new and IT based services the users were asked to indicate their opinion on charging the services. The following table indicates user's opinion in this regard. (Table#4).

**Do the funding for the construction of a new library is**  
**Legal**

Area of improvement	Frequency	Percentage
Yes	123	67.96
No	58	32.04
<b>Total</b>	<b>181</b>	<b>100</b>

Table#4

### Satisfaction Levels about the Overall Functioning of the Library

The study also wanted to know how far the users are satisfied with the library and its services as a whole. The data revealing the users responses is presented in the following Table#5

View	Frequency	Percentage
Very dissatisfied	0	0.00
Dissatisfied	9	4.97
Slightly dissatisfied	0	0.00
Slightly satisfied	48	26.52
Satisfied	105	58.01
Very satisfied	19	10.50
<b>Total</b>	<b>181</b>	<b>100.00</b>

Table#5

## 1. Findings

Major findings of the survey are

- A majority of users visited the library weekly once.
- Nearly half of the users expressed library timings are inconvenient.



- The maximum users of the library are seeking job information.
- Highest percentage of the users expressed that the required books are available in the library. A Half of the users rated Manual script service as excellent.
- Majority of the users expressed that they require Computer facilities and internet access facility in the library.
- Most of users are not willing to pay for new I.T. based services.
- Mostly users have complains that study room should increased more.
- Mostly users are come to library for studies of Competition exams, so they want to silent place in the library.
- Maximum users satisfied with overall library services.
- Many users have give suggestion about limitation of study tables in the study room, so study tables should be increased more in the Library.

## **2. Suggestions**

Based on the findings of the study, the following suggestions were recommended to improve the use the library service.

- Computerized OPAC facility should provide in the Library.
- Computer and Internet facility is required in the Library as per need of Modern Information Technology Era.
- A Permanent and Regular State Librarian should be appointed in Library.
- More study rooms and study tables are urgent needs of the users in the Library.
- Personal Books are not allowed in the reading room of the Library, so separate room should be available for the users of students, and other who are preparing of Competitions exams..
- Presently Library was closed on Sunday for weekly holyday, so it will be closed only three days in a year on Republic Day, Independence Day, and Gandhi Jayanti.
- Dr Radha Krishan State central Public Library is Model Library of Rajasthan, so it shold be take full responsibility of developing and monitoring all public Libraries in Rajasthan.



- The library working hours should be altered keeping in view the suggestion from the user population to encourage

### 3. Conclusion

In the present study, opinions of the user were collected regarding the Dr Radhakrishnan State central Public Library. Internet is a boon to the user community. Provision access to internet opens the doors for user to global information sources. Since the costs of computers and internet access have reduced greater extent the management can think about providing these facilities to users. Majority of the users are satisfied with the library services. However they wanted the present facilities may be extended to include internet, OPAC facilities, increased study rooms and study tables. The library users are found to be having clear idea about the collections. Their opinion about collections reveals both strengths and weakness of the existing collection.

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## WORK ORIENTATION AND PROFESSIONAL PLEASURE OF COLLEGE LECTURERS

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True education, it must be noted at the outset, is a powerful force in bringing about desired change. It is education and education alone that can bring about changes in knowledge, skills, attitudes, appreciations and understanding things around us. There is a consensus of opinion among educationists to-day that education besides developing the faculties of mind and body, should also contribute for achieving certain social ends such as integration, democracy, equal distribution of wealth etc. That success of an educational institution depends on the quality of its teachers. It is not out of place to state that the teacher is the noblest symbol of the country's culture. A systematic study of Work Orientation and Professional Pleasure among the Degree College Lecturers in the Indian context is very much needed. It is also intended to study the influence of intervening variables of Work Orientation and Professional Pleasure.

Work or 'karma' is a force which can uplift one's life when rightly performed and it can also spoil the life when wrongly performed. Work Orientation has been recognized as an important factor influencing work place behavior (Indirasen, 1986). Widderburn and Cromption (1972) studied three chemical plants make a similar point.

Professional pleasure gives happiness success and efficiency in one's professional activity. It indicates individual's ability to strike a balance between the requirements of the job and his own potentialities. According to Scheneider and Synder (1975), 'it is most adequately conceptualized as a personalistic evaluation of conditions existing on the job or outcomes that arise as a result of having a job security and that job satisfaction consists of filtered and processed perceptions. Perceptions filtered through the individual's system forms, values expectations and so forth'.

Mr.Gregor (1960), Argyris (1972) and Herzberg (1966) have opined that the human needs like autonomy, discretion and opportunity for self-growth are important factors influencing the work orientation of people in general. Whereas, Cherrington (1980) in his study concludes that in addition to the present work environment, the



childhood experiences of works also act as influencing factors of work orientation of employees. Neff (1968) found that work – like many other human activities is highly responsive to the environment in which it takes place. While Mohanthy (1991) has disclosed that persons high in meaning were achievement oriented, whereas persons low in meaning was affiliation oriented in their work orientation.

Bidwell examined the relationship between principal administrative behavior and teacher satisfaction. Hesberg et al has observed that the job satisfaction influenced by the factors of intrinsic aspects of job supervision, working environment, opportunity for advancement wages and management and social aspects of job communication and benefits. While Eiseman revealed that the affiliated college teachers are more dissatisfied with their institutional environment facilities professional opportunities and professional work than faculty at universities and institutions.

**Problem:**

The problem posed in this study is to establish the relationship between Teacher Work Orientation and Teacher Professional Pleasure among the Degree College Lecturers in Vizianagaram District.

**Objectives of the Study:**

- (1) To study the relationship between Teacher Work Orientation and Teacher Professional Pleasure of Degree College Lecturers.
- (2) To find out the significance of relationship between Dimensions of – Teacher Work Orientation; and Teacher Professional Pleasure of Degree College Lecturers.
- (3) To find out the significance of difference between the demographic and professional variables in respect of Teacher Work Orientation, Teacher Professional Pleasure of Degree College Lecturers.

**Hypotheses:**

- (1) There is no significance of relationship between Teacher Work Orientation and Teacher Professional Pleasure.
- (2) There is no significance of relationship between the Dimensions of Teacher Work Orientation; and Teacher Professional Pleasure.
- (3) Teachers considered under Sex, Locality, Qualification, Age, Marital Status,



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Experience, and Type of Management do not differ significantly in their Teacher Work Orientation and Teacher Professional Pleasure.

### **Procedure adopted:**

In order to test the hypotheses, the investigator is planned and executed in four phases. In the first phase development and standardization of Teacher Work Orientation and Teacher Professional Pleasure self-rating scales. In the second phase measurement of Teachers' opinion is collected with the help of above two self-rating scales. In the third phase using appropriate statistical procedure is adopted to find out the significance of relationship between Teacher Work Orientation and Teacher Professional Pleasure. In the Fourth and last phase using appropriate statistical procedures is to find out the significance of difference between the demographic variables in their Teacher Work Orientation and Teacher Professional Pleasure.

### **Administration of the Tools:**

After developing and standardizing these two tools following the predictive validity as suggested by John, W.Best and James V.Kahn, the final and fresh scales are prepared for administration with specific instructions. Each statement of Work Orientation tools is followed with the four alternatives as suggested by Likert's methods of summated rating technique. This technique is used because it is most straight forward technique. Those four alternatives are – Very Often (VO), Often (O), Sometimes (S) and Rarely(R). Whereas the Professional Pleasure Tool is provided with five alternatives viz., Strongly Agree (SA), Agree (A), Neutral (N), Disagree (DA) and Strongly Disagree (SDA). A clear instruction was given to the respondents to express their opinion by putting a tick mark against the response category to which they are agreed with. Each scale is stated with the personal data sheet. These two scales are administered to 126 Degree College Lecturers in Vizianagaram District.

### **Collection of Data:**

For collection of data, the investigator personally visited each Institution and administered these scales to the Lecturers. They advised to put their name, sex, qualification, designation, Age, experience and address of the school etc., as mentioned in the demographic data sheet provided to each Scale. Teachers are further requested not to leave any item of the tool. Most of the teachers have responded on the spot and return the tools to the investigator. Thus these two tools collected are scored according



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to the scoring procedure.

### **Scoring:**

The responses scored according to the key of Work Orientation Tool. In this tool four alternatives provided and weightage was given from 4 to 1 for all the positive items viz., Very Often –(VO-4), Often –(O-3), Sometimes (S-2) and Rarely –(R -1). The weightage was given in the reverse order from 1 to 4 in respect of negative items.

In respect of Professional Pleasure all the positive items scores from 5 to 1 for five responses viz., Strongly Agree (SA)-5, Agree (A)-4, Neutral (N)-3, Disagree (DA)-2 and Strongly Disagree (SDA)-1 respectively are given. For all negative items scores 1 to 5 are given separately. Basing on the above scoring procedure both the tools were scored and computed as required and stated in the analysis of data. Thus the total score of Teacher Work Orientation tool will be 24 to 96 and Professional Pleasure Score is 35 – 175.

### **Sample:**

To study the Work Orientation and Professional Pleasure of Degree College Lecturers, the Investigator has confined his research study to 18 Degree Colleges (Govt./Aided Colleges:06 + Private Unaided Colleges = 12) in Vizianagaram District. Random sampling technique is followed to draw the sample for the present study. To measure the Teacher Work Orientation and Teacher Professional Pleasure of the selected sample of Lecturers, the collected data was categorized variable wise viz., Sex (Male= 74; Female = 52), Locality (Rural = 49; Urban = 77), Age (below 35 years = 68; Above 35 years = 58); Marital Status (Married = 82; Unmarried = 44); Qualification (Post-graduates = 81; PG with M.Phil/Ph.D. = 45); Experience (Below 15 years = 59; Above 15 years = 67), Type of Management (Govt./Aided Colleges = 48; Private Unaided Colleges = 78). Thus, the total sample of Teachers is 126 and it is found to be a satisfactory sample. The sample is believed to be an adequate to test the hypotheses.

### **Delimitation of the Study:**

This study is delimited to the Lecturers working in Degree Colleges in Vizianagaram District only. To measure the opinion of Lecturers in their Work Orientation and Professional Pleasure, self-rating Scale is used. Of many dimensions of Teacher Work Orientation – Achievement Orientation and Affiliation Orientation



are taken into account, Similarly, of many dimensions of Teacher Professional Pleasure – Personal, Intellectual, Professional and Social aspects are taken into account.

### **Tools Description:**

The ‘Work Orientation’ tool was devised and standardized by Dr.Indira, Birudavolu (1998) for her Research study on Degree College Lecturers. This stool is consists of two areas namely – Achievement Orientation (12 items) and Affiliation Orientation (12). Whereas the Professional Pleasure Tool was designed and standardized by Dr.Devagiri Tirupathi Reddy (1993) to measure the Professional Pleasure of Secondary School Teachers. This tool is consists of four areas viz., Personal aspects (10 items), Intellectual aspects (9 items), Professional aspects (11 items) and Social aspects (05 items).

Statistical Procedure adopted:

After presenting the methodological aspects, the statistical procedure was used to establish the relationship between the two variables, i.e., Teacher Work Orientation and Teacher Professional Pleasure ‘r’ values are computed. To measure the significant differences between these two variables in relation to the demographic variables the means, standard deviations and Critical Ratio values are computed.

### **Analysis of Data:**

After processing the data variable wise, the following statistics were calculated for arriving at conclusions likes co-efficient correlation to find the relationship between Work Orientation and Professional Pleasure and also obtained the Critical Ratio values variables wise.

**Table 1**  
**Table showing significance of ‘r’ between Residential and Non-Residential Junior College Teachers Work Orientation and Professional Pleasure**

Variable category	N	Df	‘r’	Probability
Teacher Work Orientation	126	124	0.66	Significant at 0.01 Level
Teacher Professional Pleasure				



After processing the data variable wise, the following statistics were calculated for arriving at conclusions likes co-efficient correlation to find the relationship between Work Orientation and Professional Pleasure and also obtained the Critical Ratio values variables wise.

**Table 2**  
**Table showing the inter-correlation matrix of various dimensions of Teacher Work Orientation of Dr.Indira, Birudavolu (1998)**

	Achievement Orientation	Affiliation Orientation
Achievement Orientation	1.00	0.64
Affiliation Orientation		1.00

From the above table it can be concluded that the obtained 'r' values is significant at 0.01 level respectively. The dimensions viz., Achievement Orientation and Affiliation Orientation of Teacher Work Orientation are correlated and statistically significant. Hence, the null hypothesis stated that 'there no significance of relationship between the dimensions of Teacher Work Orientation' is rejected.

**Table 3**  
**Table showing the inter-correlation Matrix of various Dimensions of Teacher Professional Pleasure Scale of Dr.D.Tirupathi Reddy (1993)**

	Personal	Intellectual	Professional	Social
Personal	1.00	0.41	0.56	0.61
Intellectual		1.00	0.65	0.47
Professional			1.00	0.53
Social				1.00

From the above table it is concluded that the obtained 'r' values are significant at 0.01 levels respectively. The dimensions viz., Personal, Intellectual, Professional and Social aspects of Professional Pleasure are correlated and statistically corroborated. Hence, the null hypothesis that, 'there no significance of relationship between the dimensions of Professional Pleasure' is rejected.



**Table 4**

**Table showing the significance of difference of Mean between the Lecturers of Degree Colleges in their Work Orientation and Professional Pleasure**

Variable category	Work Orientation				Professional Pleasure			
	Mean	S.D	N	C.R	Mean	S.D	N	C.R
Male	76.65	16.23	74	3.13**	54.87	11.9	74	3.73**
Female	85.94	16.49	52		62.98	12.23	52	
Rural area	88.67	16.52	49	2.34*	68.28	12.26	49	3.23**
Urban area	81.66	16.18	77		61.28	11.65	77	
Below 35 years Experience	74.65	16.26	68	1.89@	62.82	11.85	68	3.34**
Above 35 years Experience	80.17	16.51	58		70.98	12.15	58	
Married	85.61	16.9	82	2.07*	65.42	11.58	82	2.32*
Unmarried	79.17	16.58	44		60.19	12.29	44	
Post-graduates	82.35	16.11	81	2.14*	58.56	11.61	81	4.41**
PG with M.Phil/Ph.D.	75.82	16.56	45		68.45	12.28	45	
Below 15 years Age	78.37	16.5	59	2.15*	65.38	12.14	59	2.09*
Above 15 years Age	84.63	16.24	67		60.87	11.88	67	
Govt./Aided Colleges	78.21	16.54	48	2.56*	66.34	12.27	48	2.3*
Private Unaided Colleges	85.89	16.17	78		61.27	11.63	78	

**\*\*Significant at 0.01 level**

**\*Significant at 0.05 level**

**@Not Significant at any level**

From the above table it can be concluded that the Critical Ratio values in respect of Variables - Sex, Locality, Marital Status, Qualification, Experience and Type of Management are more than 1.96 and 2.58, which is significant at 0.05 and 0.01 levels respectively. Hence, the null hypotheses in respect of these variables are rejected. Further, it is also concluded that though there is significance of difference between the Lecturers considered under Age category, statistically it is not



corroborated; hence, the null hypotheses is retained.

Further, it is concluded that the obtained Critical Ratio values in respect of all variables - Sex, Locality, Age, Marital Status, Qualification, Experience and Type of Management are more than 1.96 and 2.58, which is significant at 0.05 and 0.01 levels respectively. Hence, the null hypotheses stated that the 'there is no significance of difference between the variables – Sex, Locality, Age, Marital Status, Qualification, Experience and Type of Management of Degree College Lecturers in their Professional Pleasure' is rejected.

**Table 5**  
**Table showing the Mean values Dimension wise in respect of Work Orientation and Professional Pleasure (N = 126)**

WORK ORIENTATION			PROFESSIONAL PLEASURE		
Dimension	Mean	S.D	Dimension	Mean	S.D
Achievement Orientation	25.9	5.65	Personal	26.35	4.63
Affiliation Orientation	27.76	4.98	Intellectual	27.42	3.82
			Professional	28.57	4.19
			Social	10.24	2.56

From the above table it is observed that the 'Affiliation Orientation' aspect is possessed highest mean score followed by 'Achievement Orientation' aspect of Work Orientation. Similarly, in respect of Professional Pleasure – the highest mean value is 'Professional' aspect followed by 'Intellectual', 'Personal' and 'Social' aspects of Teacher Professional Pleasure.

### **Discussion of Results:**

- (1) There is significance of relationship between Teacher Work Orientation and Professional among the Degree College Lecturers.
- (2) There is significance of relationship between the dimensions of Work Orientation.
- (3) There is significance of relationship between the dimensions of Teacher Professional Pleasure.
- (4) In respect of Work Orientation of Degree College Lecturers, there is significance



of difference between the variables – Sex, Locality, Marital Status, Experience and Type of Management, whereas the Lecturers in respect of Age category do not differ significantly. Hence, the hypotheses are rejected. There is no significance of difference between the Lecturers of Degree Colleges in respect of dimension – Age category. Hence, the hypothesis is accepted.

- (5) In respect of Teacher Professional Pleasure of Degree College Lecturers, there is significance of difference between all the variables like – Sex, Locality, Age, Marital Status, Qualification, Experience and Type of Management. Hence, the hypotheses are rejected.

### **Results & Discussions:**

The Work Orientation aspect of Degree College Lecturers is influencing by the Teacher Professional Pleasure. Further, the result of the study disclosed that the Teacher Work Orientation aspect is influencing the variables like Sex, Locality, Marital Status, Qualification, Experience and Type of Management, whereas the Professional Pleasure aspect influencing all the variables like Sex, Locality, Age, Marital Status, Qualification, Experience and Type of Management categories. In view of the above, more attention is needed to ascertain the causes of differentiation among the Degree College Lecturers so as to enhance the quality in teaching-learning process at higher education level.

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## **A STUDY OF AGRICULTURAL DEVELOPMENT THROUGH FIVE YEAR PLANS**

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India can be characterized as an agricultural country despite concerted industrialisation in the past few decades. India was known for its fertile lands, rich mineral resources, abandoned water resources like rivers and lakes. It was the quality of Indian agricultural goods like the spices which drew the Europeans to the Indian soil. The wide diversity of lands, rivers, climatic conditions facilitate diverse variety of crops in this country. It can be said that agriculture forms the backbone of the Indian economy as it provides raw materials for some of the industries like textiles and rubber manufacturing. The Central Statistical Organisation stated that the contribution of agriculture to the National Income was around 57% in 1950-51 but now it has been considerably reduced due to the increasing industrial and service sectors in India.

It was the opinion of some economists that agriculture dominates Indian economy. It is true that the per capita productivity in agriculture is less than in industry. So long as the Indian Economy is dominated by agricultural activity, per capita income and prosperity will not rise to a desirable extent. But this situation was quite different during the early years of independence. The decline in agricultural productivity in general and food grains productivity in particular, was a marked feature before independence. This situation was positively reversed with the introduction of planning in 1950-51.

### **Agricultural Development under the Five-Year Plans:**

In spite of its importance, agriculture in India was in a hopeless condition of stagnation and neglect, partly because of the British masters who cared more for commerce and consolidation of their administration rather than economic uplift and partly because of the socio-economic structure of the country. Little attention was paid by the government to the various suggestions of the Famine Commissions of 1880, 1898, and 1902 and also the Irrigation Commission of 1903 towards the



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improvement of agriculture in the country.

It was only after the attainment of independence a marked awareness of the need of agricultural development was felt. So steps were taken up to make systematic and empirical study of the problems of agriculture and measures for solving the problems. The problems were:

(i) Excessive population depending on land giving rise to low man-land ratios (ii) Low productivity of land and low level of income from farming operations providing only subsistence income to the farmer and his family. (iii) Concentration of land holdings in the hands of a few rich landlords even after making land reforms. (iv) Mass indebtedness of the rural families.

### **Agriculture in the First Five-Year Plan:(1951-55)**

The aftermath of the Second World War created an acute food shortage in the country. Agricultural production was at its low level and the farmers were very heavily indebted. The partition of the country still aggravated the situation. India lost the supply of 7.5 lakh tons of foodgrains realized from Sindh, Punjab and East Bengal which passed on to the share of Pakistan.

Communalism and the consequent inflow of refugees from Pakistan during the partition of India created the problem of feeding the refugees which was staggering. The outbreak of the Korean War in 1950 and the bad season in 1950-51 still further contributed to scarcity and shortage of food supply. India had to depend on imported food which was of the order of 25 lakh tons.

Under these circumstances the planning commission laid greater emphasis on the programme of agricultural development to strengthen the base of the rural economy. So the First Five-Year Plan (1951-56) was launched primarily as an agricultural plan with the objective of correcting the disequilibrium in the economy and initiating a process of development, particularly in the field of agriculture.

For achieving the targets of the plan in the field of agriculture, irrigational facilities were extended to 14 million acres of land and nearly 12 lakh areas of land were reclaimed, and brought under plough. The agricultural plan of 1951-56 was fairly successful as the output of all agricultural commodities went up by 22.2 per cent giving a growth rate of 4.2 percent. The output of food grains went up by 30 per cent.



The impact of the First Plan on the economy was very favourable. The situation was helpful to curb inflation and stabilize the economy and create possibilities for further development.

### **Agriculture in the Second Plan: (1956-60)**

Out of a total expenditure of Rs.4,600 crores during the plan period, a sum of Rs. 950 crores was spent on agriculture. This was only 20 per cent of the total out lay as against 31 per cent in the First Plan of the Rs.950 crores. The Second Plan aimed at a 'diversified agricultural economy'. During this period, 16 million acres were extended irrigational facilities and agricultural production was stepped up considerably.

Though agricultural production in general increased over the First Plan period, in many case the targets of the Second Plan could not be achieved and in some cases the achievements were far below the targets. However, there was an increase of 27 per cent in the overall agricultural production. The poor response of agriculture during the second plan had a very baneful effect on the economy and created a number of difficulties and problems. This bitter experience of the plan gave a rude shock to the Planning Commission which realized the main limiting factor in the progress of the Indian economy is agricultural production.

### **Agriculture in the Third Plan: (1961-66)**

Self sufficiency in food and increased agricultural production were made the main objectives of the Third Plan. The plan aimed at raising overall agricultural production by 30 per cent. This was expected to be achieved through extension of irrigation facilities, soil conservation, dry farming, land reclamation, better inputs and improved techniques.

In the initial years of the Third Plan (1962) India was attacked by China, and in the closing years of the Plan(1965), Pakistan invaded India. Consequently the resources of the country had to suit the national emergency. The Third Plan period, could not enjoy good monsoons and seasons. From the point of agricultural production except the year 1964-65, which was considered to be the best year other years, were very bad. Drought conditions and poor agricultural production adversely affected the war torn economy. Hence the targets in agricultural production could not be achieved.

Against the plan target of 100 million tons, the output of food grains amounted to only 89 million ton in 1964-65 and 72.3 million tons in 1965-66. As against the target



of 30 percent increase, the foodgrains productions increased barely by 10 percent. The production of oilseeds came down to 6.4 million tons at the end of the plan period (1965-66) as against the target of 9.8 million tons.

### **Agricultural Development from the Fourth Plan to the Tenth Plan: (1969-2007)**

The Fourth Plan had two objectives in the agricultural sector, (i) to provide the conditions necessary for a sustained increasing of food production by about 5 per cent annum over the decade 1969-78 and (ii) to enable large section of the rural population including small farmers and farmers in the dry areas to participate in the process of agricultural development. The actual production of food grain was 104.7 million tons in 1973-74 as against targeted increase of 129 million tons.

The Fifth Plan accorded priority for the spread of H.Y.V. cultivation, double or multiple, greater use of fertilizer pesticides and insecticides to increase agricultural production. The plan further provided special emphasis on; (i) small and marginal farmers, (ii) dry farming technique, (iii) evolving H.Y.V. seeds for other crops like paddy, (iv) social conservation measures on saline and alkaline soils and for desert land reclamation. During this fifth plan, the production of food grains increased substantially i.e. 232.5 million tons.

The sixth five-year plan recognised that the growth of the Indian economy depends on a rapid growth in agriculture and rural development. The main objective of the plan, therefore, was to increase agricultural production, generate employment and income opportunities in rural areas and strengthen the forces of modernization for achieving self-reliance. Further, the plan aimed at accelerated the pace of the implementation of the land reforms and institution building for beneficiaries. The sixth plan aimed at 3.8 per cent annual growth in agricultural production.

The seventh plan aimed at an annual average increase of 4 per cent in agricultural production. The plan allocated Rs.39,770 crores for agricultural sector which is 22 per cent of the total plan outlay. The major programmes adopted during the plan were, a special rice programme in the eastern region, national water-shed programme for rain-fed agriculture, national oil-seed development project and social forestry.

The basic objective of the Eighth five-year plan were, (i) To consolidate the



gains already achieved in agricultural productivity and production during last 40 years; (ii) To sustain agricultural productivity and production in order to meet the increased demands of the growing population; (iii) To enlarge the income of the farmers. The plan was allotted 22 per cent for agriculture and irrigation. The plan targets a growth rate of 4.1 per cent per annum for the agricultural sector.

The ninth five-year plan was launched in the 50<sup>th</sup> year of India's Independence. The specific focus of the plan was to agriculture and rural development. Development strategy gave special attention to agricultural sector which requires a unique combination of private effort and public support. Agriculture has not benefited as much as it should have from policies of economic liberalization because agriculture continues to suffer from too many restrictions and implements which prevent farmers from marketing their produce at attractive prices. The plan outlay was 4.9 per cent in total plan outlay and the growth rate was 5.4 the agricultural sector.

During the tenth five-year plan, the important area of focus was to raise the cropping intensity of our existing agricultural land. The second priority was the development of other rural infrastructure that supports not only agriculture but all rural economic activities. The third area of attention was the development and dissemination of agricultural technologies. The plan emphasised that the true potential of Indian agriculture can be realized only when there is diversification of agricultural products, both geographically and over time.

### **Agriculture in the Eleventh Plan: (2007-12)**

The planning commission suggested a road map for 9 per cent per annum growth for the economy as a whole, and an agricultural growth target of 4 % per annum during the plan period. Agriculture is not only an important driver of macro-economic performance; it is an essential element of the strategy to make growth more inclusive. The agriculture plan outlay was 3.7 per cent.

Thus, during different plan periods, the government has accorded vital importance to the agricultural sector and has tried to increase the agricultural production and productivity through different policy measures.

At present India has 23 per cent forest cover, 3% pastures and grassing land, 46 per cent area under agricultural use. The cultivable waste land accounts to about 6% and fallow land is 8 per cent and the remaining 14 per cent land is barren. During



the last 60 years Indian agriculture has achieved tremendous growth but at the same time the share of agriculture in National Income is reduced to a mere 14.2 per cent of the gross national product of India.

This drastic fall is due to the combined effect of several factors like, increased industrialisation and the migration of rural population to urban areas, etc., Earlier agriculture was a way of life, part of the culture of custom of the people. But now it has been reduced to mere employment. India is not only a leading producer but also a major consumer with an expanding population to feed. Its position in the world market has been modest owing to its agricultural trading policy. Agriculture growth is the key factor to inclusive growth and helps in rising in purchasing power in rural India. It is clear in the past few years that the lack of interest in the production of food grains is increasing on the part of farmers. This is mainly because many of them have opted for other related occupations like horticulture, floriculture, dairy development etc., Today the farmers grow short-term crops and non-food grain crops like sugarcane, tea, rubber etc., for more income in short span.

Some factors that affect the agricultural growth are discussed here. The relationship between the population growth and food production is unique and cannot be patterned. Till 1921, both population and agricultural production grew at a slow rate and because of that India was self-sufficient in food grains. According to a study there was a steep decline in cultivation after 1951 though the population rapidly increased. The gap between the need and supply also depends on the rise in urbanisation and failure of monsoons.

Indian economy is often calling the 'Monsoon Economy'. It reflects the critical role of the monsoon in the agricultural production of India. The four-month period of the South-West Monsoon period is acknowledged as the earth's most productive wet season. The rain-fed agriculture constitutes about 60per cent India's total net sown area. India's development is based on its rich natural resource based. Climate change may alter the distribution and quality of India's natural resources and adversely affect the livelihood of its people.

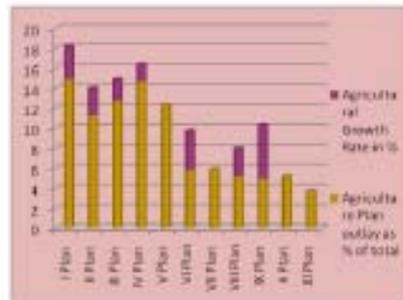
Another important factor for the alarming decrease is the rapid reduction of area under cultivation. This again is a consequence of population exposure which doubles after every 44 years in India. Most of the lands are converted into residential areas and are graved by the real estate corridor.

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Agricultural work force shifted from cultivators to agricultural labours. No of marginal and small land holdings has increased whereas large holdings have been converted in to non-agricultural areas. Wide fluctuations in crop output not only affects prices but also results in wide variations in disposable income of the farmers.

The inter-state water disputes have vitally affected the agricultural regions which are mainly depended on river waters. Making the situation more critical is the ineffective usage of existing irrigation facilities, dams and reservoirs. The Government machinery has not met the problems with far reaching strategy. Indian Government recently has launched the National Action Plan on climate change (NAPCC), the representing multi-pronged long term and integrated strategies. One of the missions in the plan is National Mission for Sustainable agriculture.

Plan Period	Agriculture Plan outlay as % of total	Population in Millions	Agricultural Growth Rate in %
I Plan	14.9	361.1(1951)	3.3
II Plan	11.3		
III Plan	12.7	439.2 (1961)	2.2
IV Plan	14.7	548.2 (1971)	1.7
V Plan	12.3		
VI Plan	5.8	683.3 (1981)	3.9
VII Plan	5.9		
VIII Plan	5.2	846.4 (1991)	2.8
IX Plan	4.9	1028.7 (2001)	5.4
X Plan	5.2		
XI Plan	3.7	121.01crores (2011)	



Source: Compiled from various issues of Economic Survey, Government of India

**Present Scenario:**

The agricultural sector recorded a growth of 2.87 per cent against the plan target of 4 per cent per annum of the current five year plan. Though it had achieved an impressive growth of 5.8 per cent in 2007-08 the growth fell in to the negative zone in the following year. Compare to other nations, agriculture productivity and growth rate is less in India. The productivity of almost all the crops suffered considerably which led to the decline in 2009. India is likely to achieve a record production of wheat (81.47 million tons), pulses (16.51) and cotton (33.93million bales of 170 kilogram each) during the current year.

To change the depleting condition of Indian agriculture to improve it the



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following measures can be suggested.

- Ø To identify and develop new varieties of crops especially thermal resistant crops.
- Ø Alternative cropping patterns capable of withstanding extremes of weather.
- Ø Monitoring systems to evaluate effect of climate change in agriculture.
- Ø Convergence and integration of traditional knowledge and practise should be used.
- Ø Adoption of large scale irrigation programmes which rely on sprinklers, drip irrigation, furrow and ridge irrigation.
- Ø Best yield can be obtained by using better seeds, nutrients, pest and weed management and soil conservation.
- Ø Effective policies restraining people from acquiring cultivable lands and using them for non-agricultural purposes have to be implemented.

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## PSYCHOLOGICAL PROBLEMS OF ADOLESCENT SCHOOL STUDENTS

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### INTRODUCTION

Education is a personality building process. It is always been linked with society. It has both a personal and social dimension and like two sides of the same coin. According to Gandhiji, "real education did not consist in packing the brain with information, facts and figures or in passing examinations by reading the prescribed number of books, but by developing the right character." Swami Vivekananda had proclaimed "we must have life building, man-making, character building education."

At present our education system is largely involved in preparing the younger generation for developing their cognitive domain and is engulfed by materialistic values. Teachers have become salesman while the students indulge in indiscipline behaviours. This scene has emerged as the teachers hardly have time in the development of personality of the student due to the existing curriculum. (Aruna Goel, S.L.Goel, 2005)

School is a miniature form of the society and as such it is a powerful instrument to shape the individual. School is a place or establishment for education or an institution for teaching and learning (Ediger, Marlow and Digumurti Bhaskara Rao, 2003). The problems of satisfying the needs of all the adolescent students when they reach the senior school are becoming more acute. Urban educators continue to struggle with widespread cultural diversity among their students and with the problems of educating them. Rural educators struggle with the changing economic structure which causes shifts in traditional rural roles (Bhaskara Rao, Digumurti and B.S.V.Dutt, 2003). The modern schools provide adolescents with a store of abstract knowledge and very little notion about life itself. The curriculums of schools are not designed to suit the adolescents with average abilities and thus create many problems in them.

While much criticism has been focused on the educational system, the adolescent students should adapt themselves to the school environment, its curriculum, pressure



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from the school to complete the task in short time, high parental expectations, teacher student relationships and peer pressure. When the adolescents fail to adapt or regulate themselves to modern school environment and parental expectations, they develop psychological problems of stress, insecurity feelings, anxiety and depression.

## REVIEW OF LITERATURE

**Verma, S., Sharma, D., and Larson, R.W. (2002).** “School stress in India: Effects on time and daily emotions.” The study described the time use profile of Indian adolescents; examined their subjective states during schoolwork; and evaluated whether youth who spend more time in leisure experience fewer negative emotions and had better mental health. The sample of 100 urban, middle class adolescents studying in class VIII responded to the Experience Sampling Method wherein the subjects carried alarm watches for one week and provided 4,764 reports on their activities and subjective states at random times. The Child Behaviour Checklist (Achenbach et al. 1991) was administered to gather information on internalizing and externalizing problems among adolescents. The time use profile indicated that adolescents spend one-third of their waking time in school related activities, with the girls spend more time than the boys (t-test). Negative subjective states were reported during schoolwork as reflected by the low affect state, below average activation levels, lower feelings of choice, and high social anxiety among the subjects. These negative states were more frequent during homework. The subjects, who spend more time doing homework, experience lower average emotional states and more internalizing problems, reported higher academic anxiety and lower scholastic achievement.

**Katyal, S., and Vasudeva, P. (1999).** “Academic stress as related to parental attitudes and parental aspirations.” Correlating academic stress with parental attitudes the study aimed to find out the level of academic stress among adolescents and examined the relationship of parental attitudes and parental aspirations with academic stress. Adolescents (75 boys and 75 girls) aged 17-18 years studying in five randomly selected Government Model Senior Secondary Schools participated in the study. The parents (150 fathers and 150 mothers) of the children participating in the study were contacted at their homes for studying the parental attitudes and aspirations. The tools used were Academic Anxiety Scale for Children (Singh and Gupta, 1986), Parental Attitude Research Inventory (Schaefer and Bell, 1958), and Parental Aspiration Scale (Grover, 1987). Results using Karl Pearson’s coefficient of correlation revealed that a majority



of boys and girls experienced moderate to high levels of academic stress. Academic stress also increased with the hostility – rejection and authoritarian attitudes of parents. A positive correlation is also suggested between high parental aspirations and high academic stress. The authors concluded by pointing out to the excessive curriculum load, homework, and a highly competitive examination system, as possible reasons for the prevailing trend. The need for parents to give due consideration to the interests, potentialities, and aptitudes of the children rather than burdening them with unrealistic aspirations was discussed.

**Beer, John, (1991).** “Depression, general anxiety, test anxiety, and rigidity of gifted junior high and high school children”. They administered the Children’s Depression Inventory, the Beck Depression Inventory, the Test Anxiety Scale, the Autobiographical Survey, and Breskin’s Rigidity Scale to 27 gifted students (aged 12-28 years). The mean scores for depression were below the cut-off score while their test anxiety, general anxiety, and rigidity scores were at moderate levels.

## **MATERIALS AND METHODS**

### **Aim and Objectives of the study**

- Ø To assess the level of stress experienced by the respondents
- Ø To understand the insecurity feelings of the respondents
- Ø To find out the level of anxiety experienced by the respondents
- Ø To measure the level of depression faced by the respondents
- Ø To suggest suitable measures to redress psychological problems that arises to adolescent school students in areas of stress, insecurity feelings, anxiety, and depression.

### **Research Design**

The aim of the present study is to describe some of the psychological problems experienced by the adolescents’ students in school with regard to stress, insecurity feelings, anxiety and depression. It is also an attempts to test the relationships of variables. Hence, descriptive design has adopted. (Royce Singleton, Bruce. C. Straits, Margaret. M. Straits and Ronald. J. McAllister, 1988).

### **Universe for the Study**

The universe of the present descriptive study consist of 2439 students studying



in standards IX, X, XI and XII in 3 schools in Tiruchirappalli, Tamil Nadu, India.

### Sampling Procedure

The researcher adopted stratified (disproportionate) random sampling procedure for the present study. The stratification is based on the different classes studied by the respondents namely XI, X, XI and XII standards in three schools. The stratum varies in each class and in each school. So the researcher selected 25 respondents from each stratum irrespective of the number of samples, which constituted 100 respondents in each school. Hence the sample was 300 respondents from three schools.

**Table: 1 SAMPLING PROCEDURE**

S.No	Schools	Total Number Of Students					Sample Size
		IX	X	XI	XII	Total	
1.	School I	180	173	175	175	708	100
2.	School II	200	190	170	180	740	100
3.	School III	250	246	250	245	991	100

### Tools of Data Collection

Following standardized tools were also used for the present study.

**Table: 2 TOOLS OF DATA COLLECTION**

S.No	Tools	Author of the Scale	Reliability
1.	Inventory for assessment of stress	Dr. Thomas Holmes (1981)	0.878
2.	Security & Insecurity Inventory	Govind Tiwari & Singh (1975)	0.771
3.	Anxiety Scale- Revised	Taylor (1935)	0.621
4.	Depression Inventory	Beck (1988)	0.730



**Table:3 DISTRIBUTION OF RESPONDENTS BY STRESS EXPERIENCED**

S. No.	Stress	No. of Respondents (n: 300)	Percentage
1	Low	150	50.0
2	High	150	50.0

The table infers the level of stress experienced by the respondents, exactly half of the respondents (50%) have high level of stress, while another half (50%) of the respondents has low level of stress. Adolescents face stress due to authoritative attitude of the parents and teachers, parental aspirations, excessive curriculum load, lots of home work, highly competitive examination system. (Verma, Sunon, 1990).

**Table: 2**

**Table: 4 DISTRIBUTIONS OF RESPONDENTS BY INSECURITY FEELINGS EXPERIENCED**

S. No.	Insecurity feelings	No. of Respondents (n: 300)	Percentage
1	Low	139	46.3
2	High	161	53.7

The table infers the level of insecurity feelings experienced by the respondents in the adolescent stage. More than half of the respondents (53.7%) have high level of insecurity feelings while less than half of the respondents (46.3%) have low level of insecurity feelings. Insecure feelings exist in adolescents due to academic pressure by school and parents, unable to complete the task and for learning problems.

**TABLE: 3 DISTRIBUTIONS OF RESPONDENTS BY ANXIETY EXPERIENCED**

S. No.	Anxiety	No. of Respondents (n: 300)	Percentage
1	Low	143	7.7
2	High	157	52.3



**Table: 4**

**Table: 4 sDISTRIBUTION OF RESPONDENTS BY OVERALL DEPRESSION**

S. No.	Depression	No. of Respondents (n: 300)	Percentage
1	Low	145	48.3
	High	55	51.7

It is inferred from the above table that half of the respondents (51.7%) have higher level of overall depression. This may be due to normal learning disabilities and less academic adept (Bender, N. William, Rosenkrans, B. Cecilia, 1999).

**Table: 5**

**INTER CORRELATION MATRIX AMONG STRESS, INSECURITY FEELINGS, ANXIETY AND OVERALL DEPRESSION**

Dimensions	Stress	Insecurity feelings	Anxiety	Overall Depression
Stress	1.000			
Insecurity feelings	0.321**	1.000		
Anxiety	0.383**	0.404**	1.000	
Overall Depression	0.268**	0.471**	0.360**	1.000

\*\* 0.01 Level of Significance

The above table shows the relationship between the key variables used in the present study. There exists a positive significant relationship between stress and insecurity feelings, anxiety, and overall depression at 0.01 level of significance. There also exists a negative significant relationship between stress and educational adjustment, emotional adjustment, social adjustment, overall adjustment at 0.01 level of significance. There is appositive significant relationship between insecurity feeling and anxiety, overall depression at 0.01 level of significance. There is a positive significant relationship between anxiety and overall depression at 0.01 level of significance.

## **SOCIAL WORK INTERVENTION**

Intervention has always been the essence of social work. It is portrayed by the study that exactly half of the respondents have high level of stress, a little more than half of the respondents have high level of insecure feeling and anxiety. Half of the respondents have high level of depression.



Social workers in schools could be appointed to respond effectively by applying the methods of social work. They could also perform the roles of case worker, group worker, truant officer, counsellor, parent liaison, advocate, behaviour specialist, mental health consultant, multi disciplinary team member and system change specialists to intervene with stress, insecurity feelings, anxiety, depression and low adjustments of the adolescent students.

It is suggested that social workers in schools through direct method of social work such as case work could intervene with stress, insecurity feelings, anxiety, depression and low adjustment of the individual adolescent student through counselling.

Group work can be used to intervene with the group of adolescent students with similar problems like stress, insecurity feelings, anxiety and low adjustments. Recreational group and educational groups can be formed to resolve these problems.

It is suggested that through community organization method the needs and problems of the adolescent students and their families can be identified. Family based programmes could be organized to improve the parent child relationship and parent-teacher interaction.

The social workers in school could also function as a mental health consultant not only to the students but also to the teaching members in school, in helping them to individualize education, thereby to devise materials and teaching styles that meets the need of all the adolescents. To accomplish these goals, the social worker can organize brainstorming session to all the teachers on curriculum development with an overall emphasis on human relations.

Sometimes parents are very conservative, traditional, authoritative, strict and pressurizes the students to get good marks. This leads to constant unpleasantness and tension in the family. So, family counselling and family life education could be given to such adolescents and their parents to strengthen the parent-child relationship and to set limits based on the adolescents ability.

It is further suggested that through the method of social action, social workers as professional persons can highlight problems of adolescent students that is psychosocial in nature to the government and could make the appointment of social workers in government schools and nongovernmental schools compulsory.

Social workers can also bring to light about the modern complex education system,

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the curriculum and the pressure given by schools to score good marks, as these are the main source of psychosocial problems. Hence, social action could be taken to represent it to the government to minimize the curriculum load, motivate them in extracurricular and co-curricular activities and imbibe in them the education which is more of value based and life skills oriented.

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## INDIAN TRADE UNIONS AND POLITICS IN THE LIGHT OF ECONOMIC REFORMS

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### **Introduction**

Trade unions are voluntary organizations of workers formed to promote and protect the interest of workers through collective action. Trade unions are a product of industrial society. The main elements in the development of these unions in every country have been more or less the same. The setting up of large scale industrial units and the wide spread use of machinery, opening of new lines of production, changes in living and working environments of workers and concentration of industries in large urban centres have all created a new class of 'wage-earners'.

The present paper aims at studying how the unions, particularly political unions are functioning in the wake of the introduction of economic reforms from 1991 which implies privatization, globalization and liberalization and the impact of economic reforms on trade unions.

### **Emergence of large scale industries in India**

The industrial working class in India constitutes relatively a small section of the total population. India is still a predominantly rural and agricultural country despite the growth of industries over the last century.

During the nineteenth century 'industrialization' was confined to jute and textile industries. The cotton textile industry expanded in Bombay and spread out to other centres such as Ahmedabad, Sholapur, Nagpur and Kanpur. In 1914 there were 234 cotton mills working in India employing around 260,000 operatives. In Bengal the jute industry also developed and by 1912 there were more than 60 mills employing about 2,00,000 workers<sup>1</sup>.

### **Emergence of Trade unions**

The first quarter of the twentieth century saw the birth of the trade union movement in India. Though the germs of the movement were to be found in the last



quarter of the 19<sup>th</sup> century, S.S.Bangalee, M.Lokhande and others succeeded in forming trade unions<sup>2</sup>. However it was not until the close of the First World War that the modern trade union movement really took permanent form in Indian soil.

To combat the evils of industrial competition such as low wages, long hours of work and deplorable working conditions to ameliorate their conditions through improved bargaining power and status, the workers organized themselves into trade unions.

Trade unions play a significant role in the industrial relations. In India, the trade unions were created by political leaders of the freedom movement. It is the trade unions that determine the living standards of the employees and the economy of the country. Thus the trade unions played a significant role not only for workers but also to the community as a whole.

### **Trade unions and political affiliations**

The relations between the trade unions and their political affiliations, in the light of economic reforms, is a worthwhile discussion as our “trade unions were born in politics and they will have to, it appears, live and grow in politics”<sup>3</sup> as expressed by Karnick. It involves two important aspects.

- (a) Trade union involvement in politics
- (b) Political involvement in Trade unions

As far as the former aspect is concerned, it is desirable and indispensable to the labour force, since it has to secure favourable legislation and economic policies. For instance, in England, Trade unions themselves created their own labour party. But the problem arises with the latter aspect, i.e., political involvement in trade unions, as it is still a controversial issue.

The main object of the trade unions was to work for the social, economic and cultural upliftment of the workers. According to Gandhiji, a trade union is not only to settle industrial disputes, but to cover all aspects of work, both inside the factory and at home.

Trade unions themselves established a political party in Britain i.e., Labour party. In the U.S.A the trade unions are economical unions. They concentrate on the economical needs and advancement of the employees rather than other aspects. They do not have political affiliations to the parties. They do not want to identify themselves



as political unions apparently. In Russia and some other countries like Ghana, the trade unions are subordinate to the government. They have to act according to the instructions of the Government.

N.Pattabi Raman, a scholar on Trade unions in India stated that the outside political leadership has been the labour benefactor as well as exploiter<sup>4</sup>. By the above statement, we can understand that if the leader is like N.M. Joshi, who devoted all his time for the cause of the labour, the union will be benefited. However if the leader is selfish, the union will be exploited. This study therefore includes the origin of the trade unions and their nexus with the political leaders. Another considered opinion on this aspect is as follows.

“It must be realised that outsiders are necessary to a certain extent due to the present illiteracy of the workers, but it is considered desirable to decrease the ratio with the advent of literacy among the workers as there is always likelihood of the workers being exploited by irresponsible labour leaders for political gain”.<sup>5</sup>

In developing countries like India, Sri Lanka and Indonesia where these countries have recently achieved freedom from colonial domination, the trade unions were nourished along with the freedom movements. The leaders of the freedom movements were the leaders of trade unions.

### **Why political involvement is necessitated in Indian Trade Unions?**

The history of the trade union movement indicates the close and direct link between the political parties as well as contributions made by political leaders to the growth of the unions. This close link is partly explained by the fact that the Indian trade union movement was nursed and developed by the political leaders of the country as a part of the national movement for independence<sup>6</sup>.

The dominant personalities in the political movement and trade union movement on many occasions were same. There was no trade union untouched by the political colour of national independence.

The unions desire association with the political parties and the political parties need association with the trade unions to secure the support of workers whose votes along with those of their family members account for a sizeable democratic force to reckon with. So, it is a reciprocal tendency and an important factor for mutual benefit.



Indian workers are not in a position to create their own unions because of their lack of literacy and economically poor standards of living. On the other hand due to sophisticated lifestyles of the modern world, they usually stick to the religious traditions and sentiments e.g. most of the workers think or attribute their position to the “Karma or the theory of Rebirth”.<sup>7</sup>

The workers were poor and illiterate and were in constant dread of being thrown out of employment. The outsider with his influence in the local area was therefore, requested by the workers to assist in forming a trade union and to represent their grievances to their employer. The workers assumed that their condition was a punishment for their sins which were done in their previous life.

Our society has been a hierarchical society. The superiority of the employer is paramount and the workers are never regarded as equals at the bargaining table. Hence, some means of high status are required to represent the grievances of the workmen to the employer.

The problem of the fear of victimisation is widely prevalent, particularly with regard to Indian conditions. Hence, the workers required outside help to channelize their aspirations.

Continuous dominance of the trade union movement by outsiders due to the inability of the trade unions to develop internal leadership is apparent. The trade union finances are too inadequate to pay for full time leaders. Hence, they have to depend on outside leaders.

Compulsory adjudication has necessitated that the union leadership must be adept in law because of the volume of complex legal provisions under which trade unions in India operate. This puts heavy burden on the union leadership. The legal skills necessary for resolving disputes through the legal process is unlikely to be found among inside leaders<sup>8</sup>. Thus unions were and are led by non-workers who are usually persons with political connections.

### **Trade unions and Indian conditions**

#### **(a) Dominance of outsiders**

Outside leadership has been playing a vital role in the Indian trade union movement due to the inability of insiders to meet the needs and demands of the movement, in view of the low education standards and poor command over the English



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language which is still the principal language of legislation and adjudication of industrial disputes.

**(b) Political unionism**

In India, trade unions were established by political leaders of freedom movement. Political parties have taken a lot of interest in organizing trade unions since the Nineteen Twenties in order to secure mass support for the freedom movement.

**(c) Multiple unions**

Multiple unionism both at the plant and industry levels poses a serious threat to industrial peace and harmony in India. Every political party wants to establish a trade union in order to get a foothold among workers and thereby secure a large bloc of votes. In doing this, they unleashed divisive tendencies in the union structure by setting up rival unions at the plant, industry, regional and national levels which resulted in multiplicity of unions.

**(d) Union rivalry**

The system of multiple unionism resulted in inter union rivalry in different industries. The inter union rivalry breaks the very purpose of the trade unions by weakening the strength of collective bargaining.

The state of rivalry between two groups of the same union is said to be intra-union rivalry. Inter-union and intra-union rivalry have been a potent cause of industrial disputes in the country. They are responsible for the weak bargaining power of trade unions in collective bargaining. These rivalries are also responsible for the slow growth of the trade union movement in the country.

**(e) Finances**

Because of inadequate funds most of the trade unions are unable to engage full time trade union leaders to replace the outside leaders who do not understand the workers' problems as they do not live the life of a worker.

**(f) Absence of paid office bearers**

Weak finances do not permit unions to engage the services of full time, paid office bearers and union activists. Outside leaders who work on part-time basis, neither have the time nor the energy to take up the union activities sincerely and diligently.



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**(g) Illiteracy**

Most of the workers in India are unable to understand the implications of modern trade unionism. Their illiteracy coupled with ignorance and indifference account for the predominance of outside leadership.

Even before the introduction of economic reforms, the problem of political parties' involvement has always been a controversial issue. One set of scholars like Karnick and Murthy say that political involvement is necessary, essential and inevitable for the development of trade unions. Otherwise trade unions will indulge not only in industrial action i.e., strikes, dharnas and picketing but also resort to violence. Another set of people like Dr.Siddique say political involvement not only retards the internal leadership but also creates a measure of indiscipline, intimidation, assault and violence in the industrial atmosphere and also creates confusion about the future of trade union movement.

Prof.B.Benerjee in his article Trade Unions and Politics explains the term political trade unionism as follows.

“Political trade unionism refers to the pre-occupation of trade unions with political activities, consequently neglecting legitimate activities of industry for which trade unions were formed”<sup>9</sup>.

**Welfare state and economic reforms**

India after independence adopted the philosophy of welfare state. Article 38(1) of the Indian Constitutions provides that “the state shall strive promote the welfare of people by securing and protecting as effectively as it may, a social order in which justice, social, economic and political, shall inform all the institutions of the national life”. This article, which contained in the Directive Principles of State Policy reaffirms what has already been said in the preamble. Article 39 provides

- (a) Equal right of men and women to adequate means of livelihood
- (b) Distribution of ownership and control of the material resources of the community to the common good.
- (c) To ensure that the economic system should not result in concentration of wealth and means of production to the common detriment.
- (d) Equal pay for equal work for both men and women etc.



Thus the Directive Principles of the Indian Constitutions resulted in enacting a series of labour legislations such as Minimum Wages Act, Bonus Act, Factories Act and Contract Labour (Regulation and Abolition) Act etc. These acts are aimed at to provide protection and justice to the working class which was weak and defenceless. Hence the state assumed an interventionist role in industrial relations and it continues to hold the same position even after many changes have taken place in the industrial system.

Now the situation has changed. Our indigenous industries are being replaced by multinational corporations. Introduction of economic reforms caused severe effects with regard to employment opportunities apart from job losses which resulted in reduction in membership of trade unions.

All over the world, the workers' response to the technological and organizational changes is undergoing a change. Indian workers cannot be an exception.

Various changes taking place in different economies are affecting the strength and strategy of the trade unions. Growing unemployment in developed as well as developing countries and the declining hold of communism and socialism adversely affect the role of the trade unions. International legislative changes such as resolutions of World Trade Organization etc. reduce the immunities of the trade unions by opening up opportunities for legal actions by employers, and by attempting to regulate internal organizational matters of the unions. These changes often look more like long term shifts and not just temporary experiments. These changes have increased employees' fears about job security. Technological change brings both fear and hopes; fears for established skills and job opportunity and hopes for longer term growth and productivity improvement.

The key elements of Economic reforms are

- (a) Liberalization
- (b) Privatization
- (c) Globalization

Liberalization denotes one of the government policies associated with economic reforms which reduces regulations of economic activity and limits the intervention of the state on business activity and allowing for unfiltered operation of market forces in determining the economic process. An important feature of liberalization is the removal



of the licence system. Now there is no need to wait upon ministers and departments for licences. Another feature of liberalization is the easing of import restrictions and removal of Monopolies and Restrictive Trade Practices (MRTP) Act which would enable the private sector to grow in size in the place of the public sector.

Privatization in a narrow sense means replacing public sectors with private ownership or even without changing ownership, induction of private management and control in the public sector enterprises.

Globalization implies growing interdependence in the world economy where by resources flow from one region to another, goods and services also move relatively fully from one region to another. The aim of globalization is to see the entire world as one economic unit.

### **Effects of economic reforms on trade unions**

- (a) Structural adjustment which advocates technical upgradation ultimately leads to large scale unemployment and workers on a large scale will be retrenched and no trade union can enable them to find new jobs. The trade unions would thus lose their credibility to some extent.
- (b) Private industries particularly multinational industries, according to their different structures and strategies, like technical knowledge, productivity, quality would prefer to have company unions posing a challenge to the trade union movement.
- (c) More unions will be freed from political dominance. The big trade unions in their efforts to survive will seek more and more an efficient inter dependent system of functioning.
- (d) Trade unions will be seeking protection more through contractual obligations than from Industrial Disputes Act. The grand idea of participation in management will die its natural death. The managements of new modern industries would keep the workers' organizations at arm's length. The workers in general would turn a deaf ear to the voice of the trade unions and trade unions will have no alternative but to have one center of labour thus ending, all the multiplicity of unions<sup>10</sup>.

The Constitution of India which proclaims 'Welfare State' made several safe guards and protections to the workers. In order to give effect to the constitutional mandate, the legislature enacted several legislations in favour of the labour. Now the



situation has changed. Our indigenous industries are being replaced by multinational corporations. Introduction of economic reforms caused severe effects with regard to employment opportunities apart from job losses which resulted in reduction in membership of trade unions.

The significance of collective bargaining is fading and is overshadowed by the new forms of the industrial organizations, like multinational corporations. The fundamental human rights guaranteed by Indian Constitution such as right to form organizations, human dignity, living wage, equal distribution of material resources, have been limited to the paper. Instead of gaining their rights the workers are losing their rights.

### **Conclusion**

Indian Labour should accept that more jobs will be now on contract basis, rather than regular salaried jobs. There are clear signs of downsizing the government sector in each sector of employment technology may demand job cuts, for which labour will have to equip himself with varied skills and readiness to learn new skills. In short we conclude Economic reforms are a mixed blessing, it is expected to open the door of prosperity, a higher standard of living, but at the cost of job security and labour welfare.

<sup>1</sup> B. Karnick Indian Trade Unions A survey, Manakpalas Pub. (1967) pp.7-8,

<sup>2</sup>RuddarDutt, K.P.M.Sundara, Indian Economy, S.Chand. Pub.(2005)

<sup>3</sup>V.B.Karnic, Trade unions and politics, Bombay university press (1968) p.15

<sup>4</sup>N. Pattabi Raman, Political involvement of Trade Unions (1966) p.163.

<sup>5</sup>Report of the Plantation enquiry Commission (1976), P.139.

<sup>6</sup>G.P.Sinha & PRN Sinha, Indian trade unions and political parties and the problem of leadership in industrial relations and labour legislations (1977) p.178.

<sup>7</sup>Ruder Dutt, Indian Economy, S.Chand Pub. 2005, p.724

<sup>8</sup>Chatterjee, Union Politics and the State (1980) p.194.

<sup>9</sup>Prof.B.Benerjee, Trade unions and politics, law quarterly Journal, June (1980) p.117.

<sup>10</sup>Samuel Masilamani, Economic Reform and Trade unions in India, Friedrich

<sup>11</sup>EbertStiftung Pub,1995, p-49.



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## EFFECTS OF SELECTED YOGA TRAINING ON THE HEALTH-RELATED PHYSICAL FITNESS

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### Introduction

Yoga is the oldest system of personal development encompassing body, mind, and spirit. The word yoga is derived from the Sanskrit root *Yuj*, which means to join or to yoke. In philosophical terms, yoga refers to the union of the individual self with the universal self (Hadi 2007). Yoga is an ancient Indian practice, first described in Vedic scriptures around 2500 B.C., which utilizes mental and physical exercises to attain *samadhi*, or the union of the individual self with the infinite (Lidell ;1983). Yoga has become increasingly popular in western countries as a method for coping with stress and as a means of exercise and fitness training (Schell et al; 1994). yoga is an ancient practice that was developed to promote physical health as well as an awareness of one's true nature. It consists of a series of postures, called asanas, and various breathing exercises, called pranayama, which encourage balance between the physical, mental/emotional, and spiritual aspects of a human being. In short, yoga promotes health. Like other forms of yoga, yoga is purported to quiet the mind and focus the concentration; however, of all the yoga traditions, the importance of physical fitness is emphasized most in yoga ( Worthington;1982, Zorn;1968).Yoga has been practiced for thousands of years. It is based on ancient theories, observations and principles of the mind-body connections. Substantial research has been conducted to look at the health benefits of yoga – yoga postures (*asanas*), yoga breathing (*pranayama*) and meditation. These yoga practices might be interacting with various somatic and neuro-endocrine mechanisms bringing about therapeutic effects (Malhotra and Singh ;2002). Yoga is traditionally believed to have beneficial effects on physical and emotional health (Gilbert C. ;1999). The overall performance is known to be improved by practicing yoga techniques (Upadhyay et al ;2008) and their effects on physical functions were reported (Hadi 2007). Yoga practices can also be used as psycho-physiological stimuli to increase the secretion of melatonin which, in turn, might be responsible for perceived



well-being (Harinath et al;2004). Yoga may be as effective as or better than exercise at improving a variety of health-related outcome measures (Ross and Thomas; 2010) and as a result this study was undertaken to find out the effects yoga training on health related physical fitness variables.

## 2. Material and Methods

### 2.1. Subjects:

Thirty (30) randomly selected male students of Bachelor of physical education, from M.V.A.S. SHRI. K.G.Nadgir College of Physical Education Dharwad, St.Karanatak, India) aged 20 –25 years, volunteered to participate in the study. They were highly motivated to participate in this study and allowed to quit any time. They were randomly assigned into two groups: A (experimental N=15) and B (control N=15). All subjects, after having been informed about the objective and protocol of the study, gave their written consents.

### 2.2. Selection of Variables and Tests:

The Subjects were tested on the following physical fitness variables.

Sl No	Components	Test
1	Muscular Strength	Sit-ups
2	Agility	Shuttle Run
3	Power	Standing Broad jump
4	Speed	50 yard dash Test
5	Cardiovascular Endurance	600 yard run and walk

### 2.3. Study protocol:

The subjects from Group A were subjected to an 8-week yogic exercises training programme. This lasted 8- weeks and consisted of daily sessions. Each yoga session consisted of 10 minutes of *pranayamas*, 15 minutes of warm-up exercises, 40 minutes of *asanas*, (yoga postures), and 5 minutes of relaxation in *savasana*., The Five days in a week was observed in training and Saturday-Sunday was considered as a rest days. The *pranayamas* consisted of alternate nostril breathing while maintaining the *vajrasasa ardha padmasana* position. Nostril-regulated breathing was practiced throughout the warm-up and *asana* position of the exercise program. The warm-up program focused on slow, dynamic muscular movements, which consisted of dynamic



lunges, shoulder and arm circles, neck rolls, standing forward bend and two to three cycles of the *surya namaskar*. The *asanas* introduced in this study included the following poses: *Vakrasana*, *Vidalasana*, *Pascimottanasana*, *Maha mudra*, *Vrksasana*, *Virabhadrasana*, *Trikonasana*.

The *asanas* focused on the quality and ease of breath, isometric muscular contractions, flexibility, balance, and concentration. Each yoga session ended with 10 minutes of *savasana* to relax and cool down.

#### 2.4. Physical fitness Testing:

The Sit-ups test was used to assess the muscular strength. The score of the test is the number of correctly executed sit-ups performed by the subjects in 60 seconds. Shuttle Run test was used to monitor the agility of the subjects. The time taken by the subjects between the audible signal ‘start’ and the finishing of the run was recorded to be the score. The time was recorded correct in seconds. The standing broad jump was used to assess explosive power of the legs. A 50 yard dash test was used to estimate Speed. The time was recorded correct unto tenth of seconds. The time taken by the subjects to complete the test in seconds was the net score of the subjects. 600 yards. Run or Walk test was used to measure cardiovascular endurance. The time taken to run 600 yards recorded in minutes.

#### Data Analysis:

Values are presented as mean values and SD. The Student paired t’ test was used to compare parameters within groups. Data was analyzed using SPSS Version 16.0.

#### Results

Table- 1: Mean, SD and t –test values of muscular Strength and agility of experimental group and control group during Pre Test and Post Test.

Variables	Experimental Group (A) N=15		t-test	Control Group (B) N=15		t-test
	PRE	POST		PRE	POST	
Muscular Strength	18.8 ±0.66	19.72±1.86	8.34 **	20.21±1.96	21.5±1.88	0.66
Agility	13.66±0.30	13.78±0.66	4.55 **	14.88±0.36	14.79±.36	0.73

\*\*Significant at 0.01 level

Table No.1 showed the mean ±S.D. and ‘T’ values of physical fitness variables of experimental group and control group. It is concluded that 8-week of yoga training programme showed significant improvement in muscular strength and agility at (p<0.01) level. There was non-significant deference found in control group in both variables.



**Table- 2: Mean SD and t –test values of power, speed and cardiovascular endurance of experimental group and control group during Pre Test and Post Test.**

Variables	Experimental Group (A) N=15		t-test	Control Group (B) N=15		t-test
	PRE	POST		PRE	POST	
Power	1.88±2.7	2.9±7.86	10.64 **	1.92,±9.36	1.88.5±0.14	0.83
Speed	7.83±7.30	7.05±0.46	2.55 *	7.08±0.34	7.02±0.37	0.43
Cardiovascular Endurance	1.69±4.79	1.62±0.19	2.09	1.84±0.29	1.83±0.28	0.42

\*\*Significant at 0.01 level

\*Significant at 0.05 level

Table-2 showed the mean  $\pm$ S.D. and ‘t’ values of physical fitness variables of experimental group and control group. It is concluded that 8-week of yoga training programme showed significant improvement in power ( $p < 0.01$ ) and speed ( $p < 0.05$ ). There was non-significant deference found in experimental group for cardiovascular endurance. For each of the chosen variable, the results pertaining that there were non-significant deference found in control group.

## Discussion

The study was conducted to find out the effects of yoga training on health-related physical fitness variables. The statistical analysis of data collected on thirty subjects indicated that there were significant improvement in all the variables (except cardiovascular endurance). This study shows that 8 weeks of regular yoga practice, a tradition that has existed for at least 4500 years and is now becoming increasingly popular in the United States, (Hewitt; 1978, Schell et al; 1994) can have significant benefits in improving the health-related aspects of physical fitness. We found significant increases in muscular strength, agility, power and speed. There were no significant changes in cardiovascular endurance. Studies have shown that yoga practice can lead to improvements in hand-grip strength (Madanmohan et al; 1992), muscular endurance (Ray et al; 1986) and agility (Bal and Kaur; 2009).<sup>7</sup> Practitioners credit yoga for everything from improving their strength, respiration and fitness levels to “opening energy channels.” Yoga asana are psychophysical practices to culture body and mind. Yoga practices are known to significantly improve health status, and reduce stress and anxiety (Ross and Thomas; 2010). Furthermore, the positive results of this study indicate that yoga is a form of physical activity that would meet the objectives of current recommendations to improve physical fitness and health (Surgeon; 1996).



Yogasanas training programme showed significant improvement in agility level. The findings is supported by the study conducted by Galantino et al. (2004) to evaluate a possible design for a 6-week modified yoga protocol to study the effects on Twenty-two participants (M = 4; F = 17), between the ages of 30 and 65 with chronic low back pain showed improved balance and agility. Likewise et al.( 2005) conducted a study titled “Effect of a Gentle Iyengar Yoga Program on Gait in the Elderly: An Exploratory Study” on Twenty-three healthy adults (age range, 62–83y) who were naive to yoga were recruited; 19 participants completed the program. An 8- week Iyengar yoga program specifically tailored to elderly persons and designed to improve lower-body strength and flexibility.

Findings of this exploratory study suggest that yoga practice may improve hip extension, increase stride length, and decrease anterior pelvic tilt in healthy elders. The Housam El-din Talhah, et al. (1997) to achieve the benefits of yoga exercises at the vehicle development flexibility through the integration of all of the body, mind and spirit of reason may be due to the nature of the performance of such exercises, which is characterized by slow and work to raise the level of motivation towards the best addition to Yoga exercises to improve physical fitness and strengthen the muscles of the body of all the various benefits of yoga are not limited to this only, but also to work to improve and develop the various components of the body. The researcher Recommendations with Use Yoga exercises because of its clear and positive impact on improving the health-related physical fitness variables.

## **Conclusion**

In summary, the results of this investigation indicate that 8 weeks of yoga practice can significantly improve multiple health-related aspects of physical fitness in young, healthy, predominantly female subjects. More specifically, yoga training can increase strength, agility, muscular power and speed. However, in the present study, yoga did not have a significant effect on endurance. These data provide more evidence to support the beneficial effect of Yoga for improving the health-related physical fitness variables.



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## TEACHING COMPETENCY AND JOB SATISFACTION AMONG PRIMARY AND SECONDARY SCHOOL TEACHERS – A STUDY

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The process of Teaching learning transaction depend on the efficiency of a teacher, who is in turn able to manifest potentialities of a child into actuality, be accepted with no hesitation. Teaching learning process cannot be undertaken in vacuum but it is a positively directed action, for which teachers are to be endowed with teaching competency. There has been an enormous amount of research which could answer to such question as what teaching behaviours are related to pupil outcomes in different areas of classroom and in what way they are related. Though teaching competency has been recognized as an important component of teaching learning process, relatively little effort is made to define the term. Donald M. Medley (1982) defined that the teacher competency as 'those of knowledges, abilities and beliefs a teacher process and brings to the teaching situation'. Teacher competency differs from teacher performance and teacher effectiveness in that it is a stable characteristic of the teacher that does not change appreciably when the teacher moves from one situation into another'. Falk and Dow (1971) stated that 'it is obvious that there is oneness of the subjects taught, and similarity of aims and objectives for different teaching subjects. So there must be similarity in methods and ultimately as a result, in good teaching also.

The term 'Job Satisfaction' is generally used in organizational behavior in business management. According Keith Davi (1993) that 'Job satisfaction is the favorableness or unfavorableness with which employees view their work. According to Garton (1976), employee's satisfaction and morale are attitudinal variables that reflect positive or negative feelings about particular persons or situations, satisfaction when applied to work context of teaching seems to refer to the extent to which a teacher can meet individual, personal and professional needs as an employees'. Whereas Maslow (1970) defined that 'Job Satisfaction of a person determine in two ways viz., internal factors like achievement, recognition etc., and external factors such as salary and interpersonal relation. Now, this is the right time to focus the

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significance of Teaching Competency and Job Satisfaction of Primary and Secondary School Teachers.

Biddle (1964) studied the history of evaluation of teacher competency critically and briefly. Sharma (1971) disclosed that teaching aptitude, academic grades, socio-economic status, teaching experience and age, in the order of their arrangement, appeared to be sound predictors of teacher effectiveness. While Tharyani (1986) has concluded that 'intelligence and knowledge in their subject areas were found to be the best predictors of the teacher effectiveness'.

Studies in respect of Job Satisfaction, Girens Rebay (1988) found a positive relation between age, experience and job satisfaction and no significance of difference is found in respect of Sex and level of education. Whereas Bhandarkar (1980) confirms that there is significant relationship between qualification and job satisfaction.

The theoretical questions arise in the mind of the investigator that - Is teacher Teaching Competency correlates with Job Satisfaction? Is there significance of relationship between the dimensions of Teaching Competency and Job Satisfaction? How the demographic and professional variables are influencing on the Teaching Competency and Job Satisfaction aspects? Is there any significance of difference between high and low Teaching Competency in relation to Job Satisfaction and vice-versa?

**Problem:**

The object of the study is to establish the relationship between Teaching Competency and Job Satisfaction among the Primary and Secondary School Teachers in Vizianagaram District.

**Objectives of the Study:**

- (1) To study the relationship between Teaching Competency and Job Satisfaction.
- (2) To find out the significance of relationship between Dimensions of – Teaching Competency and Job Satisfaction.
- (3) To find out the significance of difference between the demographic and professional variables in respect of Teaching Competency and Job Satisfaction.



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- (4) To find out significance of difference between High and Low Teaching Competency in relation to Job Satisfaction; High and Low Teacher Job Satisfaction in relation to Teaching Competency.

### **Hypotheses:**

- (1) There is no significance of relationship between Teaching Competency and Job Satisfaction
- (2) There is no significance of relationship between the Dimensions of Teaching Competency and Job Satisfaction.
- (3) Teachers considered under Sex, Locality, Qualification, Age, Marital Status, Experience, and Type of Management do not differ significantly in their Teaching Competency and Job Satisfaction.
- (4) Teachers of Low and High categories do not differ significantly in their Teaching Competency in relation to Job Satisfaction; and Teachers Job Satisfaction in relation to Teaching Competency.

### **Procedure adopted:**

In order to test the hypotheses, the investigator is planned and executed in four phases. In the first phase development and standardization of Teaching Competency and Job Satisfaction self-rating scales. In the second phase measurement of Teachers' opinion is collected with the help of above two self-rating scales. In the third phase using appropriate statistical procedure is adopted to find out the significance of relationship between Teaching Competency and Job Satisfaction. In the Fourth and last phase adopted by using appropriate statistical procedures to find out the significance of difference between the demographic and professional variables in their Teaching Competency and Job Satisfaction.

### **Administration of the Tools:**

After developing and standardizing these two tools following the predictive validity as suggested by John, W.Best and James V.Kahn, the final and fresh scales are prepared for administration with specific instructions. The Teaching Competency and Job Satisfaction tools consists of five alternatives provided against each item – Strongly Agreed, Agreed, Neutral, Disagreed and Strongly Agreed. A clear instruction was given to the respondents to express their opinion by putting a tick mark against



the response category to which they are agreed with. Each scale is provided with the demographic data sheet. These two scales are administered to 132 Teachers from among the Teachers of Primary Schools (28) and Secondary Schools (18) in and around the Vizianagaram City of Vizianagaram District.

### **Collection of Data:**

For collection of data, the investigator personally visited each institution and administered these scales to the teachers. They advised to put their name, sex, qualification, designation, Age, experience etc., and address of the institution etc., as mentioned in the demographic data provided to these tools. Teachers are further requested not to leave any item of the tool. Most of the teachers have responded on the spot and return the tools to the investigator. Thus these two tools collected and scores are analyzed according to the statistical procedure of Garrette, H.E.(1981).

### **Scoring:**

The responses scored according to the key provided against each item of the questionnaires of Teaching Competency and Job Satisfaction. In respect of Teaching Competency and Job Satisfaction for all the positive items scores from 5 to 1 for the responses viz., Strongly Agree (SA), Agreed (A), Neutral (N) Disagreed (DA) and Strongly Disagreed (SDA) are provided for all the 40 items (i.e., Teaching Competency Scale 59 items and Job Satisfaction Scale 25 items) and weightages will be awarded in reverse order for all negative items from 1 to 5 manner. Basing on the above scoring procedure both the tools were scored and computed as required and designed the statistical profiles presented in the analysis of data. Thus the total score of Teaching Competency tool will be in between 59 - 295. Whereas the total Score of Job Satisfaction will be in between 25 - 125. The investigator made use of the scoring key dimension wise as was designed earlier by Dr.VSR, Pakalapati (1994) and Dr.U.Nageswara Rao (1995) respectively.

### **Sample:**

The sample selected for the present investigation is the Teachers of Primary and Secondary Schools in Vizianagaram District. Random sampling technique is followed to draw the sample for the present study. To measure the Teaching Competency and Job Satisfaction of the selected sample of Teachers, the collected data was categorized as Sex (Male= 82; Female = 50), Locality (Rural = 69; Urban =



63), Qualification (TTC = 64; B.Ed., = 68); Age (Below 40 years = 58; Above 40 years = 74), Marital Status (Married – 56; Unmarried – 76), Experience (Below 15 years = 54; Above 15 years = 78), Type of management (Govt/Aided = 49; Private Unaided = 83) and Type of Institution (Primary Schools = 73 and Secondary Schools = 59). Thus it is found to be a satisfactory sample and the sample is believed to be an adequate to test the hypotheses. Thus the total sample of Teachers from Primary Schools (28) and Secondary Schools (18) is 132.

### **Delimitation of the Study:**

This study is delimited to the Teachers working in Primary and Secondary Schools in around of Vizianagaram City in Vizianagaram District only. To measure the opinion of teachers in their Teaching Competency and Job Satisfaction self-rating Scale is used. Of many dimensions of Teaching Competency – Planning, Presentation, Closing, Evaluation and Managerial aspects are taken into account. Similarly of many dimensions of Teacher Job Satisfaction – Professional, Teaching Learning, Innovation and Inter-Personal Relations are taken into account.

### **Tool Description:**

The Teaching Competency was devised and standardized by Dr.VSR, Pakalapati (199). This tool consists of 59 items covering five areas viz., Planning (10 Items), Presentation (31 items), Closing (06 items), Evaluation (05 items) and Managerial (07) aspects.

The Job Satisfaction tool was devised and standardized by Dr.U.Nageswara Rao, which was used by the present investigator with four Dimensions viz., Professional (07 items), Teaching Learning (06 items), Innovation (06 items) and Inter-Personal Relations (06 items).

### **Statistical Procedure adopted:**

After presenting the methodological aspects, the statistical procedure was used to establish the relationship between the two aspects, i.e., Teaching Competency and Job Satisfaction 'r' values are computed. To measure the significant differences between these two aspects in relation to the demographic and professional variables the means, standard deviations and Critical Ratio values are computed.

### **Analysis of Data:**

The following statistics were calculated for arriving at conclusions i.e., co-



efficient correlation to find the relationship between Teaching Competency and Job Satisfaction also obtained the Critical Ratio values variables wise.

**Table 1**

**Table showing significance of 'r' between Teaching Competency and Job Satisfaction**

Variable category	N	Df	'r'	Probability
Teaching Competency Job Satisfaction	132	130	0.76	Significant at 0.01 Level

The value of 'r' is significant and hence, the hypothesis is rejected. Hence, the null hypothesis stated that 'there is no significance of relationship between Teaching Competency and Job Satisfaction' is rejected.

**Table 2**

**Significance of relationship between the Dimensions of Teaching Competency of Dr.VSR, Pakalapati (1994)**

	Planning	Presentation	Closing	Evaluation	Managerial
Planning	1.00	0.58	0.49	0.53	0.58
Presentation		1.00	0.45	0.59	0.49
Closing			1.00	0.36	0.62
Evaluation				1.00	0.54
Managerial					1.00

From the above table it is concluded that the obtained 'r' values are significant at 0.01 levels respectively. The dimensions viz., Planning, Presentation, Closing, Evaluation and Managerial aspects are correlated and statistically corroborated. Hence, the null hypothesis stated that, 'no significance of relationship between the dimensions of Teaching Competency' is rejected.

**Table 3**

**Significance of relationship between the Dimensions of Teacher Job Satisfaction Scale of Dr.U.Nageswararao (1995)**

	Professional	Teaching Learning	Innovation	Inter-Personal Relations
Professional	1.00	0.54	0.35	0.68
Teaching Learning		1.00	0.51	0.57
Innovation			1.00	0.63
Inter-Personal Relations				1.00



From the above table it can be concluded that the obtained 'r' values are significant at 0.01 levels respectively. The dimensions viz., Professional, Teaching Learning, Innovation and Inter-Personal Relations of Teacher Job Satisfaction Scale are statistically corroborated. Hence, the null hypothesis stated that 'no significance of relationship between the dimensions of Teacher Job Satisfaction' is rejected.

**Table 4**

**Table showing the significance of difference of Mean Between various variables of Teachers of Primary and Secondary School Teachers in their Teaching Competency**

Variable category	Mean	S.D	N	C.R
Male	184.94	40.37	82	2.19*
Female	199.27	33.7	50	
Rural area	181.67	38.53	69	1.97*
Urban area	168.35	38.79	63	
T.T.C.,	185.89	38.8	64	2.09*
B.Ed.,	171.82	38.52	68	
Below 40 years Age	179.34	34.76	58	1.87@
Above 40 years Age	167.24	39.24	74	
Married	164.95	34.58	56	2.87**
Unmarried	183.38	38.89	76	
Below 15 years Experience	174.33	34.67	54	2.34*
Above 15 years Experience	189.54	39.32	78	
Govt./Aided	186.41	33.64	49	2.1*
Private Unaided	172.65	40.35	83	
Primary Schools	188.49	39.23	73	2.43*
Secondary Schools	172.84	34.75	59	

\*\* Significant at 0.01 level, \*Significant at 0.05 level, @Not Significant at any level

From the above table it can be concluded that all the Critical Ratio values in respect of the variables Sex, Locality, Qualification, Marital Status Experience, Type of Management and Type of Institution category teachers do differ significantly. The obtained Critical ratio values are more than 1.96 but less than 2.58, which is significant at 0.05 and 0.01 levels respectively and hence, the null hypotheses are rejected. Further, though there is significance of difference between the means of Age category, statistically it is not corroborated. Hence, the null hypothesis is retained.



**Table 5**

**Table showing the significance of difference of Mean Between Various variables of Teachers of Primary and Secondary School Teachers in their Job Satisfaction**

Variable category	Mean	S.D	N	C.R
Male	78.46	14.75	82	1.85@
Female	73.2	16.38	50	
Rural area	72.85	16.65	69	2.96**
Urban area	64.38	16.21	63	
TTC.,	77.85	16.21	64	5.03**
B.Ed.,	63.49	16.63	68	
Below 40 years Age	71.38	15.98	58	4.55*
Above 40 years Age	84.41	16.84	74	
Married	76.36	16.35	56	2.19*
Unmarried	82.79	16.82	76	
Below 15 years Experience	71.74	15.96	54	2.93**
Above 15 years Experience	80.19	16.81	78	
Govt./Aided	76.68	16.29	49	3.4**
Private Unaided	68.54	14.73	83	
Primary Schools	75.86	16.83	73	3.63**
Secondary Schools	65.47	15.96	59	

\*\*Significant at 0.01 level, \*Significant at 0.05 level, @Not Significant

The above table disclosed that the obtained Critical Ratio values of all variables except Sex category in respect of Job Satisfaction of Primary and Secondary School Teachers are more than 1.96 and 2.58, which is significant at 0.05 and 0.01 levels respectively. Hence, the null hypotheses stated that the ‘there is no significance of difference between the variables – Locality, Age, Experience, Type of Management and Type of Institution of Teachers in their Job Satisfaction’ is rejected. Further, the variable Sex category, though there is significance of difference between the teachers, statistically it is not corroborated. Hence, the null hypothesis is accepted.

**Table 6**

**Table showing the Mean values of the Dimensions in respect of Teaching Competency and Job Satisfaction (N = 132)**

Teaching Competency			Job Satisfaction		
Dimension	Mean	S.D	Dimension	Mean	S.D
Planning	31.97	8.56	Professional	26.29	5.38
Presentation	89.74	18.12	Teaching Learning	26.52	4.52
Closing	21.63	4.38	Innovation	24.72	4.67
Evaluation	16.17	2.84	Inter-Personal Relations	29.65	6.17
Managerial	23.45	5.16			



From the above table it is observed that the dimensions of Teaching Competency – the highest to lowest mean values in merit order are ‘Presentation’, ‘Planning’, ‘Managerial’, ‘Closing’ and ‘Evaluation’. Further, the dimensions of Teacher Job Satisfaction from highest to lowest mean scores in the order of merit are – ‘Inter-Personal Relations’, ‘Teaching Learning’, ‘Professional’ and ‘Innovation’ aspects.

**Table 7**

**Table showing the significance of difference of ‘t’ between High and Low Teaching Competency in relation to Job Satisfaction – High and Low Teacher Job Satisfaction in relation to Teaching Competency**

Variable category	Mean	S.D	N	C.R
High Teaching Competency	202.76	32.23	82	7.0
Low Teaching Competency	154.27	42.11	50	
High Job Satisfaction	94.29	18.12	79	11.65
Low Job Satisfaction	57.69	16.25	46	

\*\*Significant at 0.01 level

From the above table it is concluded that the mean value of High Teaching Competency in relation to Job Satisfaction is greater than that of Low Teaching Competency. Hence, the hypothesis is rejected. Further, the mean value in respect of High Job Satisfaction in relation to Teaching Competency is greater than Low Job Satisfaction. The obtained values of Critical Ratios (i.e., 7.0 and 11.65) are more than 1.96 and 2.58, which is significant at 0.05 and 0.01 levels respectively. Hence, the hypotheses are rejected.

### **Conclusions:**

- 1) There is significance of relationship between Teacher Teaching Competency and Job Satisfaction.
- 2) There is significance of relationship between the dimensions of Teaching Competency.
- 3) There is significance of relationship between the dimensions of Teacher Job Satisfaction.
- 4) In respect of Teaching Competency, there is significance of difference between all the variables like – Sex, Locality, Qualification, Age, Marital Status,



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Experience, Type of Management and Type of Institution.

- 5) In respect of Teacher Job Satisfaction, there is significance of difference between the variables like – Locality, Age, Marital Status, Experience, Type of Management and Type of Institution. Further, no significance of difference is found between the Teachers in respect of Sex category.
- 6) The mean values of Teaching Competency in merit order is ‘Presentation’ followed by ‘Planning’, ‘Managerial’, ‘Closing’ and ‘Evaluation’. Where the mean values from highest to lowest is ‘Inter-Personal Relations’, ‘Teaching Learning’, ‘Professional’ and ‘Innovation’ aspects.
- 7) The highest mean in respect of Teaching Competency is greater than the Lowest Teaching Competency in relation to Teacher Job Satisfaction. Where, the highest mean value of Teacher Job Satisfaction is greater than that of Lowest Job Satisfaction in relation to Teaching Competency.

### **Results and Discussions:**

From the above study it is concluded that the Teaching Competency aspect is influencing the Teacher Job Satisfaction factor. Further, the results of the study reveal that the Teaching Competency all variables like Sex, Locality, Qualification, experience, type of Management and Type of institution do differed significantly, whereas the Job Satisfaction all- the variables like Sex, Locality, Qualification, Marital Status, Experience, Type of Management and Type of Institution categories are do differed significantly. In view of these reasons more attention is required to pursue the causes of disparity among the Teachers of Primary and Secondary Schools in their Teaching Competency and Job Satisfaction aspects so as to enhance the quality in Primary and Secondary Education.

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## A FOUR GRADED MANPOWER MODEL WITH BULK RECRUITMENT AT FIRST GRADE

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### **Introduction**

The planning of personnel in an organization known as Manpower Planning of the organization and is vital in business and industrial sectors as the growth and development of a company is dependent largely on the proper planning of their personnel. Stochastic models provide basic framework for efficient analysis and design of manpower system of the organization as human behavior is random and ultimately depending on the environment in and around the organization one may decide to continue or leave the organization. Starting from Seal (1945), pioneer in Manpower planning models different authors developed and analyzed different models with various assumptions suitable for the practical situations. The graded manpower models gain lot of importance in business and industry, since they cater the needs of manpower systems in developing efficient control strategies. Forbes (1971) studied Markov chain type models of manpower systems and estimated the transitional probabilities of a manpower system over reasonable span of time and considered different methods for testing of goodness of fit of the model. Sally Mc.Clean (1976) developed a manpower model with two grades. Murty M.V et.al (2000) developed a three grade manpower model as an extension to the model developed by Sally Mc.Clean (1976) developed a three graded manpower model in which Poisson recruitment is assumed at first and second grades. M.Vivekananda Murty et al (2010) developed a three stage manpower model with bulk recruitment at first grade and Poisson recruitment at second grade was considered and analyzed. In this paper a four graded manpower model is developed having bulk recruitment at first grade.

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## 2. Model:

Present day practice of recruiting fresh candidates at the first grade, which is the basic one, in sectors like IT, insurance, banking and marketing etc, is in bulk. They do recruitment through campus interviews and conducting common examination. Here the employees at this first grade can be viewed as employees in probation. After the recruitment at the first grade, the grades next to this can be broadly classified in to the categories namely Jr. Manger cadre, Middle manager cadre and Top management cadre. These can be denoted as second, third and fourth grades respectively. Though there is some recruitment took place at second and other higher grades it is comparatively insignificant and can be ignored while modeling the manpower structure. Accordingly in this paper a four graded manpower model was developed and analyzed. In the process of bulk recruitment at first grade the arrival streams are assumed to form a Poisson process and the actual number of employees in any arrival streams is a random variable  $X$ , which may on any Poisson interval values less than  $\infty$  with probability  $c_x$ . Let  $\lambda_x$  be the recruitment rate of the Poisson process of batches of size  $X$  then  $c_x = \lambda_x / \lambda$ , where  $\lambda = \sum_x \lambda_x$ , the composite recruitment rate of all batches

together. The batch sizes are assumed to follow geometric distribution with parameter  $q$ . Grades II to IV are the hierarchical grades and assume to have promotions from grade to grade hierarchically and further assumed that there is no double promotion facility and there is no reversion policy in the organization. Promotional transitions from grade-I to grade-II, grade-II to grade-III and grade-III to grade-IV are assumed to follow Poisson with parameters  $\beta, \delta$  and  $\psi$  respectively Leaving process is assumed to follow Poisson with parameters  $\alpha, \gamma, \theta$  and  $\phi$  respectively from grades-I, II, III and IV respectively. Let there be  $M_0, N_0, K_0$  and  $L_0$  be the initial number of employees at

grade-I grade-II grade-III and grade-IV respectively in the system. Let  $P_{m,n,k,l}(t)$  be the probability that there are  $m$  employees in grade-I,  $n$  employees in grade-II,  $k$  employees in grade-III and  $l$  employees in grade-IV at time  $t$ . The grade to which all the leavers will reach is also denoted as grade- V for convenience, though it is not with in the organization.

The schematic diagram representing this Manpower model is shown in fig. 1.

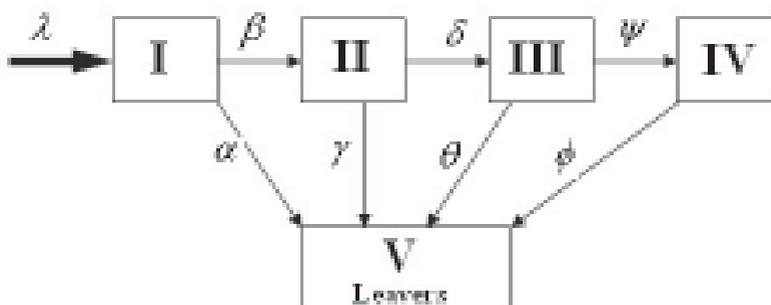


Fig 1 Manpower model with four grades

### 3. Postulates of the model:

1. The occurrence of events in non-overlapping intervals of time is statistically independent.
2. The probability that one employee was recruited at grade-I during an infinitesimal interval of time  $\Delta t$  is  $\lambda \Delta t + o(\Delta t)$ .
3. The probability that an employee will leave the organization when there are  $m$  employees in grade-I during an infinitesimal interval of time  $\Delta t$  is  $m\alpha(\Delta t) + o(\Delta t)$ .
4. The probability that an employee will get one promotion from grade I during an infinitesimal interval of time  $\Delta t$  when there are  $m$  employees at grade-I is  $m\beta(\Delta t) + o(\Delta t)$ .
5. The probability that an employee will get one more promotion from grade II during an infinitesimal interval of time  $\Delta t$ , when there are  $n$  employees in grade -II is  $n\delta(\Delta t) + o(\Delta t)$ .
6. The probability that an employee will get one more promotion from grade III during an infinitesimal interval of time  $\Delta t$ , when there are  $k$  employees in grade -III is  $k\psi(\Delta t) + o(\Delta t)$ .
7. The probability that an employee will leave the organization after making one promotion during an infinitesimal interval of time  $\Delta t$ , when there are  $n$  employees in stage-II is  $n\gamma(\Delta t) + o(\Delta t)$ .
8. The probability that an employee will leave from stage-III during an infinitesimal interval of time  $\Delta t$ , when there are  $k$  employees in stage-III is  $k\theta(\Delta t) + o(\Delta t)$ .
9. The probability that an employee will leave from stage stage-IV during an infinitesimal interval of time  $\Delta t$ , when there are  $l$  employees in stage-IV is  $l\phi(\Delta t) + o(\Delta t)$ .
10. The probability that occurrence of other than the above events during an infinitesimal interval of time  $\Delta t$  is  $o(\Delta t)$ . Then the probability that no recruitment was made at grade -I, no employee leaves the organization during an infinitesimal interval of time  $\Delta t$  is  $1 - [\lambda + m\alpha + n\beta + n\gamma + n\delta + k\theta + l\phi](\Delta t) + o(\Delta t)$ .

#### 4. Difference differential equations of the model:

The difference differential equations of the model are

$$\begin{aligned}
 P_{m,n,p,q}^*(t) = & P_{m,n,p,q}(t) [ -(\lambda + m\alpha + m\beta + n\gamma + n\delta + k\theta + k\psi + l\phi) ] + \lambda P_{m-1,n,p,q}(t) \\
 & + (m+1)\alpha P_{m+1,n,p,q}(t) + (m+1)\beta P_{m+1,n-1,p,q}(t) + (n+1)\gamma P_{m,n+1,p,q}(t) \\
 & + (n+1)\delta P_{m,n+1,p-1,q}(t) + k\theta P_{m,n,p,q-1}(t) + (k+1)\psi P_{m,n,p,q+1}(t) + l\phi P_{m,n,p,q+1}(t) \\
 & + \lambda \left[ \sum_{i=1}^n P_{m-1,n,p,q}(t) C_i \right] \quad \text{--(4.1)}
 \end{aligned}$$

$$\begin{aligned}
 P_{m,n,p,r}^*(t) = & P_{m,n,p,r}(t) [ -(\lambda + m\alpha + m\beta + n\gamma + n\delta + k\theta + k\psi) ] + \lambda P_{m-1,n,p,r}(t) \\
 & + (m+1)\alpha P_{m+1,n,p,r}(t) + (m+1)\beta P_{m+1,n-1,p,r}(t) + (n+1)\gamma P_{m,n+1,p,r}(t) \quad \text{--(4.2)}
 \end{aligned}$$

$$\begin{aligned}
 P_{m,n,p,s}^*(t) = & P_{m,n,p,s}(t) [ 1 - (\lambda + m\alpha + m\beta + n\gamma + n\delta + l\phi) ] + \lambda P_{m-1,n,p,s}(t) \\
 & + (m+1)\alpha P_{m+1,n,p,s}(t) + (m+1)\beta P_{m+1,n-1,p,s}(t) + (n+1)\gamma P_{m,n+1,p,s}(t) \\
 & + \theta P_{m,n,p,s-1}(t) + \psi P_{m,n,p,s+1}(t) + l\phi P_{m,n,p,s+1}(t) + \lambda \left[ \sum_{i=1}^n P_{m-1,n,p,s}(t) C_i \right] \quad \text{--(4.3)}
 \end{aligned}$$

$$\begin{aligned}
 P_{m,n,p,t}^*(t) = & P_{m,n,p,t}(t) [ -(\lambda + m\alpha + m\beta + k\theta + k\psi + l\phi) ] + \lambda P_{m-1,n,p,t}(t) \\
 & + (m+1)\alpha P_{m+1,n,p,t}(t) + \gamma P_{m,n,p,t}(t) + \delta P_{m,n,p-1,t}(t) + k\theta P_{m,n,p,t-1}(t) \\
 & + (k+1)\psi P_{m,n,p,t+1}(t) + l\phi P_{m,n,p,t+1}(t) + \lambda \left[ \sum_{i=1}^n P_{m-1,n,p,t}(t) C_i \right] \quad \text{--(4.4)}
 \end{aligned}$$

$$\begin{aligned}
 P_{m,n,p,u}^*(t) = & P_{m,n,p,u}(t) [ -(\lambda + n\gamma + n\delta + k\theta + k\psi + l\phi) ] + \alpha P_{1,n,p,u}(t) \\
 & + \beta P_{1,m-1,p,u}(t) + (n+1)\gamma P_{m,n+1,p,u}(t) + (n+1)\delta P_{m,n+1,p-1,u}(t) \\
 & + k\theta P_{m,n,p,u-1}(t) + (k+1)\psi P_{m,n,p,u+1}(t) + l\phi P_{m,n,p,u+1}(t) \quad \text{--(4.5)}
 \end{aligned}$$

$$\begin{aligned}
 P_{m,n,p,v}^*(t) = & P_{m,n,p,v}(t) [ -(\lambda + m\alpha + m\beta + n\gamma + n\delta) ] + \lambda P_{m-1,n,p,v}(t) + (m+1)\alpha P_{m+1,n,p,v}(t) \\
 & + (m+1)\beta P_{m+1,n-1,p,v}(t) + (n+1)\gamma P_{m,n+1,p,v}(t) + \psi P_{m,n,p,v}(t) + \phi P_{m,n,p,v}(t) + \lambda \left[ \sum_{i=1}^n P_{m-1,n,p,v}(t) C_i \right] \\
 & \quad \text{--(4.6)}
 \end{aligned}$$

$$\begin{aligned}
 P_{m,n,p,w}^*(t) = & P_{m,n,p,w}(t) [ -(\lambda + m\alpha + m\beta + k\theta + k\psi) ] + \lambda P_{m-1,n,p,w}(t) \\
 & + (m+1)\alpha P_{m+1,n,p,w}(t) + \gamma P_{m,n,p,w}(t) + \delta P_{m,n,p-1,w}(t) \\
 & + (k+1)\psi P_{m,n,p,w+1}(t) + \phi P_{m,n,p,w}(t) + \lambda \left[ \sum_{i=1}^n P_{m-1,n,p,w}(t) C_i \right] \quad \text{--(4.7)}
 \end{aligned}$$

$$\begin{aligned}
 P_{m,n,p,x}^*(t) = & P_{m,n,p,x}(t) [ -(\lambda + n\gamma + n\delta + k\theta + k\psi) ] + \alpha P_{1,n,p,x}(t) + \beta P_{1,m-1,p,x}(t) \\
 & + (n+1)\gamma P_{m,n+1,p,x}(t) + (n+1)\delta P_{m,n+1,p-1,x}(t) + (k+1)\psi P_{m,n,p,x+1}(t) + \phi P_{m,n,p,x}(t) \\
 & \quad \text{--(4.8)}
 \end{aligned}$$

$$\begin{aligned}
 P_{m,n,p,y}^*(t) = & P_{m,n,p,y}(t) [ -(\lambda + n\gamma + n\delta + l\phi) ] + \alpha P_{1,n,p,y}(t) + \beta P_{1,m-1,p,y}(t) + (n+1)\gamma P_{m,n+1,p,y}(t) \\
 & + \theta P_{m,n,p,y-1}(t) + \psi P_{m,n,p,y+1}(t) + l\phi P_{m,n,p,y+1}(t) \quad \text{--(4.9)}
 \end{aligned}$$

$$P_{m,n,p,z}^*(t) = P_{m,n,p,z}(t) [ -(\lambda + k\theta + k\psi + l\phi) ] + \alpha P_{1,m,p,z}(t) + \gamma P_{m,n,p,z}(t) + \delta P_{m,n,p-1,z}(t)$$



$$+k\theta P_{0,0,0,0,0}^{(k)}(t) + (k+1)\psi P_{0,0,0,0,0}^{(k)}(t) + l\phi P_{0,0,0,0,0}^{(k)}(t) \quad \text{--(4.10)}$$

$$P_{m,0,0,0,0}^{(k)}(t) = P_{m,0,0,0,0}^{(k)}(t) [-(\lambda + m\alpha + m\beta)] + \lambda P_{m-1,0,0,0,0}^{(k)}(t) + (m+1)\alpha P_{m+1,0,0,0,0}^{(k)}(t) \\ + \gamma P_{m,0,0,0,0}^{(k)}(t) + \psi P_{m,0,0,0,0}^{(k)}(t) + \theta P_{m,0,0,0,0}^{(k)}(t) + \lambda \left[ \sum_{i=1}^m P_{m-i,0,0,0,0}^{(k)}(t) C_i \right] \quad \text{--(4.11)}$$

$$P_{n,0,0,0,0}^{(k)}(t) = P_{n,0,0,0,0}^{(k)}(t) [-(\lambda + n\gamma + n\delta)] + \alpha P_{n+1,0,0,0,0}^{(k)}(t) + \beta P_{n-1,0,0,0,0}^{(k)}(t) \\ + (n+1)\gamma P_{n+1,0,0,0,0}^{(k)}(t) + \psi P_{n,0,0,0,0}^{(k)}(t) + \theta P_{n,0,0,0,0}^{(k)}(t) \quad \text{--(4.12)}$$

$$P_{k,0,0,0,0}^{(k)}(t) = P_{k,0,0,0,0}^{(k)}(t) [-(\lambda + k\theta + k\psi)] + \alpha P_{k+1,0,0,0,0}^{(k)}(t) \\ + \gamma P_{k,0,0,0,0}^{(k)}(t) + \delta P_{k,0,0,0,0}^{(k)}(t) + (k+1)\psi P_{k+1,0,0,0,0}^{(k)}(t) + \theta P_{k,0,0,0,0}^{(k)}(t) \quad \text{--(4.13)}$$

$$P_{l,0,0,0,0}^{(k)}(t) = P_{l,0,0,0,0}^{(k)}(t) [-(\lambda + l\phi)] + \alpha P_{l+1,0,0,0,0}^{(k)}(t) + \gamma P_{l,0,0,0,0}^{(k)}(t) \\ + \theta P_{l,0,0,0,0}^{(k)}(t) + \psi P_{l,0,0,0,0}^{(k)}(t) + l\phi P_{l+1,0,0,0,0}^{(k)}(t) \quad \text{--(4.14)}$$

$$P_{0,0,0,0,0}^{(k)}(t) = P_{0,0,0,0,0}^{(k)}(t) [1 - \lambda] + \alpha P_{1,0,0,0,0}^{(k)}(t) + \gamma P_{0,0,0,0,0}^{(k)}(t) + \psi P_{0,0,0,0,0}^{(k)}(t) + \theta P_{0,0,0,0,0}^{(k)}(t) \quad \text{--(4.15)}$$

with the initial conditions

$$P_{0,0,0,0,0}^{(k)}(0) = 1, P_{m,j}^{(k)}(0) = 0 \quad \forall i \neq M_0, j \neq N_0, k \neq K_0, l \neq L_0$$

### 5. Characteristics of the Model:

The characteristics of the model can be obtained by using joint cumulant generating

(CGK) function of  $P_{m,n,l,j}^{(k)}(t)$

$$\text{Let } K(u, v, w, x, t) \text{ denote the CGF of } P_{m,n,l,j}^{(k)}(t) \\ = uE[W(t)] + vE[X(t)] + wE[Y(t)] + xE[Z(t)] + U^2 D^2[W(t)]/2 + v^2 D^2[X(t)]/2 + W^2 D^2[Y(t)]/2$$

$$+ X^2 D^2[Z(t)]/2 + UV \text{Cov}(W(t), X(t)) + UW \text{Cov}(W(t), Y(t)) + VW \text{Cov}(X(t), Y(t)) +$$

Taking  $Z_1 = e^u, Z_2 = e^v, Z_3 = e^w, Z_4 = e^x$

$$\frac{\partial}{\partial t} K(u, v, w, x, t) = [\beta e^{-u} e^u + \alpha e^{-v} - (\alpha + \beta)] \frac{\partial}{\partial u} k(u, v, w, x, t) + \phi(e^{-v} - 1) \frac{\partial u}{\partial x} + \lambda(e^u - 1) \\ + [\delta e^{-w} e^w + \gamma e^{-x} - (\gamma + \delta)] \frac{\partial}{\partial w} k(u, v, w, x, t) + [\psi e^{-w} e^w + \theta e^{-x} - (\theta + \psi)] \frac{\partial}{\partial w} k(u, v, w, x, t)$$

The average number of employees in grade-I is

$$m_{1,0,0,0,0}(t) = \lambda / (\alpha + \beta) (1 - e^{-(\alpha + \beta)t}) + M_0 e^{-(\alpha + \beta)t} \quad \text{-- (5.1)}$$

The average number of employees in grade-II is

$$m_{0,1,0,0,0}(t) = \lambda(1+q)\beta / (\alpha + \beta)(\gamma + \delta) + \beta e^{-(\alpha + \beta)t} / (\alpha + \beta - \gamma - \delta) (\lambda(1+q) / (\alpha + \beta) - M_0) \\ + N_0 e^{-(\gamma + \delta)t} + \beta e^{-(\gamma + \delta)t} / (\alpha + \beta - \gamma - \delta) (M_0 - \lambda(1+q) / (\gamma + \delta)) \quad \text{-- (5.2)}$$

The average number of employees in grade-III is

$$\begin{aligned}
 m_{0,0,1}(t) = & \frac{\lambda(1+q)\beta\delta}{(\alpha+\beta)(\gamma+\delta)(\psi+\theta)}(1-e^{-(\gamma+\delta)t}) + \frac{\beta\delta\left(\frac{\lambda(1+q)}{\alpha+\beta}-M_3\right)(e^{-(\gamma+\delta)t}-e^{-(\alpha+\beta)t})}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-\psi-\theta)} \\
 & + \frac{\beta\delta\left(\frac{\lambda(1+q)}{\gamma+\delta}-M_3\right)(e^{-(\gamma+\delta)t}-e^{-(\psi+\theta)t})}{(\alpha+\beta-\gamma-\delta)(\gamma+\delta-\psi-\theta)} + \frac{N_0\delta(e^{-(\psi+\theta)t}-e^{-(\gamma+\delta)t})}{(\gamma+\delta-\psi-\theta)} + K_0e^{-(\psi+\theta)t}
 \end{aligned} \quad (5.3)$$

The average number of employees in grade-IV is

$$\begin{aligned}
 m_{0,0,0}(t) = & \frac{\lambda(1+q)\beta\delta\psi}{(\alpha+\beta)(\gamma+\delta)(\psi+\theta)\phi} + \frac{e^{-(\psi+\theta)t}}{(\psi+\theta-\phi)}\left(\frac{\lambda(1+q)\beta\delta\psi}{(\gamma+\delta)(\psi+\theta)(\alpha+\beta-\psi-\theta)}\right. \\
 & \left. - \frac{N_0\delta\psi}{(\gamma+\delta-\psi-\theta)} - K_0\right) + \frac{\beta\delta\psi}{(\alpha+\beta-\gamma-\delta)(\gamma+\delta-\psi-\theta)}\left(\frac{\lambda e^{-(\alpha+\beta)t}}{(\alpha+\beta)(\alpha+\beta-\phi)}\right. \\
 & \left. - \frac{\lambda e^{-(\gamma+\delta)t}}{(\gamma+\delta)(\gamma+\delta-\phi)} + \frac{M_1e^{-(\gamma+\delta)t}}{(\gamma+\delta-\phi)} - \frac{M_1e^{-(\alpha+\beta)t}}{(\alpha+\beta-\phi)}\right) + \frac{N_0\delta e^{-(\gamma+\delta)t}}{(\gamma+\delta-\psi-\theta)(\gamma+\delta-\phi)} \\
 & - \frac{\lambda\beta\delta\psi e^{-\alpha t}}{(\alpha+\beta)(\gamma+\delta)(\psi+\theta)\phi} - \frac{e^{-\alpha t}}{(\psi+\theta-\phi)} \\
 & \left(\frac{\lambda(1+q)\beta\delta\psi}{(\gamma+\delta)(\psi+\theta)(\alpha+\beta-\psi-\theta)} - \frac{N_0\delta\psi}{(\gamma+\delta-\psi-\theta)} - K_0\right) - \frac{\beta\delta\psi e^{-\alpha t}}{(\alpha+\beta-\gamma-\delta)(\gamma+\delta-\psi-\theta)} \\
 & \left(\frac{\lambda(1+q)}{(\alpha+\beta)(\alpha+\beta-\phi)} - \frac{\lambda(1+q)}{(\gamma+\delta)(\gamma+\delta-\phi)} + \frac{M_0}{(\gamma+\delta-\phi)} - \frac{M_1}{(\alpha+\beta-\phi)}\right) \\
 & - \frac{N_0\delta\psi e^{-\alpha t}}{(\gamma+\delta-\psi-\theta)(\gamma+\delta-\phi)} + L_0e^{-\alpha t}
 \end{aligned} \quad (5.4)$$

The variance of the grade-I is

$$m_{2,0,0}(t) = \lambda(1+q)/(\alpha+\beta)\left(1-e^{-(\alpha+\beta)t}\right) + M_1e^{-(\alpha+\beta)t}\left(1-e^{-(\alpha+\beta)t}\right) \quad (5.5)$$

The variance of the grade-II is

$$\begin{aligned}
 m_{4,2,0}(t) = & \frac{\lambda(1+q)\beta}{(\alpha+\beta)(\gamma+\delta)} + \frac{\beta e^{-(\alpha+\beta)t}}{(\alpha+\beta-\gamma-\delta)}\left(\frac{\lambda(1+q)}{\alpha+\beta}-M_3\right) + \frac{M_0\beta^2(2e^{-(\alpha+\beta-\gamma-\delta)t}-e^{-2(\alpha+\beta)t}-e^{-2(\gamma+\delta)t})}{(\alpha+\beta-\gamma-\delta)^2} \\
 & + N_0e^{-(\gamma+\delta)t}\left(1-e^{-(\gamma+\delta)t}\right) + \frac{\beta e^{-(\gamma+\delta)t}}{(\alpha+\beta-\gamma-\delta)}\left(M_0-\frac{\lambda(1+q)}{\gamma+\delta}\right) \quad (5.6)
 \end{aligned}$$

The variance of the grade-III is

$$\begin{aligned}
 m_{3,0,2,1}(t) = & \frac{\lambda(1+q)\beta\delta}{(\alpha+\beta)(\gamma+\delta)(\psi+\theta)}(1-e^{-(\gamma+\delta)t}) + \frac{\beta\delta\left(\frac{\lambda(1+q)}{\alpha+\beta}-M_0\right)\left(e^{-(\gamma+\delta)t} + \frac{(\psi+\theta)e^{-(\alpha+\beta)t}}{\alpha+\beta-2\psi-2\theta}\right)}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-\psi-\theta)} \\
 & - \frac{\beta\delta e^{-(\alpha+\beta)t}}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-2\psi-2\theta)} + \frac{N_0\delta\left(e^{-(\alpha+\beta)t}-e^{-(\gamma+\delta)t}\right)}{(\gamma+\delta-\psi-\theta)} \\
 & + \frac{\beta\delta\left(\frac{\lambda(1+q)}{\gamma+\delta}-M_1\right)\left(e^{-(\gamma+\delta)t} + \frac{e^{-(\alpha+\beta)t}}{\psi+\theta}\right)}{(\alpha+\beta-\gamma-\delta)(\gamma+\delta-\psi-\theta)} - \frac{M_0\beta^2\delta^2}{(\alpha+\beta-\gamma-\delta)^2(\alpha+\beta-\psi-\theta)^2} \\
 & \left[ \frac{2(\gamma+\delta+2\psi+2\theta-3\alpha-3\beta)e^{-(\alpha+\beta+\gamma+\delta)t}}{\alpha+\beta+\gamma+\delta-2\psi-2\theta} + e^{-2(\gamma+\delta)t} + e^{-2(\alpha+\beta)t} \right] \\
 & + \frac{N_0\beta^2\left(2e^{-(\gamma+\delta+\psi+\theta)t}-e^{-2(\gamma+\delta)t}\right)}{(\gamma+\delta-\psi-\theta)^2} - \frac{2M_0\beta^2\delta^2e^{-(\gamma+\delta+\psi+\theta)t}}{(\alpha+\beta-\gamma-\delta)^2(\alpha+\beta-\psi-\theta)(\gamma+\delta-\psi-\theta)} \\
 & \left[ \frac{3\alpha+\beta-2\psi-2\theta-\gamma-\delta}{\alpha+\beta-\psi-\theta} - \frac{(\alpha+\beta+\gamma+\delta-2\psi-2\theta)}{\gamma+\delta-\psi-\theta} \right] \\
 & + \frac{\beta\delta e^{-(\alpha+\beta)t}\left(M_0 - \frac{\lambda(1+q)}{\alpha+\beta} - 1\right)e^{-2(\psi+\theta)t}}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-2\psi-2\theta)} \\
 & + \frac{K_0e^{-2(\psi+\theta)t}}{\psi+\theta} - \frac{\beta\delta\left(\frac{\lambda(1+q)}{\gamma+\delta}-M_0\right)\left(1 + \frac{1}{\psi+\theta}\right)e^{-2(\gamma+\delta)t}}{(\alpha+\beta-\gamma-\delta)(\gamma+\delta-\psi-\theta)} \\
 & - \frac{\delta^2e^{-2(\psi+\theta)t}}{(\gamma+\delta-\psi-\theta)^2}\left(N_0 + \frac{4M_0\beta^2}{\alpha+\beta-\gamma-\delta}\right) \\
 & + \frac{2M_0\beta^2\delta^2e^{-2(\psi+\theta)t}}{(\alpha+\beta-\gamma-\delta)^2(\alpha+\beta-\psi-\theta)(\gamma+\delta-\psi-\theta)} \\
 & \left[ \frac{3\alpha+\beta-2\psi-2\theta-\gamma-\delta}{\alpha+\beta-\psi-\theta} - \frac{(\alpha+\beta+\gamma+\delta-2\psi-2\theta)}{\gamma+\delta-\psi-\theta} \right] - \frac{K_0e^{-2(\psi+\theta)t}}{\psi+\theta} \quad (5.7)
 \end{aligned}$$

The variance of the grade-IV is

$$\begin{aligned}
 m_{4,0,0,1}(t) = & \frac{\lambda(1+q)\beta\delta\psi}{(\alpha+\beta)(\gamma+\delta)(\psi+\theta)\phi} - \frac{\lambda(1+q)\beta\delta\psi e^{-\theta t}}{(\gamma+\delta)(\psi+\theta)}\left(\frac{1}{(\alpha+\beta)\phi} + \frac{1}{(\alpha+\beta-\theta)(\psi+\theta-\phi)}\right) \\
 & + \frac{\beta\delta\psi\left(\frac{\lambda(1+q)}{\alpha+\beta}-M_0\right)e^{-(\alpha+\beta)t}}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-2\phi)}\left(\frac{1}{\alpha+\beta-\psi-\theta} - \frac{\phi}{(\alpha+\beta-\phi)(\gamma+\delta-\psi-\theta)}\right)
 \end{aligned}$$



$$\begin{aligned}
 & + \frac{\beta \delta \psi e^{-(\gamma+\delta)t}}{(\alpha+\beta-\gamma-\delta)(\psi+\theta-2\phi)} \left[ \frac{\left( \frac{\lambda(1+g)}{\gamma+\delta} - M_0 \right)}{\gamma+\delta-\psi-\theta} - \frac{\left( \frac{\lambda(1+g)}{\alpha+\beta} - M_0 \right)}{\alpha+\beta-\psi-\theta} \right] \\
 & - \frac{N_0 \delta \psi e^{-(\gamma+\delta)t}}{(\psi+\theta)(\gamma+\delta-\psi-\theta)(\psi+\theta-2\phi)} - \frac{N_0 \delta e^{-(\gamma+\delta)t}}{(\gamma+\delta-\psi-\theta)(\gamma+\delta-2\phi)} \left( \psi - \frac{\phi}{\gamma+\delta-\phi} \right) \\
 & - \frac{\beta \delta \psi \left( \frac{\lambda(1+g)}{\gamma+\delta} - M_0 \right) e^{-(\gamma+\delta)t}}{(\gamma+\delta)(\alpha+\beta-\gamma-\delta)(\gamma+\delta-\psi-\theta)(\gamma+\delta-2\phi)} + \frac{K_2}{\psi+\theta-\phi} \left( \frac{\phi e^{-(\gamma+\delta)t}}{\psi+\theta-2\phi} + e^{-t} \right) \\
 & - \frac{K_2 \psi e^{-(\gamma+\delta)t}}{\psi+\theta-2\phi} - \frac{\lambda(1+g) \beta \delta \psi \phi e^{-(\gamma+\delta)t}}{(\gamma+\delta)(\psi+\theta)(\alpha+\beta-\psi-\theta)(\psi+\theta-\phi)(\psi+\theta-2\phi)} \\
 & + \frac{N_0 \delta \psi e^{-t}}{(\psi+\theta-\phi)(\gamma+\delta-\phi)} - \frac{\beta \delta \psi e^{-t}}{(\alpha+\beta-\gamma-\delta)(\gamma+\delta-\psi-\theta)} \left[ \frac{\left( \frac{\lambda(1+g)}{\alpha+\beta} - M_0 \right)}{\alpha+\beta-\phi} - \frac{\left( \frac{\lambda(1+g)}{\gamma+\delta} - M_0 \right)}{\gamma+\delta-\phi} \right] \\
 & + L_0 e^{-t} + \frac{2\beta \delta \psi^2 \left( \frac{\lambda(1+g)}{\alpha+\beta} - M_0 \right) (3\psi+3\theta-\alpha-\beta) \left( \frac{e^{-(\alpha+\beta)t}}{\alpha+\beta-2\phi} - \frac{e^{-(\psi+\theta+\phi)t}}{\psi+\theta-\phi} \right)}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-\psi-\theta)(\alpha+\beta-\psi-\theta-\phi)(\alpha+\beta-2\psi-2\theta)} \\
 & + \frac{M_0 \beta^2 \delta^2 \psi^2 (\gamma+\delta-\phi) \left( \frac{2e^{-(\psi+\theta+\phi)t}}{\psi+\theta-\phi} - \frac{e^{-2(\alpha+\beta)t}}{\alpha+\beta-\phi} \right)}{(\alpha+\beta-\gamma-\delta)^2 (\alpha+\beta-\psi-\theta)(\gamma+\delta-\phi+2\alpha-2\beta)(\psi+\theta+\phi-2\alpha-2\beta)(\alpha+\beta-\phi)} \\
 & + \frac{2M_0 \beta^2 \delta^2 \psi^2 \left( \frac{2e^{-(\alpha+\beta+\gamma+\delta)t}}{(\alpha+\beta+\gamma+\delta-2\phi)} - \frac{2e^{-(\psi+\theta+\phi)t}}{\psi+\theta-\phi} \right)}{(\alpha+\beta-\phi)(\alpha+\beta-\gamma-\delta)(\alpha+\beta-\psi-\theta)(\gamma+\delta-\phi)(\alpha+\beta+\gamma+\delta-\psi-\theta-\phi)} \\
 & + \frac{2M_0 \beta^2 \delta^2 \psi^2 \left( \frac{1}{\gamma+\delta-\phi} + \frac{\gamma+\delta+2\psi+2\theta-3\alpha-3\beta}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-\psi-\theta)} \right) \left( \frac{e^{-(\psi+\theta+\phi)t}}{\psi+\theta-\phi} - \frac{e^{-2(\alpha+\beta+\delta)t}}{\alpha+\beta-\phi} \right)}{(\alpha+\beta-\psi-\theta)^2 (\alpha+\beta-\gamma-\delta)(\alpha+\beta-\phi)} \\
 & + \frac{N_0 \delta^2 \psi^2}{(\gamma+\delta-\psi-\theta)(\gamma+\delta-\phi)} \left( 2(1-\gamma-\delta-\psi-\theta+2\phi) e^{-(\gamma+\alpha+\delta)t} - \frac{e^{-2(\gamma+\delta+\phi)t}}{\gamma+\delta} \right) \\
 & + \frac{M_0 \beta^2 \delta^2 \psi^2 \left( \frac{e^{-2(\gamma+\delta+\phi)t}}{\gamma+\delta} - 2e^{-(\psi+\theta+\phi)t} \right)}{(\gamma+\delta-\psi-\theta)(\gamma+\delta-\phi)(\psi+\theta+\phi-2\gamma-2\delta)(\alpha+\beta-\gamma-\delta)^2} \\
 & + \frac{2M_0 \beta^2 \delta^2 \psi^2 \left( \frac{(\gamma+\delta+\psi+\theta-2\phi) e^{-(\psi+\theta+\phi)t}}{(\psi+\theta-\phi)} - e^{-2(\gamma+\delta+\psi+\theta)t} \right)}{(\alpha+\beta-\gamma-\delta)^2 (\alpha+\beta-\psi-\theta)(\gamma+\delta-\phi)(\psi+\theta-\phi)(\gamma+\delta-\psi-\theta)}
 \end{aligned}$$



$$\begin{aligned}
 & \left( \frac{3\alpha+3\beta-2\psi-2\theta-\gamma-\delta}{\alpha+\beta-\psi-\theta} \frac{(\gamma+\delta+\alpha+\beta-2\psi-2\theta)}{\gamma+\delta-\psi-\theta} \right) + \frac{2N_0\delta^2\psi^2}{(\gamma+\delta-\psi-\theta)^2} \\
 & \left( \frac{e^{-(\gamma+\delta+\psi+\theta)}}{(\gamma+\delta-\phi)} \frac{2e^{-(\psi+\theta+\phi)}}{(\psi+\theta-\phi)^2} \right) - \frac{2N_0\delta^2\psi^2}{(\gamma+\delta-\psi-\theta)^2 (\psi+\theta-\phi)} \left( \frac{e^{-(\gamma+\delta+\phi)}}{(\gamma+\delta-\phi)} \frac{e^{-2(\psi+\theta-\phi)}}{2(\psi+\theta-\phi)} \right) \\
 & + \frac{2M_0\beta^2\delta^2\psi^2 \left( 1 + \frac{1}{(\alpha+\beta-\psi-\theta)} \right) \left( \frac{e^{-(\gamma+\delta+\phi)}}{\gamma+\delta-\phi} - \frac{e^{-(\psi+\theta+\phi)}}{\psi+\theta-\phi} \right)}{(\alpha+\beta-\psi-\theta)(\alpha+\beta-\gamma-\delta)^2 (\alpha+\beta-\phi)(\gamma+\delta-\psi-\theta)} \\
 & + \frac{2M_1\beta^2\delta^2\psi^2 \left( \frac{1}{(\gamma+\delta-\psi-\theta)} + \frac{(3\alpha+3\beta-2\psi-2\theta-\gamma-\delta)}{(\alpha+\beta-\psi-\theta)} \right) \left( \frac{e^{-(\psi+\theta+\phi)}}{\psi+\theta-\phi} - \frac{e^{-(\gamma+\delta+\phi)}}{\gamma+\delta-\phi} \right)}{(\alpha+\beta-\psi-\theta)(\alpha+\beta-\gamma-\delta)^2 (\psi+\theta-\phi)(\gamma+\delta-\psi-\theta)} \\
 & - \frac{2M_0\beta^2\delta^2\psi^2}{(\alpha+\beta-\gamma-\delta)^2 (\gamma+\delta-\psi-\theta)^2 (\gamma+\delta-\phi)} \left( \frac{e^{-(\psi+\theta+\phi)}}{\psi+\theta-\phi} - \frac{e^{-(\gamma+\delta+\phi)}}{\gamma+\delta-\phi} \right) \\
 & + \frac{2\beta\delta\psi^2 \left( \frac{\lambda(1+g)}{\gamma+\delta} - M_0 \right) (\psi+\theta-1)}{(\alpha+\beta-\gamma-\delta)(\gamma+\delta-\psi-\theta)} \left( \frac{e^{-(\psi+\theta+\phi)}}{(\psi+\theta-\phi)^2 \phi} + \frac{e^{\psi+\theta\phi}}{(\psi+\theta)(\psi+\theta+2\phi)\phi} + \frac{e^{-2(\psi+\theta\phi)}}{2(\psi+\theta)(\psi+\theta-\phi)^2} \right) \\
 & + \frac{K_0\psi e^{-(\psi+\theta+\phi)}}{\psi+\theta-\phi} \left( \frac{1}{\psi+\theta} - 1 + \frac{1}{(\psi+\theta)(\psi+\theta-\phi)} \right) - \frac{K_1\psi^2 e^{-2(\psi+\theta\phi)}}{(\psi+\theta)(\psi+\theta-\phi)^2} \\
 & + \frac{2\beta\delta\psi^2 \left( \frac{e^{-(\psi+\theta+\phi)}}{\psi+\theta-\phi} - \frac{e^{-2(\alpha+\beta)}}{\alpha+\beta-2\phi} \right)}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-2\psi-2\theta)(\alpha+\beta-\psi-\theta-\phi)} + \frac{2K_0\psi^2 e^{\psi+\theta\phi} (1-\psi-\theta)}{(\psi+\theta)(\psi+\theta+2\phi)} \\
 & + \frac{2M_1\beta^2\delta^2\psi^2 \left( \frac{2(\gamma+\delta+2\psi+2\theta-3\alpha-3\beta)e^{-(\alpha+\beta-\gamma+\phi)}}{(\alpha+\beta+\gamma+\delta-2\psi-2\theta)(\alpha+\beta+\gamma+\delta-\psi-\theta-\phi)(\alpha+\beta+\gamma+\delta-2\theta)} \right)}{(\alpha+\beta-\gamma-\delta)^2 (\alpha+\beta-\psi-\theta)^2} \\
 & - \frac{e^{-2(\psi+\theta\phi)}}{2(\psi+\theta+\phi-2\gamma-2\delta)(\gamma+\delta-\phi)} - \frac{e^{-2(\alpha+\beta\phi)}}{2(\psi+\theta+\phi-2\gamma-2\delta)(\alpha+\beta-\phi)} \\
 & - \frac{2(\psi+\theta+\phi-\alpha-\beta-\gamma-\delta)e^{-(\psi+\theta+\phi)}}{(\psi+\theta-\phi)(\psi+\theta+\phi-2\gamma-2\delta)(\psi+\theta+\phi-2\alpha-2\beta)} \\
 & + \frac{4M_0\beta^2\delta^2\psi^2 (\gamma+\delta+2\psi+2\theta-3\alpha-3\beta)e^{-(\psi+\theta+\phi)}}{(\alpha+\beta-\gamma-\delta)^2 (\alpha+\beta-\psi-\theta)^2 (\alpha+\beta+\gamma+\delta-2\psi-2\theta)(\alpha+\beta+\gamma+\delta-\psi-\theta-\phi)(\psi+\theta-\phi)} \\
 & + \frac{\beta\delta\psi^2 \left( M_0 - \frac{\lambda(1+g)}{\alpha+\beta} - 1 \right) \left( e^{-\psi+\theta\phi} - 2e^{-(\psi+\theta+\phi)} \right)}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-2\psi-2\theta)(\psi+\theta-\phi)^2} + \frac{2M_0\beta^2\delta^2\psi^2 \left( 2 - \frac{(\alpha+\beta+\gamma+\delta-2\psi-2\theta)}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-\psi-\theta)} \right)}{(\gamma+\delta-\psi-\theta)^2 (\alpha+\beta-\gamma-\delta)(\psi+\theta-\phi)^2} \\
 & + \frac{2M_0\beta^2\delta^2\psi^2 \left( e^{-2(\psi+\theta\phi)} - 2e^{-(\psi+\theta+\phi)} \right)}{(\alpha+\beta-\gamma-\delta)^2 (\psi+\theta-\phi)^2 (\alpha+\beta-\psi-\theta)(\gamma+\delta-\psi-\theta)}
 \end{aligned}$$

$$\begin{aligned}
 & + \frac{\lambda(1+q)\beta\delta\psi e^{-2\alpha}}{(\gamma+\delta)(\psi+\theta)(\psi+\theta-\phi)} \left( \frac{\phi}{(\alpha+\beta-\psi-\theta)(\psi+\theta-2\phi)} - \frac{1}{\alpha+\beta-\phi} \right) \\
 & - \frac{\beta\delta\psi \left( \frac{\lambda(1+q)}{\alpha+\beta} - M_0 \right) e^{-2\alpha}}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-2\phi)} \left( \frac{1}{\alpha+\beta-\psi-\theta} - \frac{\phi}{(\alpha+\beta-\phi)(\gamma+\delta-\psi-\theta)} \right) \\
 & - \frac{\beta\delta\psi e^{-2\alpha}}{(\alpha+\beta-\gamma-\delta)(\psi+\theta-2\phi)} \left[ \frac{\left( \frac{\lambda(1+q)}{\gamma+\delta} - M_0 \right)}{\gamma+\delta-\psi-\theta} - \frac{\left( \frac{\lambda(1+q)}{\alpha+\beta} - M_0 \right)}{\alpha+\beta-\psi-\theta} \right] + \frac{N_0\delta\psi e^{-2\alpha}}{(\psi+\theta)(\gamma+\delta-\psi-\theta)(\psi+\theta-2\phi)} \\
 & + \frac{N_0\delta e^{-2\alpha} \left( \psi - \frac{\phi}{\gamma+\delta} \right)}{(\gamma+\delta-\psi-\theta)(\gamma+\delta-2\phi)} + \frac{\beta\delta\psi \left( \frac{\lambda(1+q)}{\gamma+\delta} - M_0 \right)}{(\gamma+\delta)(\alpha+\beta-\gamma-\delta)(\gamma+\delta-\psi-\theta)(\gamma+\delta-2\phi)} + \frac{K_0(\psi-1)e^{-2\alpha}}{\psi+\theta-2\phi} \\
 & - \frac{N_0\delta\psi e^{-2\alpha}}{(\psi+\theta-\phi)(\gamma+\delta-\phi)} + \frac{\beta\delta\psi e^{-2\alpha}}{(\alpha+\beta-\gamma-\delta)(\gamma+\delta-\psi-\theta)} \left[ \frac{\left( \frac{\lambda(1+q)}{\alpha+\beta} - M_0 \right)}{\alpha+\beta-\phi} - \frac{\left( \frac{\lambda(1+q)}{\gamma+\delta} - M_0 \right)}{\gamma+\delta-\phi} \right] - L_0 e^{-2\alpha} \\
 & + \frac{2\beta\delta\psi^2 \left( \frac{\lambda(1+q)}{\alpha+\beta} - M_0 \right) (3\psi+3\theta-\alpha-\beta) e^{-2\alpha}}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-\psi-\theta)(\alpha+\beta-2\phi)(\alpha+\beta-2\psi-2\theta)(\psi+\theta-\phi)} \\
 & + \frac{M_0\beta^2\delta^2\psi^2(\gamma+\delta-\phi)e^{-2\alpha}}{(\alpha+\beta-\gamma-\delta)^2(\alpha+\beta-\psi-\theta)(\gamma+\delta+\phi-2\alpha-2\beta)(\alpha+\beta-\phi)^2(\psi+\theta-\phi)} \\
 & - \frac{2M_0\beta^2\delta^2\psi^2(\psi+\theta+3\phi-2\alpha-2\beta-2\gamma-2\delta)e^{-2\alpha}}{(\alpha+\beta-\phi)(\alpha+\beta-\gamma-\delta)(\alpha+\beta-\psi-\theta)(\gamma+\delta-\phi)(\alpha+\beta+\gamma+\delta-\psi-\theta-\phi)(\alpha+\beta+\gamma+\delta-2\phi)(\psi+\theta-\phi)} \\
 & + \frac{N_0\delta^2\psi^2 \left( 2(1-\gamma-\delta-\psi-\theta+2\phi) - \frac{1}{\gamma+\delta} \right) e^{-2\alpha}}{(\gamma+\delta-\psi-\theta)^2(\gamma+\delta-\phi)} \\
 & + \frac{M_0\beta^2\delta^2\psi^2(2\gamma+2\delta-1)e^{-2\alpha}}{(\gamma+\delta-\psi-\theta)(\gamma+\delta-\phi)(\psi+\theta+\phi-2\gamma-2\delta)(\alpha+\beta-\gamma-\delta)^2(\gamma+\delta)} \\
 & - \frac{2M_0\beta^2\delta^2\psi^2 \left( \frac{3\alpha+3\beta-2\psi-2\theta-\gamma-\delta}{\alpha+\beta-\psi-\theta} - \frac{(\gamma+\delta+\alpha+\beta-2\psi-2\theta)}{\gamma+\delta-\psi-\theta} \right) e^{-2\alpha}}{(\alpha+\beta-\gamma-\delta)^2(\alpha+\beta-\psi-\theta)(\psi+\theta-\phi)^2(\gamma+\delta-\psi-\theta)(\gamma+\delta-\psi-\theta-2\phi)} \\
 & - \frac{2N_0\delta^2\psi^2 e^{-2\alpha} \left( \frac{1}{(\gamma+\delta-\phi)} - \frac{2}{(\psi+\theta-\phi)^2} \right) + \frac{N_0\delta^2\psi^2(2\psi+2\theta+\gamma+\delta-3\phi)e^{-2\alpha}}{(\gamma+\delta-\psi-\theta)^2(\psi+\theta-\phi)^2(\gamma+\delta-\phi)}}{(\gamma+\delta-\psi-\theta)^2(\gamma+\delta-\phi)} \\
 & + \frac{2M_0\beta^2\delta^2\psi^2 \left( 1 + \frac{1}{(\alpha+\beta-\psi-\theta)} \right) e^{-2\alpha}}{(\alpha+\beta-\psi-\theta)(\alpha+\beta-\gamma-\delta)^2(\alpha+\beta-\phi)(\gamma+\delta-\phi)(\psi+\theta-\phi)}
 \end{aligned}$$



The covariance between grade-II and grade-III sizes is

$$\begin{aligned}
 m_{2,3,10}(t) &= \frac{M_a \beta^2 \delta (\gamma + \delta + 2\psi + 2\theta - 3\alpha - 3\beta) e^{-(\alpha + \beta + \gamma + \delta)t}}{(\alpha + \beta - \gamma - \delta)^2 (\alpha + \beta - \psi - \theta)^2} + \frac{M_a \beta^2 \delta e^{-(\alpha + \beta)t}}{(\alpha + \beta - \gamma - \delta)^2 (\alpha + \beta - \psi - \theta)} \\
 &+ \frac{\delta e^{-2(\gamma + \delta)t}}{\gamma + \delta - \psi - \theta} \left( N_4 + \frac{M_a \beta^2}{(\alpha + \beta - \gamma - \delta)^2} \right) + \frac{M_a \beta^2 \delta e^{-(\gamma + \delta + \psi + \theta)t}}{(\alpha + \beta - \gamma - \delta)^2 (\alpha + \beta - \psi - \theta)} \\
 &\left[ \frac{3\alpha + 3\beta - 2\psi - 2\theta - \gamma - \delta}{(\alpha + \beta - \psi - \theta)} - \frac{(\gamma + \delta + \alpha + \beta - 2\psi - 2\theta)}{\gamma + \delta - \psi - \theta} \right] - \frac{N_4 \delta e^{-(\gamma + \delta + \psi + \theta)t}}{\gamma + \delta - \psi - \theta}
 \end{aligned} \quad \text{-- (5.10)}$$

The covariance between grade-I and grade-IV is

$$m_{1,4,11}(t) = \frac{M_a \beta \delta \psi}{(\alpha + \beta - \gamma - \delta)(\alpha + \beta - \psi - \theta)} \left( \frac{e^{-2(\alpha + \beta)t}}{\alpha + \beta - \phi} - \frac{e^{-(\alpha + \beta + \gamma + \delta)t}}{\gamma + \delta - \phi} \right) + \frac{M_a \beta \delta \psi e^{-(\alpha + \beta + \delta)t}}{(\alpha + \beta - \psi - \theta)(\alpha + \beta - \phi)(\gamma + \delta - \phi)} \quad \text{-- (5.11)}$$

The covariance between grade-II and grade-IV is

$$\begin{aligned}
 m_{2,4,11}(t) &= \frac{M_a \beta \delta \psi}{(\alpha + \beta - \gamma - \delta)(\alpha + \beta - \psi - \theta)(\alpha + \beta - \phi)} \left( \frac{e^{-(\alpha + \beta + \gamma + \delta)t}}{\gamma + \delta - \phi} - \frac{e^{-2(\alpha + \beta)t}}{\gamma + \delta + \phi - 2\alpha - 2\beta} \right) \\
 &- \frac{M_a \beta^2 \delta \psi e^{-(\alpha + \beta + \delta)t}}{(\alpha + \beta - \psi - \theta)(\alpha + \beta - \gamma - \delta)(\alpha + \beta - \phi)(\gamma + \delta - \phi)} - \frac{M_a \beta^2 \delta \psi (\gamma + \delta + 2\psi + 2\theta - 3\alpha - 3\beta) e^{-(\alpha + \beta + \delta)t}}{(\alpha + \beta - \gamma - \delta)^2 (\alpha + \beta - \psi - \theta)^2 (\alpha + \beta - \phi)} \\
 &+ \frac{M_a \beta^2 \delta \psi e^{-2(\alpha + \beta)t}}{(\alpha + \beta - \gamma - \delta)^2 (\alpha + \beta - \psi - \theta)(\gamma + \delta + \phi - 2\alpha - 2\beta)} - \frac{\delta \psi e^{-2(\gamma + \delta)t}}{(\gamma + \delta - \psi - \theta)(\gamma + \delta - \phi)} \\
 &\left( N_6 + \frac{M_a \beta^2}{(\alpha + \beta - \gamma - \delta)^2} \right) - \frac{M_a \beta^2 \delta \psi e^{-(\gamma + \delta + \psi + \theta)t}}{(\alpha + \beta - \gamma - \delta)^2 (\alpha + \beta - \psi - \theta)(\psi + \theta - \phi)} \\
 &\left( \frac{3\alpha + 3\beta - 2\psi - 2\theta - \gamma - \delta}{\alpha + \beta - \psi - \theta} - \frac{(\alpha + \beta + \gamma + \delta - 2\psi - 2\theta)}{\gamma + \delta - \psi - \theta} \right) + \frac{N_6 \delta \psi e^{-(\gamma + \delta + \psi + \theta)t}}{(\gamma + \delta - \psi - \theta)(\psi + \theta - \phi)} \\
 &- \frac{M_a \beta^2 \delta \psi e^{-(\gamma + \delta + \phi)t}}{(\alpha + \beta - \phi)(\alpha + \beta - \psi - \theta)(\alpha + \beta - \gamma - \delta)(\gamma + \delta + \phi - 2\alpha - 2\beta)} \\
 &+ \frac{M_a \beta^2 \delta \psi e^{-(\gamma + \delta + \phi)t}}{(\alpha + \beta - \gamma - \delta)^2 (\alpha + \beta - \psi - \theta)^2} \left( \frac{\gamma + \delta + 2\psi + 2\theta - 3\alpha - 3\beta}{\alpha + \beta - \phi} + \frac{3\alpha + 3\beta - 2\psi - 2\theta - \gamma - \delta}{\psi + \theta - \phi} \right) \\
 &- \frac{M_a \beta^2 \delta \psi e^{-(\gamma + \delta + \psi + \theta)t}}{(\alpha + \beta - \gamma - \delta)^2 (\alpha + \beta - \psi - \theta)} \left( \frac{1}{\gamma + \delta + \phi - 2\alpha - 2\beta} + \frac{\gamma + \delta + \alpha + \beta - 2\psi - 2\theta}{(\psi + \theta - \phi)(\gamma + \delta - \psi - \theta)} \right) \\
 &+ \frac{M_a \beta^2 \delta \psi e^{-(\gamma + \delta + \phi)t}}{(\alpha + \beta - \gamma - \delta)^2 (\gamma + \delta - \psi - \theta)(\gamma + \delta - \phi)} - \frac{N_6 \delta \psi e^{-(\gamma + \delta + \phi)t}}{(\gamma + \delta - \phi)(\psi + \theta - \phi)} \quad \text{-- (5.12)}
 \end{aligned}$$



The covariance between grade-I and grade-III is

$$m_{1,3,0}(r) = \frac{M_0 \beta \delta}{(\alpha + \beta - \gamma - \delta)(\alpha + \beta - \psi - \theta)} \left[ e^{-(\alpha + \beta + \gamma + \delta)r} - e^{-2(\alpha + \beta)r} \right] \quad \text{-- (5.13)}$$

The covariance between grade-III and grade-IV is

$$\begin{aligned} m_{3,4,0}(r) = & \frac{\beta \delta \psi \left( \frac{\lambda(1+g)}{\alpha + \beta} - M_0 \right) e^{-(\alpha + \beta)r} (3\psi + 3\theta - \alpha - \beta)}{(\alpha + \beta - \gamma - \delta)(\alpha + \beta - \psi - \theta)(\alpha + \beta - \psi - \theta - \phi)(\alpha + \beta - 2\psi - 2\theta)} \\ & + \frac{M_0 \beta^2 \delta^2 \psi e^{-2(\alpha + \beta)r} (\gamma + \delta - \phi)}{(\alpha + \beta - \gamma - \delta)^2 (\alpha + \beta - \psi - \theta)(\gamma + \delta + \phi - 2\alpha - 2\beta)(\psi + \theta + \phi - 2\alpha - 2\beta)(\alpha + \beta - \phi)} \\ & - \frac{M_0 \beta^2 \delta^2 \psi e^{-(\alpha + \beta + \gamma + \delta)r}}{(\alpha + \beta - \phi)(\alpha + \beta - \gamma - \delta)(\alpha + \beta - \psi - \theta)(\gamma + \delta - \phi)(\alpha + \beta + \gamma + \delta - \psi - \theta - \phi)} \\ & + \frac{M_0 \beta^2 \delta^2 \psi e^{-(\alpha + \beta + \psi)r}}{(\alpha + \beta - \phi)(\alpha + \beta - \gamma - \delta)(\alpha + \beta - \psi - \theta)^2} \left( \frac{1}{\gamma + \delta - \phi} + \frac{\gamma + \delta + 2\psi + 2\theta - 3\alpha - 3\beta}{(\alpha + \beta - \gamma - \delta)(\alpha + \beta - \psi - \theta)} \right) \\ & + \frac{N_0 \delta^2 \psi e^{-2(\gamma + \delta)r}}{(\gamma + \delta - \psi - \theta)^2 (\gamma + \delta - \phi)} - \frac{M_0 \beta^2 \delta^2 \psi e^{-2(\gamma + \delta)r}}{(\gamma + \delta - \psi - \theta)(\gamma + \delta - \phi)(\psi + \theta + \phi - 2\gamma - 2\delta)(\alpha + \beta - \gamma - \delta)^2} \\ & + \frac{M_0 \beta^2 \delta^2 \psi e^{-(\gamma + \delta + \psi + \theta)r} (\gamma + \delta + \psi + \theta - 2\phi) \left( \frac{3\alpha + 3\beta - 2\psi - 2\theta - \gamma - \delta}{(\alpha + \beta - \psi - \theta)} - \frac{(\gamma + \delta + \alpha + \beta - 2\psi - 2\theta)}{(\gamma + \delta - \psi - \theta)} \right)}{(\alpha + \beta - \gamma - \delta)^2 (\alpha + \beta - \psi - \theta)(\gamma + \delta - \phi)(\psi + \theta - \phi)(\gamma + \delta - \psi - \theta)} \\ & - \frac{N_0 \delta^2 \psi e^{-(\gamma + \delta + \psi + \theta)r} (\gamma + \delta + \psi + \theta - 2\phi)}{(\gamma + \delta - \psi - \theta)^2 (\gamma + \delta - \phi)} + \frac{N_0 \delta^2 \psi (e^{-2(\gamma + \delta + \theta)r} + e^{-2(\psi + \theta)r})}{(\gamma + \delta - \psi - \theta)^2 (\psi + \theta - \phi)} \\ & - \frac{M_0 \beta^2 \delta^2 \psi e^{-(\gamma + \delta + \psi)r} \left( 1 + \frac{1}{\alpha + \beta - \psi - \theta} \right)}{(\alpha + \beta - \gamma - \delta)^2 (\alpha + \beta - \psi - \theta)(\alpha + \beta - \phi)(\gamma + \delta - \psi - \theta)} + \frac{M_0 \beta^2 \delta^2 \psi e^{-(\gamma + \delta + \psi)r}}{(\alpha + \beta - \gamma - \delta)^2 (\gamma + \delta - \psi - \theta)} \\ & \left( \frac{1}{(\alpha + \beta - \psi - \theta)(\psi + \theta - \phi)(\gamma + \delta - \psi - \theta)} - \frac{1}{(\gamma + \delta - \phi)(\gamma + \delta - \psi - \theta)} \right) \\ & - \frac{3\alpha + 3\beta - 2\psi - 2\theta - \gamma - \delta}{(\alpha + \beta - \psi - \theta)^2 (\psi + \theta - \phi)} + \frac{\beta \delta \psi \left( \frac{\lambda(1+g)}{\gamma + \delta} - M_0 \right) \left( 1 - \frac{1}{\psi + \theta} \right)}{(\alpha + \beta - \gamma - \delta)(\gamma + \delta - \psi - \theta)} \\ & \left( \frac{e^{-2(\psi + \theta)r}}{\psi + \theta - \phi} - \frac{e^{-(\psi + \theta)r}}{\phi} \right) + \frac{K_0 \psi e^{-2(\psi + \theta)r}}{(\psi + \theta)(\psi + \theta - \phi)} + \frac{\beta \delta \psi e^{-(\alpha + \beta)r}}{(\alpha + \beta - \gamma - \delta)(\alpha + \beta - 2\psi - 2\theta)(\alpha + \beta - \psi - \theta - \phi)} \\ & + \frac{K_0 \psi e^{-(\alpha + \beta)r} \left( \frac{1}{\psi + \theta} - 1 \right)}{\phi} - \frac{M_0 \beta^2 \delta^2 \psi}{(\alpha + \beta - \gamma - \delta)^2 (\alpha + \beta - \psi - \theta)^2} \left( \frac{e^{-2(\gamma + \delta)r}}{\psi + \theta + \phi - 2\gamma - 2\delta} \right. \\ & \left. + \frac{e^{-2(\alpha + \beta)r}}{\psi + \theta + \phi - 2\alpha - 2\beta} - \frac{2(\gamma + \delta + 2\psi + 2\theta - 3\alpha - 3\beta) e^{-(\alpha + \beta + \gamma + \delta)r}}{(\alpha + \beta + \gamma + \delta - 2\psi - 2\theta)(\alpha + \beta + \gamma + \delta - \psi - \theta - \phi)} \right) \end{aligned}$$

$$\begin{aligned}
 & \frac{\beta\delta\psi \left( M_1 - \frac{\lambda(1+g)}{\alpha+\beta} - 1 \right) e^{-2(\nu+\theta)t}}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-2\psi-2\theta)(\psi+\theta-\phi)} - \frac{2M_0\beta^2\delta^2\psi e^{-2(\nu+\theta)t}}{(\gamma+\delta-\psi-\theta)^2(\alpha+\beta-\gamma-\delta)(\psi+\theta-\phi)} \\
 & \left( 2 - \frac{(\alpha+\beta+\gamma+\delta-2\psi-2\theta)}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-\psi-\theta)} \right) - \frac{2M_0\beta^2\delta^2\psi e^{-2(\nu+\theta)t}}{(\alpha+\beta-\gamma-\delta)^2(\alpha+\beta-\psi-\theta)(\gamma+\delta-\psi-\theta)(\psi+\theta-\phi)} \\
 & \frac{\beta\delta\psi \left( \frac{\lambda(1+g)}{\alpha+\beta} - M_0 \right) (3\psi+3\theta-\alpha-\beta) e^{-(\nu+\theta)t}}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-\psi-\theta)(\alpha+\beta-\psi-\theta-\phi)(\alpha+\beta-2\psi-2\theta)} \\
 & \frac{M_0\beta^2\delta^2\psi(\gamma+\delta-\phi) e^{-(\nu+\theta)t}}{(\alpha+\beta-\gamma-\delta)^2(\alpha+\beta-\psi-\theta)(\gamma+\delta+\phi-2\alpha-2\beta)(\psi+\theta+\phi-2\alpha-2\beta)(\alpha+\beta-\phi)} \\
 & + \frac{M_0\beta^2\delta^2\psi e^{-3(\nu+\theta)t}}{(\alpha+\beta-\phi)(\alpha+\beta-\gamma-\delta)(\alpha+\beta-\psi-\theta)(\gamma+\delta-\phi)(\alpha+\beta+\gamma+\delta-\psi-\theta-\phi)} \\
 & - \frac{M_0\beta^2\delta^2\psi e^{-3(\nu+\theta)t}}{(\alpha+\beta-\phi)(\alpha+\beta-\gamma-\delta)(\alpha+\beta-\psi-\theta)^2} \left( \frac{1}{\gamma+\delta-\phi} + \frac{\gamma+\delta+2\psi+2\theta-3\alpha-3\beta}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-\psi-\theta)} \right) \\
 & \frac{N_1\delta^2\psi e^{-3(\nu+\theta)t} (1-\gamma-\delta-\psi-\theta+2\phi)}{(\gamma+\delta-\psi-\theta)^2(\gamma+\delta-\phi)} + \frac{M_1\beta^2\delta^2\psi e^{-3(\nu+\theta)t}}{(\gamma+\delta-\psi-\theta)(\gamma+\delta-\phi)(\psi+\theta+\phi-2\gamma-2\delta)(\alpha+\beta-\gamma-\delta)^2} \\
 & \frac{M_1\beta^2\delta^2\psi(\gamma+\delta+\psi+\theta-2\phi) e^{-(\psi+\theta+\phi)t}}{(\alpha+\beta-\gamma-\delta)^2(\alpha+\beta-\psi-\theta)(\gamma+\delta-\phi)(\psi+\theta-\phi)(\gamma+\delta-\psi-\theta)} \left( \frac{3\alpha+3\beta-2\psi-2\theta-\gamma-\delta}{(\alpha+\beta-\psi-\theta)} \right. \\
 & \left. \frac{(\gamma+\delta+\alpha+\beta-2\psi-2\theta)}{(\gamma+\delta-\psi-\theta)} \right) - \frac{2N_1\delta^2\psi e^{-(\psi+\theta+\phi)t}}{(\gamma+\delta-\psi-\theta)^2(\psi+\theta-\phi)} + \frac{M_1\beta^2\delta^2\psi \left( 1 + \frac{1}{\alpha+\beta-\psi-\theta} \right) e^{-(\psi+\theta+\phi)t}}{(\alpha+\beta-\gamma-\delta)^2(\alpha+\beta-\psi-\theta)(\alpha+\beta-\phi)(\gamma+\delta-\psi-\theta)} \\
 & \frac{M_0\beta^2\delta^2\psi e^{-(\psi+\theta+\phi)t}}{(\alpha+\beta-\gamma-\delta)^2(\gamma+\delta-\psi-\theta)} \left( \frac{1}{(\alpha+\beta-\psi-\theta)(\psi+\theta-\phi)(\gamma+\delta-\psi-\theta)} \right. \\
 & \left. \frac{1}{(\gamma+\delta-\phi)(\gamma+\delta-\psi-\theta)} - \frac{(3\alpha+3\beta-2\psi-2\theta-\gamma-\delta)}{(\alpha+\beta-\psi-\theta)^3(\psi+\theta-\phi)} \right) \\
 & \frac{\beta\delta\psi \left( \frac{\lambda(1+g)}{\gamma+\delta} - M_1 \right) (\psi+\theta-1) e^{-(\psi+\theta+\phi)t}}{(\alpha+\beta-\gamma-\delta)(\gamma+\delta-\psi-\theta)(\psi+\theta-\phi)\phi} - K_3\psi e^{-(\psi+\theta+\phi)t} \left( \frac{1}{\psi+\theta} - 1 + \frac{1}{(\psi+\theta)(\psi+\theta-\phi)} \right) \\
 & \frac{\beta\delta\psi e^{-(\psi+\theta+\phi)t}}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-2\psi-2\theta)(\alpha+\beta-\psi-\theta-\phi)}
 \end{aligned}$$



$$\begin{aligned}
 & + \frac{M_0 \beta^2 \delta^2 \psi e^{-(\psi+\theta+\phi)t}}{(\alpha+\beta-\gamma-\delta)^2 (\alpha+\beta-\psi-\theta)^2 \left( \frac{1}{\psi+\theta+\phi-2\gamma-2\delta} + \frac{1}{\psi+\theta+\phi-2\alpha-2\beta} \right)} \\
 & \frac{2(\gamma+\delta+2\psi+2\theta-3\alpha-3\beta)}{(\alpha+\beta+\gamma+\delta-2\psi-2\theta)(\alpha+\beta+\gamma+\delta-\psi-\theta-\phi)} \\
 & + \frac{\beta \delta \psi \left( M_0 - \frac{\lambda(1+q)}{\alpha+\beta} - 1 \right) e^{-(\psi+\theta+\phi)t}}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-2\psi-2\theta)(\psi+\theta-\phi)} \\
 & + \frac{2M_0 \beta^2 \delta^2 \psi e^{-(\psi+\theta+\phi)t} \left( 2 - \frac{(\alpha+\beta+\gamma+\delta-2\psi-2\theta)}{(\alpha+\beta-\gamma-\delta)(\alpha+\beta-\psi-\theta)} \right)}{(\gamma+\delta-\psi-\theta)^2 (\alpha+\beta-\gamma-\delta)(\psi+\theta-\phi)} \\
 & + \frac{2M_0 \beta^2 \delta^2 \psi e^{-(\psi+\theta+\phi)t}}{(\alpha+\beta-\gamma-\delta)^2 (\alpha+\beta-\psi-\theta)(\gamma+\delta-\psi-\theta)(\psi+\theta-\phi)} \quad \dots (5.14)
 \end{aligned}$$

For various values of the distributional parameters  $\lambda, \alpha, \beta, \gamma, \delta, \theta, \psi$  and  $\phi$ , for different values of the initial number employees at grades -I, II, III and IV and for different values of the time parameter  $t$ , using equations (5.1), (5.2), (5.3) and (5.4) the average number of employees at each grade and using equations (5.5), (5.6), (5.7) and (5.8) the variance of the number of employees at each grade in the model are computed and presented in table 1. The covariance between the number of employees at different grades are computed using the equations (5.9), (5.10), (5.11), (5.12), (5.13) and (5.14) and presented in table 2.

From table 1 it is observed that the average number of employees at each grade is much influenced by the parameters time and the initial number of employees at different grades. As  $t$  is increasing  $m_{1,0,0,0}$  and  $m_{0,0,0,1}$ , the average number of employees at grade -I & IV respectively are decreasing and  $m_{0,1,0,0}$  and  $m_{0,0,1,0}$ , the average number of employees at grades II & III respectively are increasing. If  $\lambda$ , the rate of recruiting the employees at grade -I is increasing then the average number of employees at each grade is increasing but it is very insignificant. If  $\alpha$ , the rate of making wastage from grade -I is increasing then the average number of employees at grade -I, II & III are decreasing where as the average number of employees at grade -IV is increasing. If  $\beta$ , the rate of getting promotion from grade-I is increasing then the average number of employees at grades -I & IV are decreasing, and the average number of employees at grades -II & III are increasing. If  $\gamma$ , the rate of wastage from grade -II is increasing then the average number of employees at grades -II, III & IV are decreasing but the average number of employees at grade -I remain constant. That is this rate  $\gamma$  has no impact on average number of employees at grade -I. If  $\delta$ , the rate of getting one more promotion from grade-II is increasing then the average employees at grades-II & IV are decreasing and the average number of employees at grade -III is increasing where as the average number of employees at grade -I remains constant. If  $\theta$ , the rate wastage from stage-III is increasing then the average number of employees at grades -I & II remain constant, the average number of employees at grade -III is decreasing and the average number of employees at grade-IV is increasing. If  $\psi$ , the rate of getting third promotion from grade-I is increasing then the average number of employees at grades-I & II are constant and the



average number of employees at grade -III is decreasing but the average number of employees at grade -IV is increasing. If  $\phi$ , the rate of wastage from grade-III is increasing then the average number of employees at grades -I, II & III remain constant and the average number of employees at grade -IV is increasing for fixed values of other parameters. As  $M_0$ , the initial number of employees at grade-I is increasing then the average number of employees at grades -I, II & III are increasing but the average number of employees at grade -IV is decreasing. If  $N_0$ , the initial number of employees at grade -II, is increasing then the average number of employees at grades -II, III & IV are increasing where as the average number of employees at grade -I remain constant. If  $K_0$ , the initial number of employees at grades -III, is increasing then the average number of employees at grades -III & IV are increasing and the average number of employees at grades -I & II remains constant. If  $L_0$ , the initial number of employees at grade -IV, is increasing then the average number of employees at grade -IV is decreasing but the average number of employees at grades -I, II & III remain constant. It is further observed that from table.1 it is observed that the variance of number of employees at each grade is influenced by the distributional parameters and time. As the time  $t$  is increasing then the values  $m_{2,0,0,0}$ ,  $m_{0,0,2,0}$  and  $m_{0,0,0,2}$ , the variances of number of employees at grades -I, III & IV respectively are decreasing whereas  $m_{0,2,0,0}$ , the variance of number of employees at grade -II is increasing. If  $\lambda$ , the rate of employees recruited at grade -I is increasing then the variance of number of employees at grades -I, II & III are increasing but the variance of number of employees at grade -IV is decreasing. If  $\alpha$ , the rate of wastage from grade -I is increasing then the variance of number of employees at grades -I, II & IV are decreasing but the variance of number of employees at grade -III is increasing. If  $\beta$ , the rate of getting promotion from grade -I is increasing then the variances of number of employees at grades -II & IV are increasing but the variance of number of employees at grades -I & III are decreasing. If  $\gamma$ , the rate of wastage from grade -II is increasing then the variance of number of employees at grades -II & IV are decreasing and variance of number of employees at grade -III is increasing and variance of number of employees at grade -I remains constant. If  $\delta$ , the rate of getting one more promotion from grade -II is increasing then the variances of number of employees at grades -II & III are decreasing, the variance of number of employees at grade -IV is increasing and the variance of number of employees at grade -I remain constant. If  $\theta$ , the rate of wastage from grade -III is increasing then the variances of number of employees at grades -III & IV are decreasing where as the variance of number of employees at grades -I & II remain constant. If  $\psi$ , the rate of making one more promotion from grade-III is increasing then the variance of number of employees at grade- IV is increasing and the variance of number of employees at grade -III is decreasing where as the variance of number of employees at grade-I & II remains constant. If  $\phi$ , the rate of wastage from grade -IV is increasing then the variance of number of employees at grades -I, II & III remain constant but the variance of number of employees at grade -IV is increasing. As  $M_0$ , the initial number of employees at grade -I, is increasing then the variances of number of employees at grades -I, II & IV are increasing but the variance of number of employees at grade -III is decreasing. As  $N_0$ , the initial number of employees at grade -II is increasing then the variances of number of employees at grades -II, III & IV are increasing and the variance of number of employees at grade -I remain constant. As  $K_0$ , the initial number of employees at grade-III is increasing then the variance of number of employees at grade -III is increasing, the variance of number of employees at grade- IV is decreasing and the variance of number of employees at grades -I & II remain constant. If  $L_0$ , the initial number of employees at grade-IV, is increasing then the variances of



number of employees at grades -I II & III remain constant and variance of number of employees at grade -IV is increasing.

From table 2 it is observed that the covariance between the number of employees at each grade are influenced by the parameters. For comparison the absolute values of the co-variances are only considered. It is interesting to note that the covariance between the number of employees at grade -I & grade-II and between grade-III & grade-IV are all negative and remaining are positive. As time 't' is increasing  $m_{0,1,0}$  and  $m_{0,0,1}$  the covariance between the number of employees at grades -II & III and grades-III & IV are increasing but  $m_{1,1,0}$ ,  $m_{1,0,1}$ ,  $m_{1,0,0}$ ,  $m_{0,1,1}$ , the covariance between number of employees at grades -I & II, grades-I & III, grades-I & IV and grades-II & IV are decreasing. If  $\lambda$ , the rate of recruitment made at grade-I is increasing then the covariance between number of employees at grades -I & II, grades-I & III, grades-II & III, grades-I & IV, and grades-II & IV remain constant and the covariance between the number of employees at grades -III & IV is decreasing. If  $\alpha$ , the rate of wastage from grade-I is increasing then the covariance between the number of employees at grades -I & II, grades-I & III, grades-II & III, grades-I & IV and grades-III & IV are decreasing, but the covariance between number of employees at grades -II & IV remains constant. If  $\beta$ , the rate of getting one promotion from grade -I is increasing then the covariance between the number of employees at grades -I & II, grades -I & III, grades -II & III and grades -III & IV are increasing, the covariance between the number of employees at grades -I & IV is fluctuating and the covariance between number of employees at grades -II & IV remains constant. If  $\gamma$ , the rate of wastage from grade -II is increasing then all the covariance are decreasing. If  $\delta$ , the rate of getting one more promotion from grade-II is increasing then the covariance between the number of employees at grades -I & II, and grades -II & IV are decreasing but the co-variances between number of employees at grades -I & III, grades- II & III, grades -I & IV and grades -III & IV are increasing. If  $\theta$ , the rate of wastage from grade -III is increasing then the covariance between number of employees at grades -I & II remains constant and the covariance between number of employees at grades -I & III, grades-II & III and grades-I & IV are increasing but the covariance between number of employees at grades -II & IV and grades -III & IV are fluctuating. If  $\psi$ , the rate of one more promotion from grade-III is increasing then the covariance between number of employees at grades -I & III, grades-II & III, grades-I & IV and grades -III & IV are increasing, the covariance between numbers of employees at grades -II & IV is decreasing and the covariance between number of employees at grades -I & II remains constant. If  $\phi$ , the rate of wastage from grade-IV is increasing then the covariance between numbers of employees at grades -I & II, grades-I & III and grades-II & III are remains constant and the covariance between number of employees at grades -I & IV, and grades II & IV are increasing, but covariance between numbers of employees at grades -III & IV is decreasing. If  $M_0$ , the initial number of employees at grade -I, is increasing then the covariance number of employees at grades -I & II, grades-I & III, grades-II & III, grades I & IV and grades-III & IV are increasing but covariance between the number of employees at grades -II & IV remains constant. If  $N_0$ , the initial number of employees existing at stage-II, is increasing then the covariance between the number of employees at grades -I & II, grades-I & III, grades-I & IV and grades-III & IV remain constant, the covariance between the numbers of employees at grades -II & III is decreases but the covariance between the numbers of employees at grades -II & IV is increasing. If  $K_0$ , the initial number of employees at grade -III, is increasing then the covariance between the number of employees at grades -I & II, grades-I & III, grades-II & III, grades-I & IV and grades-II & IV remains constant but the covariance between



number of employees at grades -III & IV is decreasing. If  $L_0$ , the initial number of employees at grade -IV, is increasing then the covariance between numbers of employees at all grades remain constant.

### 6. Steady State Solution of the Model

$$P_{m,n,k,l} = e^{-\left[ \frac{\lambda}{\alpha+\beta} \left( \frac{(\gamma+\delta)(\psi+\theta)\phi + \beta[(\gamma+\delta)\phi + (\psi+\theta)\delta]}{(\gamma+\delta)(\psi+\theta)\phi} \right) \right]} \times \frac{\left( \frac{\lambda}{\alpha+\beta} \right)^m \left( \frac{\lambda\beta}{(\alpha+\beta)(\gamma+\delta)} \right)^n \left( \frac{\lambda\beta\gamma}{(\alpha+\beta)(\gamma+\delta)(\psi+\theta)} \right)^k \left( \frac{\lambda\beta\gamma\psi}{(\alpha+\beta)(\gamma+\delta)(\psi+\theta)\phi} \right)^l}{m!n!k!l!} \quad \text{-- (6.1)}$$

From equation (6.1) one can observe that the marginal distribution of grade-I, grade-II grade-III and grade-IV sizes are independent of each other and each follows Poisson distribution with parameters  $\lambda/(\alpha+\beta)$ ,  $\lambda/(\alpha+\beta)(\gamma+\delta)$ ,  $\lambda\beta\gamma/(\alpha+\beta)(\gamma+\delta)(\psi+\theta)$  and  $\lambda\beta\gamma\psi/(\alpha+\beta)(\gamma+\delta)(\psi+\theta)\phi$  respectively.

Using  $P_{m,n,k,l}$  one can analyze the equilibrium behavior of the system.

The average number of employees at grade -I is

$$m_{1,0,0,0} = \sum_{n=0}^{\infty} \sum_{k=0}^{\infty} \sum_{l=0}^{\infty} \sum_{j=0}^{\infty} m P_{m,n,k,l} = \frac{\lambda(1+q)}{\alpha+\beta}, \text{ which is same as variance of the number of employees at grade-I} = m_{2,0,0,0} \quad \text{-- (6.2)}$$

The average number of employees at grade -II is

$$m_{0,1,0,0} = \sum_{n=0}^{\infty} \sum_{k=0}^{\infty} \sum_{l=0}^{\infty} \sum_{j=0}^{\infty} n P_{m,n,k,l} = \frac{\lambda(1+q)\beta}{(\alpha+\beta)(\gamma+\delta)}, \text{ which is same as variance of the number of employees at grade-II} = m_{0,2,0,0} \quad \text{-- (6.3)}$$

The variance of the number of employees at grade -II is

The average number of employees at grade -III is

$$m_{0,0,1,0} = \sum_{n=0}^{\infty} \sum_{k=0}^{\infty} \sum_{l=0}^{\infty} \sum_{j=0}^{\infty} k P_{m,n,k,l} = \frac{\lambda(1+q)\beta\delta}{(\alpha+\beta)(\gamma+\delta)(\psi+\theta)}, \text{ which is same as variance of the number of employees at grade- III} = m_{0,0,2,0} \quad \text{-- (6.4)}$$

The average number of employees at grade -IV is

$$m_{0,0,0,1} = \sum_{n=0}^{\infty} \sum_{k=0}^{\infty} \sum_{l=0}^{\infty} \sum_{j=0}^{\infty} l P_{m,n,k,l} = \frac{\lambda(1+q)\beta\delta\psi}{(\alpha+\beta)(\gamma+\delta)(\psi+\theta)\phi}, \text{ which is same as variance of the number of employees at grade-IV} = m_{0,0,0,2} \quad \text{-- (6.5)}$$



The total number of employees in the company is also a random variable say  $Q$ . Therefore the probability that there are  $q$  employees in all the four grades when the company is in equilibrium is

$$P[Q = q] = \frac{e^{-\left(\frac{\lambda(1+q)}{\alpha+\beta} \left( \frac{(\gamma+\delta)(\psi+\theta)\phi + \beta[(\psi+\theta)\phi + (\psi+\phi)\delta]}{(\gamma+\delta)(\psi+\theta)\phi} \right)\right)} \left( \frac{\lambda(1+q)}{\alpha+\beta} \left( \frac{(\gamma+\delta)(\psi+\theta)\phi + \beta[(\psi+\theta)\phi + (\psi+\phi)\delta]}{(\gamma+\delta)(\psi+\theta)\phi} \right) \right)^q}{q!}$$

, where  $t=0, 1, 2, \dots$  -- (6.6)

This is also a Poisson with parameter

$$\frac{\lambda(1+q)}{\alpha+\beta} \left( \frac{(\gamma+\delta)(\psi+\theta)\phi + \beta[(\psi+\theta)\phi + (\psi+\phi)\delta]}{(\gamma+\delta)(\psi+\theta)\phi} \right)$$

The expected number of employees in the company

$$E(Q) = \frac{\lambda(1+q)}{\alpha+\beta} \left( \frac{(\gamma+\delta)(\psi+\theta)\phi + \beta[(\psi+\theta)\phi + (\psi+\phi)\delta]}{(\gamma+\delta)(\psi+\theta)\phi} \right) \quad \text{-- (6.7)}$$

For different values of  $\lambda, \beta, \alpha, \gamma, \delta, \theta, \psi$  and  $\phi$  parameter values the mean number of employees at different grades of the model under steady state are calculated and presented in table 3.

From table 3 it is observed that if  $\lambda$ , the rate of recruiting at grade-I is increasing then  $m_{1,0,0,0}, m_{0,1,0,0}, m_{0,0,1,0}$  and  $m_{0,0,0,1}$ , the average number of employees at grades -I, II, III & IV are increasing. If  $\beta$ , the rate of getting one promotion grade-I is increasing the average number of employees at grades -I & IV are decreasing and the average number of employees at grades -II & III are increasing. If  $\alpha$ , the rate wastage grade -I is increasing then the average number of employees at grades -I, II, III & IV are decreasing. If  $\gamma$ , the rate of wastage from grade-II is increasing then the average number of employees at grades II, III & IV are decreasing but average number of employees at grade -I remain constant. If  $\delta$ , the rate of getting one more promotion from grade -II is increasing then the average number of employees at grades -II & III are decreasing and average number of employees at grade -IV is increasing where as the average number of employees at grade-I remain constant. If  $\theta$ , the rate wastage from grade-III is increasing then the average number of employees at grades -I & II remains constant and the average number of employees at grades -II & IV are decreasing. If  $\psi$ , the rate of getting three promotions from grade -III is increasing then the average number of employees at grades -I & II remains constant and the average number of employees at grade -II is decreasing where as the average number of employees at grade-IV is increasing. If  $\phi$ , the rate of wastage grade -III is increasing then the average number of employees at grades -I, II & III remain constant and the average number of employees at grade -IV is decreasing.



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**Table: 1**  
**The Average and Variance of the number of employees at each grade – I, II, III and IV**

t	$\lambda$	$\alpha$	$\beta$	$\gamma$	$\delta$	$\theta$	$\psi$	$\phi$	$M_0$	$N_0$	$K_0$	$L_0$	q	$m_{0,0,0,0}(t)$									
1	0.9	0.5	0.1	.05	0.1	.02	.001	.005	1500	30	10	5	2	458.672	332.942	98.425	-120.869	3.218	3.113	38.698	31.889	38.698	38.698
2														292.974	303.543	202.256	-59.013	2.689	4.345	35.60	39.496	35.60	39.496
3														96.945	267.458	270.51	-27.054	2.052	3.254	33.048	33.048	33.048	33.048
1	0.5	0.1	.05	0.1	.02	.001	.005	.005	1500	30	10	5	2	458.672	332.942	98.425	-120.869	3.3	3.362	38.161	38.602	38.161	38.602
2														458.981	333.163	98.458	-120.869	4.176	3.862	41.783	41.783	41.783	41.783
3														451.807	333.383	98.482	-120.869	4.952	3.389	48.445	48.445	48.445	48.445
1	0.9	0.6	0.1	.05	0.1	.02	.001	.005	1500	30	10	5	2	487.382	336.67	98.565	-101.319	3.155	3.657	38.076	37.199	38.076	37.199
2														313.526	298.356	93.192	-78.014	3.069	3.629	37.887	37.887	37.887	37.887
3														273.136	278.681	89.945	-68.53	3.008	3	37.585	37.585	37.585	37.585
1	0.9	0.5	0.2	.05	0.1	.02	.001	.005	1500	30	10	5	2	368.582	407.317	118.85	-138.299	3.008	3.413	39.102	37.72	39.102	37.72
2														361.825	407.172	135.316	-121.556	2.734	3.535	39.075	39.075	39.075	39.075
3														273.136	409.6	141.188	-117.619	2.887	3.555	39.041	39.041	39.041	39.041
1	0.9	0.5	0.1	.1	0.1	.02	.001	.005	1500	30	10	5	2	458.672	332.833	96.721	-117.725	3.218	3.287	37.665	37.665	37.665	37.665
2														458.672	333.111	95.667	-114.687	3.218	3.218	37.665	37.665	37.665	37.665
3														458.672	309.76	93.458	-111.751	3.218	3.341	36.598	36.598	36.598	36.598
1	0.9	0.5	0.1	.05	0.2	.02	.001	.005	1500	30	10	5	2	458.672	294.763	133.827	-108.893	3.218	2.62	42.66	42.66	42.66	42.66
2														458.672	302.041	164.963	-98.466	3.218	2.987	41.021	41.021	41.021	41.021
3														458.672	309.387	139.387	-89.319	3.218	3.051	39.768	39.768	39.768	39.768
1	0.9	0.5	0.1	.05	0.1	.01	.001	.005	1500	30	10	5	2	458.672	332.942	97.331	-120.869	3.218	3.115	39.317	39.317	39.317	39.317
2														458.672	333.942	96.651	-120.869	3.218	3.115	39.317	39.317	39.317	39.317
3														458.672	332.942	95.782	-120.869	3.218	3.115	39.317	39.317	39.317	39.317
1	0.9	0.5	0.1	.05	0.1	.02	.005	.005	1500	30	10	5	5	458.672	332.942	98.215	-120.869	3.218	3.115	39.317	39.317	39.317	39.317
2														458.672	333.942	94.678	-120.869	3.218	3.115	39.317	39.317	39.317	39.317
3														458.672	332.942	92.94	-120.869	3.218	3.115	39.317	39.317	39.317	39.317
1	0.9	0.5	0.1	.05	0.1	.02	.001	.01	1500	30	10	5	2	458.672	332.942	98.425	-120.869	3.218	3.115	38.698	38.698	38.698	38.698
2														458.672	332.942	98.425	-120.869	3.218	3.115	38.698	38.698	38.698	38.698
3														458.672	332.942	98.425	-120.869	3.218	3.115	38.698	38.698	38.698	38.698
1	0.9	0.5	0.1	.05	0.1	.02	.001	.005	1600	30	10	5	2	451.887	333.232	98.441	-120.869	4.333	3.419	44.938	44.938	44.938	44.938
2														451.887	333.343	98.482	-120.869	4.952	3.389	48.445	48.445	48.445	48.445
3														452.426	333.513	98.592	-120.869	5.572	3.759	51.872	51.872	51.872	51.872
1	0.9	0.5	0.1	.05	0.1	.02	.001	.005	1600	40	10	5	2	519.958	586.142	110.762	-145.643	1.962	1.698	37.841	37.841	37.841	37.841
2														674.757	467.441	129.271	-180.305	2.472	2.538	38.131	38.131	38.131	38.131
3														889.481	600.941	160.119	-241.738	2.97	2.578	38.431	38.431	38.431	38.431
1	0.9	0.5	0.1	.05	0.1	.02	.001	.005	1600	30	20	5	2	458.672	596.765	127.1	-120.869	3.218	2.877	38.599	38.599	38.599	38.599
2														458.672	428.586	141.458	-120.869	3.218	2.887	38.672	38.672	38.672	38.672
3														458.672	466.468	155.776	-120.869	3.218	3.634	38.665	38.665	38.665	38.665
1	0.9	0.5	0.1	.05	0.1	.02	.001	.005	1600	30	10	10	2	458.672	333.942	102.335	-120.869	3.218	3.115	45.141	45.141	45.141	45.141
2														458.672	332.942	106.408	-120.869	3.218	3.115	51.756	51.756	51.756	51.756
3														458.672	332.942	110.461	-120.869	3.218	3.115	58.292	58.292	58.292	58.292
1	0.9	0.5	0.1	.05	0.1	.02	.001	.005	1600	30	10	5	0.4	458.672	333.942	98.425	-120.869	3.218	3.115	38.566	38.566	38.566	38.566
2														458.672	332.942	98.425	-120.869	3.218	3.115	38.566	38.566	38.566	38.566
3														458.672	332.942	98.425	-120.869	3.218	3.115	38.566	38.566	38.566	38.566



**Table 2**  
**The Covariance between the Number of Employees at Different grades**

1	$\alpha$	$\beta$	$\gamma$	$\delta$	$\theta$	$\psi$	$\phi$	$M_0$	$N_0$	$K_0$	$L_0$	$m_{L,LL}(t)$	$m_{L,LL}(t)$	$m_{L,LL}(t)$	$m_{L,LL}(t)$		
1	0.9	0.5	0.1	0.05	0.1	0.02	0.001	1500	30	10	20	-57.057	9.854	2.598	163.817	$1.2258 \times 10^7$	$-4.7068 \times 10^7$
2												7.623	3.488	3.488	89.463	$1.0328 \times 10^7$	$-4.7068 \times 10^7$
3												4.495	4.495	3.05	48.858	870.118	$-4.7128 \times 10^7$
1	0.5	0.1	0.05	0.1	0.02	0.001	0.005	1500	30	10	20	-57.057	9.854	2.598	163.817	$1.2258 \times 10^7$	$-4.7048 \times 10^7$
2												9.854	9.854	2.598	163.817	$1.2258 \times 10^7$	$-4.6828 \times 10^7$
3												9.854	9.854	2.598	163.817	$1.2258 \times 10^7$	$-4.6618 \times 10^7$
1	0.9	0.6	0.1	0.05	0.1	0.02	0.001	1500	30	10	20	-49.314	7.203	1.218	108.211	$1.2258 \times 10^7$	$-3.8348 \times 10^7$
	0.7											5.476	0.329	74.61	$1.2258 \times 10^7$	$-3.23 \times 10^7$	
	0.8											4.201	-0.276	53.145	$1.2258 \times 10^7$	$-2.78 \times 10^7$	
1	0.9	0.5	0.2	0.05	0.1	0.02	0.001	1500	30	10	20	-98.028	14.525	11.991	216.423	$1.2258 \times 10^7$	$-7.706 \times 10^7$
	0.3											16.427	21.942	223.829	$1.2258 \times 10^7$	$-9.8758 \times 10^7$	
	0.4											16.804	31.165	212.579	$1.2258 \times 10^7$	$-1.1438 \times 10^8$	
1	0.9	0.5	0.1	0.1	0.02	0.001	0.005	1500	30	10	20	-55.551	9.594	2.189	121.814	839.722	$-3.8018 \times 10^7$
	0.15											9.343	1.851	96.095	624.384	$-3.3848 \times 10^7$	
	0.20											9.1	1.646	80.523	487.51	$-3.2418 \times 10^7$	
1	0.9	0.5	0.1	0.05	0.2	0.02	0.001	1500	30	10	20	-4.095	18.686	3.702	193.97	$1.2498 \times 10^7$	$-6.8088 \times 10^7$
	0.3											26.595	4.46	206.561	$1.18 \times 10^7$	$-1.0088 \times 10^8$	
	0.4											33.674	4.995	213.528	$1.0328 \times 10^7$	$-1.7238 \times 10^8$	
1	0.9	0.5	0.1	0.05	0.1	0.05	0.001	1500	30	10	20	-57.057	10.393	5.557	172.76	538.636	$-2.468 \times 10^7$
	0.10											11.424	19.418	190.081	495.857	$-2.4048 \times 10^7$	
	0.11											11.668	26.672	193.968	508.574	$-2.7258 \times 10^7$	
1	0.9	0.5	0.1	0.05	0.1	0.02	0.005	1500	30	10	20	-57.057	9.923	2.904	164.319	$1.0078 \times 10^7$	$-2.0338 \times 10^7$
	0.01											10.01	3.317	164.956	833.801	$-3.5148 \times 10^7$	
	0.05											10.766	8.692	170.483	452.496	$-1.0918 \times 10^7$	
1	0.9	0.5	0.1	0.05	0.1	0.02	0.001	1500	30	10	20	-57.057	9.854	2.598	170.352	$1.7828 \times 10^7$	$-3.3538 \times 10^7$
	0.015											9.854	2.598	171.179	$3.2678 \times 10^7$	$-1.578 \times 10^8$	
	0.02											9.854	2.598	184.653	$1.968 \times 10^7$	$-1.1828 \times 10^7$	
1	0.9	0.5	0.1	0.05	0.1	0.02	0.001	1600	30	10	20	-60.861	10.511	2.93	174.738	$1.2258 \times 10^7$	$-3.0278 \times 10^7$
	0.01											11.168	3.261	183.06	$1.2258 \times 10^7$	$-3.3488 \times 10^7$	
	0.05											11.825	3.393	196.581	$1.2258 \times 10^7$	$-5.678 \times 10^7$	
1	0.9	0.5	0.1	0.05	0.1	0.02	0.001	1600	40	10	20	-57.057	9.854	1.808	163.817	$1.6338 \times 10^7$	$-4.7068 \times 10^7$
	0.01											9.854	1.017	163.817	$2.0418 \times 10^7$	$-4.7068 \times 10^7$	
	0.05											9.854	0.226	163.817	$2.45 \times 10^7$	$-4.7068 \times 10^7$	
1	0.9	0.5	0.1	0.05	0.1	0.02	0.001	1600	30	20	20	-57.057	9.854	2.598	163.817	$1.2258 \times 10^7$	$-4.6128 \times 10^7$
	0.01											9.854	2.598	163.817	$1.2258 \times 10^7$	$-4.1598 \times 10^7$	
	0.05											9.854	2.598	163.817	$1.2258 \times 10^7$	$-4.458 \times 10^7$	
1	0.9	0.5	0.1	0.05	0.1	0.02	0.001	1600	30	10	5	-57.057	9.854	2.598	163.817	$1.2258 \times 10^7$	$-4.7068 \times 10^7$
	0.01											9.854	2.598	163.817	$1.2258 \times 10^7$	$-4.7068 \times 10^7$	
	0.05											9.854	2.598	163.817	$1.2258 \times 10^7$	$-4.7068 \times 10^7$	



**Table: 3**  
 The Average Number of Employees at grades -I, II, III and IV under Steady State Condition

$\lambda$	$\beta$	$\alpha$	$\gamma$	$\delta$	$\theta$	$\psi$	$\phi$	$m_{1,0,0,0}$	$m_{0,1,0,0}$	$m_{0,0,1,0}$	$m_{0,0,0,1}$
3	0.6	2	0.5	0.4	0.3	0.2	0.1	1.154	0.769	0.615	1.231
4								1.538	1.026	0.821	1.641
5								1.923	1.282	1.026	2.051
3	0.8	2	0.5	0.4	0.3	0.2	0.1	1.071	0.952	0.762	1.524
	1.0							1	1.111	0.889	0.778
	1.2							0.938	1.25	1	2
3	0.6	2.3	0.5	0.4	0.3	0.2	0.1	1.034	0.69	0.552	1.103
		2.6						0.938	0.625	0.5	1.0
		2.9						0.857	0.571	0.457	0.914
3	0.6	2	0.6	0.4	0.3	0.2	0.1	1.154	0.692	0.554	1.108
			0.7					1.154	0.629	0.503	1.007
			0.8					1.154	0.577	0.462	0.923
3	0.6	2	0.5	0.35	0.3	0.2	0.1	1.154	0.814	0.57	1.14
			0.45					1.154	0.729	0.656	1.312
			0.5					1.154	0.692	0.692	1.385
3	0.6	2	0.5	0.4	0.35	0.2	0.1	1.154	0.769	0.559	1.119
					0.4			1.154	0.769	0.513	1.026
					0.45			1.154	0.769	0.473	0.947
3	0.6	2	0.5	0.4	0.3	0.23	0.1	1.154	0.769	0.581	1.335
						0.26		1.154	0.769	0.549	1.429
						0.29		1.154	0.769	0.522	1.512
3	0.6	2	0.5	0.4	0.3	0.2	0.13	1.154	0.769	0.615	0.947
							0.16	1.154	0.769	0.615	0.769
							0.19	1.154	0.769	0.615	0.648



## NATURE OF MAN: TAGORE, GANDHI AND VIVEKANANDA

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“We do not know what our nature permits us to be”

-Jean Jacques Rousseau

Human nature refers to the distinguishing characteristics, including ways of thinking, feelings and acting that humans tend to have naturally. We can look at our self in its two different aspects. The self which displays itself and the self which transcends itself and thereby reveals its own meaning.

In this context, the view of Rabindranath Tagore about the nature of man strongly upholds a claim to be mentioned. Rabindranath Tagore (1861 – 1941) was a philosopher, poet, dramatist, teacher, essayist and painter of outstanding repute. His philosophy of life was based on the notion of spiritual humanism. He was an idealist as well as a humanist.

In pursuing spiritual humanism, Tagore put emphasis on man. According to him, man is an end in itself. God is simply a symbol of human perfection. He considers man as absolute and he humanized God. It is the consciousness within a man that makes him perfect. To Tagore God is not the absolute truth. God is nothing but the sum total of human truth. To him, this universe is not the God’s universe; rather it is the universe of human beings. It is the human unity that holds the universe together. “Tagore conceives man in such a manner that without affecting the Godness of God, he gives to man also a special dignity and uniqueness”<sup>1</sup>.

As a poet and artist, Tagore always aspired towards the realization of the transcendental personality of man, which he believed is immanent in the finite self. In his writings, he laid stress on the realization of unity between the individual and the Universal Being through a perfect relationship. With Tagore, “religion” is the ultimate awakening of man’s ego-consciousness in the universal consciousness. It is a process of realizing the infinite ‘I’ in the finite ‘I’, by the freedom of mind and creative activities, for the goodness of humanity at large. Dharma or religion is the innermost nature, the



essence, and the implicit truth of all things. It is the ultimate purpose that is working in our self. When we know the highest ideal of freedom which a man has, we know his dharma, the essence of his nature, the real meaning of his self. According to Tagore, man's nature or dharma representing the truth of his supremacy is realized by our imagination but not created by our mind.

Tagore clearly distinguishes between the two aspects of man – (i) biological or physical aspect which he calls finite 'I' or the finite aspect of man and (ii) spiritual aspect of man which he calls infinite 'I' or the infinite aspect of man.

The finite aspect of man's nature is expressed in the terms of space and time. Human body is composed of millions of cells. It has limitations. The finite nature of man is similar with the qualities and characteristics of animals. Like other animals he is conscious of his self and many of his actions are guided by the motives of self-satisfaction. He is aware of his own needs and desires which he wants to fulfill for his satisfaction. For this purpose he quarrels and fights with others. The psychological individual with environmental factors constitutes Tagore's finite 'I'. This aspect of man revolves around the immediate worldly requirements of life and after meeting those he becomes happy; he does not want anything more. Man possesses a unique attribute, i.e., mind which makes him distinguished from all other beings. He has control over his senses and his reactions to environmental factors are very different from those of others. Like other animals he has not surrendered himself to the forces of Nature like fire, rain, flood, storm etc. Rather he has invented methods to fight against those powers with his own physical and intellectual capacities.

Due to this finite aspect man is ego-centric. He wants to satisfy his ego at any cost. Every individual considers himself to be superior to any other individual. Likewise every individual thinks that his activity is the best among all. The finite self always wants bodily comforts like good food, good drink, good dress etc. A finite individual performs all his activities for the fulfillment of these desires that offer him satisfaction of physical needs. The primary tendency of this aspect is the desire for acquisition or possession. All human struggles evolve around the satisfaction by possession. Man always wants to possess more and more. Though the mentality of acquiring more is in terms of physical properties, it indicates the existence of spirituality present in man. Because man always wants to extend the limits of his limited existence and attributes. The tendency to excel himself and to surpass his own limitations proves the presence

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of spirituality within the finite framework of every individual. B. K. Lal said, "In the finite self itself lies the root of the infinite self, it is the finite self that grows and develops into the Infinite."<sup>2</sup>

Tagore has variously described the other aspect of human nature as 'Universal' in man, the 'surplus' in man, the infinite 'I', the element of Divinity present in man, and so on. The obvious characteristic of the infinite aspect of man is that it constantly inspires the individual to go beyond, to surpass itself. The infinite aspect of man is about an ideal; about discovering the very best in himself. This aspect of man doesn't want mere happiness, but searches for vastness which Tagore calls 'bhuma'. According to him, man is the architect of his own destiny. His perfection leads him to have a link with infinity.

It is on account of his infinite nature man is basically creative, dynamic and ever growing. "By creativity Tagore does not mean the mere capacity, to construct something new. Creativity is the capacity of having and giving expression to novel ideas, it is the power of having new and original visions"<sup>3</sup>. For this aspect nothing is completely impossible for man. He tries for something and he may fail. But his failure accelerates him for a renewed effort. This element of man is called the 'surplus' in man, which helps him to feel that he is destined to be something higher and superior. In Tagore's view, man is born with enormous surplus force, which is excess of his physical need. This surplus is the limitless potentiality of human personality and creativity. In this lies the infinite nature of man. The surplus potentiality manifests itself in man's religious, spiritual and moral activities.

Another significant characteristic of this aspect of man is freedom. Freedom, according to Tagore, has a spiritual root. "Perfect freedom, according to Tagore, lies in a perfect harmony of relationship – in the realisation of the universal within the individual"<sup>4</sup>. It will provide opportunity to attain enlightenment of soul and it makes an individual to feel that he was a component part of the great creation of God. His 'Gitanjali' reflects his idea of freedom thus:

"Where the mind is without fear and the head is held high;

Where knowledge is free;

Where the world has not been broken up into fragments by narrow domestic walls"<sup>5</sup>

The infinite aspect of man is an expression of joy, which is inherent in the



soul. Joy plays an important role in constituting the spiritual aspect of human nature. On account of the presence of the element of 'joy' man can realise his affinity with nature and he can be moral or religious or noble. When the bodily aspect of human life dominates a man, his joy is reduced but when he asserts the higher aspect of life his joy goes on increasing.

According to Tagore, the infinite aspect of human nature makes him yearning for 'mukti' or salvation or immortality. In spite of the obviousness of his death, only man among all creatures can aspire for immortality. Only man can think that death can not be the end of life and there is another life after death. This spiritual aspect of man is called by Tagore as 'Jivan Devata'. 'Jivan Devata' is God in man, the element of Divinity in man, the ultimate creator of everything. According to him, realization of self is the essence to realize the Godhood.

So it has been clear that Tagore constructs human being as the combination of two essential aspects – a lower one and a higher one; the physical and the spiritual. The former is expressed in terms of physiological, biological and psychological facts while the latter is expressed in terms of longings and aspirations. The proof of the existence of our finite self is that we live and move on this world. Again we have higher kinds of feelings and urges which transcend our capacities of explaining them. For example, there can not be any scientific explanation of why we love someone or why we are thrilled by a work of art. According to B. K. Lal, "...Tagore says that a rejection of the finite self will naturally mean a rejection of the infinite self also, because it is in and through the finite that the infinite is sought to be realised"<sup>6</sup>. So it can be safely said that man is finite-infinite, i.e., individual-universal. Every man has got some characteristics, which makes him distinguished from others. This constitutes his individuality or individual character. Again, he shares some common characteristics with all the others. This is the 'Universal' in man. Man's individual character is the aspect of his finite self and universal character is the aspect of his infinite self. Tagore says:

Thou art the sky and thou art the nest as well"<sup>7</sup>

In this connection, the view of Mahatma Gandhi is worth mentioning. In the spectrum of ideas there are identifiable affinities in the thought patterns of modern India's founding fathers – Tagore and Gandhi. Mahatma Gandhi was Tagore's contemporary. Both belonged to the nineteenth century Indian intelligentsia. Both shared



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a remarkably similar view about the nature of man.

If philosophy is wisdom, Mahatma Gandhi was among our foremost philosophers. The objective of Gandhian philosophy is to transform the individual and society simultaneously, in accordance with the principles of truth and non-violence that are the twin cardinal principles of Gandhi's thought.

Gandhian philosophy is based on humanity. "The core of his thought is the concept of man"<sup>8</sup>. He studied very well the basic nature and status of man like many other thinkers of the history of philosophy. He is of the opinion that human nature is regarded as fundamentally virtuous. Sometimes outwardly man appears to be cruel and selfish but man is originally good by nature. He gives stress on the aspect of essential goodness present in every man. All individuals are believed to be capable of high moral development, and of reform.

In the Gandhian thought-system Ahimsa or non-violence represents one of the basic and essential qualities of mankind although it does not mean that violence does not have any place in life. Man is both body and spirit. Body can represent physical power and therefore can, occasionally, commit himsa or violence. But man's true nature consists in his spiritual outlook. Gandhiji's oft-quoted assertion is that Ahimsa is natural to man. According to him, man as animal is violent, but in spirit he is non-violent. A clear evidence of this fact is that while our body or the senses can be injured, the soul can never be injured.

Gandhiji was a spiritualist. Underlying Gandhiji's faith in Satyagraha is his belief that man is fundamentally a spiritual being, and can not long deny the spirituality within himself. He believed that the spiritual element of man constantly influences a person upon his all types of activities like social, economic, political, individual etc.

As Tagore distinguishes between finite 'I' and infinite 'I', Gandhiji also differentiates between the physical aspect and the spiritual aspect of man. He added that man is a complex being having these two aspects. The body of man grows and decays according to the Laws of Nature. This changing aspect of man appeared to us is his physical or bodily aspect. But man has got a metaphysical aspect as well which is "...much more basic, which gives nourishment even to the bodily aspect..."<sup>9</sup>. This particular aspect depicts the true nature of man. According to Gandhiji man has mental faculties like reason, will, consciousness etc, which prove the existence of his spiritual



or metaphysical aspect. Man has an insight by which he can distinguish between good and bad, which supports the existence of soul or spirit in him. Man has an aesthetic sense which helps him to be the worshipper of beauty. This expression also strongly proves the existence of soul in him. Gandhiji is of the opinion that although the physical aspect of man seems to be more predominant, actually man's essential nature consists in his spirituality. Man's spiritual power thus surpasses his bodily limitations to a great extent.

Another strong point of similarity between Tagore and Gandhi rests on the concept of Divinity of man. Gandhiji opines that the presence of reason, will, emotion, conscience, consciousness etc is an evidence of an element of Divinity present in every man. He said that if these Divine elements within man can be used as in a right way, man could even bring heaven on this earth. The complete realisation of spirituality paves the way for Divinity.

Gandhiji was a monist, as he believes in the reality of one Supreme God. According to him, man with both his physical and metaphysical aspects is an expression of one Supreme Reality, i.e., God. Here we can notice the great resemblance with Tagore's notion of 'Jivan Devata'. Like Gandhi, Tagore also believed that the infinite aspect of man made him God-like. Tagore also had faith in one Supreme Being named 'Brahma' and he believed that true salvation takes place when individual realizes the presence of Brahma within him. Tagore says:

“And my pride is from the life-throb of ages  
dancing in my blood this moment.”<sup>10</sup>

Another stalwart of the Modern Indian Philosophy is Swami Vivekananda (1863 – 1902). He was not an academic philosopher but he was offered by J. Williams the Chair of Philosophy in Harvard University. Many years after Vivekananda's death, Rabindranath Tagore told Romain Rolland that if we want to know India, we should study Vivekananda. In him everything is positive and nothing negative. At the Belur Math Mahatma Gandhi <sup>11</sup> was heard to say that his whole life was an effort to bring into actions the ideas of Vivekananda.

Swami Vivekananda's view about the nature of man claims to have affinity with the views of his two contemporary philosophers – Rabindranath Tagore and Mahatma Gandhi.



In the philosophy of Swami Vivekananda the picture of man is depicted as an organised unity of the physical and the spiritual. Like Tagore and Gandhi he is also of the opinion that every human being possesses physical nature as well as spiritual nature; the former is known as inferior or lower one and the latter is known as superior or higher one. Swamiji never undermines the importance of the physical nature of man. He never treated the finite aspect of man as completely false.

The physical nature of man includes the bodily, the biological and the psychological aspect of man's nature. "Infact, the body itself represents the physical nature of man"<sup>12</sup>. This physical nature of man is perceived by us. It is called the apparent man. And the apparent man, however great he may be, is only a dim reflection of the Real Man, who is beyond. The apparent man is limited by time, space and causation, and is therefore bound. Or, in the language of some philosophers, he appears to be bound, but really is not.

Vivekananda believes that man is even physically superior to other animals because of the better organisation of his physical nature expressing a greater unity. Like other animals human response to the environmental factors are not just instinctive or mechanical. Rather his physical behaviour claims to have a planful and well-organised way. This makes him distinguished from all other animals even in respect of physical capacity or physical nature. Actually it becomes possible due to the presence of the brain-system in human body which offers him "a unique status in the world"<sup>13</sup>.

According to Vivekananda, this uniqueness of man's physical nature is due to the presence of spirituality in him. From his Guru Sri Ramakrishna he received the message "Jiva is Shiva" which means that each individual is divinity itself. Vivekananda also believed that each soul is potentially divine. "Vivekananda describes the true nature of man as Soul-Force or Atman"<sup>14</sup>. This Atman or Self represents man's spiritual or real nature. The Real Man is one and infinite, the omnipresent spirit which is beyond cause and effect, not bound by space and time, must therefore be free. This self can neither be born nor die. The sword can not pierce it, the water can not melt it, the fire can not burn it, and the air can not dry it. It is intangible, omniscient, omnipotent Being. The apparent man is constantly struggling to manifest this actual individuality of man which is infinite, which is beyond. There is no individuality except in the Infinite. That is the only condition which does not change. Everything else is on a constant state of flux.



Neither the body nor the mind represents the real nature of man. The body and mind, according to Vivekananda, are continuously in changing modes. They are only names of series of changeful phenomena like rivers whose waters are in a constant state of flux, yet representing the same river. Every particle of our body is subject to change. No one has the same body for many times or many years together. A boy grows older but still he remains the same person. Likewise one moment a mind is happy and in other moment it becomes unhappy although it is the same mind. The combination of body and mind is ever changing. Change can only be in the limited. The infinite unit is unchangeable, immovable, and absolute and this is the Real Man. Our reality, therefore, consists in the Universal, and not in the limited. So here we can notice a great resemblance with Tagore's view of human being as 'individual-universal'.

Vivekananda tries to explain the distinction between soul's real nature and apparent nature in various ways. The Atman or self or soul is one and unchangeable while all the various changes in the universe are the reflections or appearances of that one self. He gives the analogy of sun. The only sun of the sky may shine in the waters of different pots. All the reflections of the sun in different pots are apparent while the real sun is always one. Thus he explained the plurality of selves still being a monist. This spiritual aspect of man is described as Divine Nature by Vivekananda.

Swami Vivekananda was a Vedantist in his own way and he identified the true nature of Atman with Brahman itself. According to him, human beings always have a tendency to go beyond, to have the transcendental. There is no upper limit of man's quest for truth or activities. "This capability of self-transcendence is itself an evidence of the basic oneness of the Atman and Brahman."<sup>15</sup> This human tendency of going beyond itself proves the existence of his spiritual nature. This notion of Swamiji claims to have a similarity with Tagore's concept of 'Jivan-Devata'.

According to Vivekananda, the real nature of man is freedom. Freedom is not merely a quality of the soul but it is the very essence of the soul. Vivekananda's concept of 'potential divinity of the soul' gives a new, ennobling concept of man. He has laid the foundation of 'spiritual humanism', which makes human life meaningful and worth living.



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## **ROLE OF THE TEACHER IN IMPLEMENTATION OF RIGHT TO EDUCATION ACT**

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The Right to Education Act came into force in the entire country from April 1, this year. But, Andhra Pradesh government seems to be in a state of inertia as far as implementation of several key recommendations of this act. The state education department has to formulate rules in the state for the implementation of this act as per the model rules issued by central government in this regard. The government has to seek the opinion of all sections of society on the draft rules and promulgate the final rules. But, the final rules have not yet been promulgated in the state even weeks after the feedback was sought from the people. People will get a clarity on the implementation of The Right to Education act only after these final rules are notified.

There is no dearth of ministers in education department in the state. There are as many as six ministers looking after many sectors of education such as primary education, secondary education, Higher Education, technical education, medical education and Sarva Shiksha Abhiyan. Still, the government does not find time to take action on an important central legislation like Right to Education. In fact, the administration in the state is rudely rocked by two important developments. The internal power struggle within the ruling Congress and the movement for separate state of Telangana have taken a heavy toll of public administration in the state. But, fortunately the implementation of Right to Education has no hurdles either from Jagan camp or from Telangana agitation. Still, the government does not act speaking volumes of the lack of political will and commitment. Unfortunately, the political parties and the leadership do not make this a political issue to beat the state government. The unfortunate and helpless children are not a vote bank for political parties. In fact Andhra Pradesh has the dubious distinction of leading in the incidence of child labour and lagging behind the national average in the literacy rate. Andhra Pradesh is the most educationally backward state in the South India. Therefore, the state should lead in the implementation of Right to Education, but, the reality appears to be otherwise.



The right to education act stipulates provision of one teacher per 30 students at primary stage and one teacher per 35 students at secondary stage. The unofficial estimates suggest that the state government requires to appoint at least another one lakh teachers if this act has to be implemented in its true spirit. But, the state government claims that there are no vacancies even as per the notification also. The appointment of teachers is inordinately delayed. Contrary to the spirit of the right to education, thousands of schools in the state are still run by Para teachers who are called vidya volunteers. Rights can not be enforced by volunteers. The right to education calls for providing quality education and appointment of trained teachers in all the schools even including the private schools. But, the government schools are running with Para teachers. How can government make private schools adhere to the norms set out in the Right to Education act.

The implementation of Right to Education is supervised by an apex authority called National Commission for Protection of Child Rights at the all India level. Similar state level commission should be appointed to supervise the implementation of this act. This commission should be headed by a High Court judge or equally eminent educationist. The experts in different fields should be appointed as members in this commission. In case appointment of such a commission is delayed, Right to Education Protection Authority should be set up. The state government has not yet shown any initiative in this regard too. One can understand political compulsions in cabinet expansion. But no such problems are encountered in regard to the appointments under Right to Education.

The Right to Education act bans all kinds of entrance tests for admission to schools and collection of donations for admissions. Despite this stipulation in the act which is the result of a constitutional amendment, the officials simply do not bother about this vital provision. But, the government cancelled entrance test in the residential schools run by government. This resulted in a situation that threatens the very foundations of residential system. The residential schools were set up by state government for the meritorious poor students. This system produced very good results till now. But, thanks to Right to Education act, now admissions are made by lottery. But, the private schools continue the practice of entrance tests. Several such key provisions of Right to Education Act are not yet given a serious consideration by the state government.

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## Implementation Challenges :

Lack of teachers, funds, prevalent corruption, state-center differences, infrastructure and most importantly, the lack of will power to execute – there are multiple challenges for the government to go beyond lip service.

*The Right of Children to Free and Compulsory Education Act, 2009* passed by the Parliament of India makes education a fundamental right for all children between the ages of six and fourteen. Salient points of the Act include:

1. Makes Elementary Education Free
2. Makes Elementary Education Compulsory for the State to provide
3. Mandates education of children along their peer age group (“age-appropriate”); provides for “special training” to facilitate age appropriate education
4. Sets quality norms for all schools
5. Sets qualification and working norms for Teachers in all schools
6. Mandates curriculum in all schools to be in consonance with Constitutional Values
7. Mandates a system of evaluation that is free of the oppression of annual exams
8. Enhances role of PRIs in implementation as well as grievance redressal.
9. Mandates participation of civil society in the management of schools; makes teachers accountable to parents and the community
10. Democratizes education delivery in the country by mandating 25% reservation for children from weaker sections in private schools.
11. Protects children from labour, marriage, exploitation, discrimination, abuse, violence and neglect.
12. Separates agency for implementation of Act (Education Department) from agency charged with monitoring the implementation of the Act (NCPCR)

The role of education in improving the choice and quality of lives, enhancing social and economic productivity, and initiating the process of empowerment and redistribution of resources is well-documented in the past fifty eight years of research. Despite India’s commitment to provide “free and compulsory education for all children



until they complete the age of 14” and achieve Universalization of Elementary Education (UEE) and Millennium Development Goal (MDG) with substantial improvement in the quality, the average years of schooling has remained low at less than three years. Around 35 million children, in the age group of 6 to 14 years, are still estimated to be out of school and the percentage of girls and other disadvantaged sections is disproportionately high among these children. Various state sponsored efforts at national, state and district levels are currently underway across India, aiming at accelerating the pace of UEE and MDG. In some areas, notable small-scale initiatives by non-governmental organizations and other representatives of civil society are complementing state-sponsored efforts.

There has been a growing realization that a system-wide transformation is crucial for the attainment and sustainability of the goal of UEE and MDG with improved quality. The objectives of improved access and increased participation, reduced drop-out rates and enhanced learning achievements cannot be met and sustained without improving the quality, effectiveness and efficiency of services in the elementary education system. The organizational structures, processes and practices determine the effectiveness of the whole system to a large extent, including the delivery of the final output and achievement of the ultimate goals. Some of the initiatives that are underway specifically focus on development of academic as well as management processes, and intend to function as catalysts and harbingers of this systemic change. There is a need to take stock of the critical managerial and accountability issues in elementary education in order to consolidate the achievements, identify the gaps and set future goals. Some initiatives have already been implemented in the past and there is sporadic evidence of institutional reforms having been initiated in some states. However, the available literature appears to be limited either to the activities and interventions undertaken by the project/ programmes, or isolated examples in some areas. Even the interventions and processes initiated by these programmes, or other small initiatives, have rarely been assessed from the point of view of a system-wide transformation. Therefore, a fresh assessment of existing role and responsibility of teacher in the context of class room management, in elementary education as a whole, was considered necessary to determine the future course of action to achieve the goals of UEE and MDG, and raise levels of systemic effectiveness. In addition, a number of other measures initiated in other sectors, like Local Self Government and



Rural Development, have had a direct impact on elementary education management, and the last few years have witnessed rapid changes in this respect. Any effort to understand and review the elementary education system must take note of this fact as well. (Jha, Baxi, and Saxena, 2001).

**The salient features of the Right of Education Bill are:**

- Free and compulsory education to all children of India in the six to 14 age group.
- No child shall be held back, expelled, or required to pass a board examination until completion of elementary education.
- A child who completes elementary education (upto 10<sup>TH</sup> class shall be awarded a certificate.
- Calls for a fixed student-teacher ratio.
- Will apply to all of India except Jammu and Kashmir.
- Provides for 25 percent reservation for economically disadvantaged communities in admission to Class One in all private schools.
- Mandates improvement in quality of education.
- School teachers will need adequate professional degree within five years or else will lose job.
- School infrastructure (where there is problem) to be improved in three years, else recognition cancelled.
- Financial burden will be shared by state and central government.

But in my opinion rigorous efforts should be made to implement this law in rural area where 70 percent of child labors work in agriculture where access of school is severely limited and non availability of trained teacher makes the situation worsen. I feel that, to solve the problem of Trained teacher, the teachers who got the appointment in capital schools, after giving them proper training they should be transferred to their native place, because they will be more friendly and close to these people. These teachers can explain them about the importance of education and mentally prepared their parents to their children to school. I would like to mention one point “ In our Indian society this is the mentality the girls shouldn’t sent to schools there is no need to educate them, as after a particular age they will be married and get settled in



life. I want to change this thought as I feel, in a family mother plays a vital role in the upbringing of child. If she is educated she can guide her children in proper way, can manage her home systematically, and if she is financially independent, it will be more helpful economically also.

I want that literacy rate in our country should be hundred percent, we should leave no stone unturned to achieve this target. The major role of education is to create an educated society, it also make an individual to become a more refined member of a society. Education makes man a right thinker and correct decision maker. Illiteracy is a major hindrance to human development. People who are not educated have less opportunity to do what they want to do. So I want that parents should be more concerned about the education of their children, and teacher must be completely devoted to their student education. I am sure if we all will work honestly for the successful implementation of this education Act, then after few years there will be no child found working as a laborer or begging on the roads.

- ❖ Identifying minimum entitlements related to acceptability and adaptability.
- ❖ Respecting and implementing non-negotiable principles such as equality, non-discrimination, survival and development of the child, child participation and best interests of the child.
- ❖ Creating an enabling framework where solutions to barriers against FCE are provided.
- ❖ Ensuring that barriers against FCE are not punished.
- ❖ Ensuring that relationships between child–State, parent–child, parent–State and community–child/parent–State are clearly defined.
- ❖ Locating social accountability of different actors and creating a grievance redressal mechanism. This would entail clear identification of duty-bearers at different levels – Centre, State, District, Local level bodies and school.
- ❖ Capacity building of the right–holders as well as the duty–bearers.

A clear rights-based policy should be translated into skeletal Central legislation. Such skeletal legislation should be supplemented by Model Statutory Rules that will operate in the absence of State Rules. Such a model of legislation will allow for State-



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level flexibility without compromising on non-negotiable minimum standards.

- ➔ The rate at which we have to respond to changes affecting education is much faster than ever before;
- ➔ It is urgent to realign the curriculum framework to provide outcome-based, flexible learning paths leading to mastery learning;
- ➔ Training and orientation of teachers, administrators and students to the new learning technologies is an immediate requirement;
- ➔ Teachers already in the profession should have the right to adequate time and resources for continual professional development to acquire and maintain ICT skills
- ➔ Teachers should have adequate time to plan the introduction of ICT into their pedagogical practices to ensure high quality and appropriate learning.
- ➔ To ensure that teachers, educational authorities and other stakeholders enjoy the maximum benefits from the use of these technologies, all should be involved in information sharing, consultation and negotiations, according to the issue involved.
- ➔ Building appropriate information systems, including channels for sharing and communication. Also identifying means for accessing/developing knowledge and ensuring their use in taking critical decisions.
- ➔ Redefining some of the processes and procedures, with an in-built emphasis on answerability towards people. In other words, “peopleising” the processes. The focus should also be on transparency and the use of information/ objective criteria.
- ➔ Reorienting administrative/academic personnel with a focus on i) sectoral goals and objectives, and the role/responsibility of administration in achieving the same, ii) functioning with a sense of accountability towards people, and iii) use of information and knowledge for making decisions.
- ➔ In-depth review of mechanisms and modes that exist presently in different states/ programmes for ensuring horizontal linkages, in different states in the area of education, as well as in other social sectors; identification, analysis and development of the most suitable state-specific means to facilitate faster,



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co-coordinated and improved administration for the elementary education sector.

### **Safety and Security of Students**

- Tell students about purpose of education in the Schools.
- Build one to one relationship with students
- Take-up Personality Development Programmes.
- Know everything about your students
- Make students aware of realities of life
- Inspire students to face problems with braveness
- Apprise students about probable dangers and hazards in and around school campus
- Provide your students psychological therapy

### **Implementation:**

- ☞ Identifying minimum entitlements related to availability and accessibility.
- ☞ Identifying minimum entitlements related to acceptability and adaptability.
- ☞ Respecting and implementing non-negotiable principles such as equality, non-discrimination, survival and development of the child, child participation and best interests of the child.
- ☞ Creating an enabling framework where solutions to barriers against FCE are provided.
- ☞ Ensuring that barriers against FCE are not punished.
- ☞ Ensuring that relationships between child–State, parent–child, parent–State and Community child/parent–State are clearly defined.
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## SURVEY OF *ENSET* CULTIVATION IN SOUTHWESTERN ETHIOPIA

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### INTRODUCTION

The cultivation of *Enset* for food and fiber is limited to Ethiopia (Vovilov 1995 cited in Almaz 2001). *Enset* is used as staple and costaple food for over 20 million people, equivalent to people in Ethiopia (Westphal 1975 and Asnaketch 1997). It has three-fold advantage: tolerant to drought, suitable for long term storage and stable food of the densely populated areas of the country. This was proved particularly true during the 1984 famine in the SNNPR like Sidama, Wolayita, Kambata and Guraghe (Heath and Lemma 1992). It requires low agricultural inputs and hence adaptable to wide range of geographic conditions. The total areal and output record account for about 188,000 hectares and 28 million quintals, respectively (SNNPR and ECA 1996). However, further improvement of its productivity requires assessment of cultivation and adoption of appropriate practices. To contribute to this end, this paper reports on one of the most dominant producer of this crop, the Chenna district, Kaffa Zone of Southwest Ethiopia.

### MATERIALS AND METHODS

**The Study Area:** The study was undertaken in Chenna District, in SNNPR State, about 520 kms southwest of Addis Ababa. It receives average rainfall from 1400-1700 mm per annum, most of which concentrated from March to October, for the rainfall coefficient ranged from 1.0 to 1.6, and short dry period from December to February.

The study area is endowed with natural forest that shelters *enset* and natural coffee. Its topography is characterized by rugged slopes, gorges and dissected landscapes interrupted by a few plain lands and narrow plateau along watersheds. According to sources from the District Agricultural Office, about 80% of the study area is elevated at altitude from 1500 to 3500 masl.

**Data Base:** The study district was selected using purposive sampling in consultation with the Zonal Agricultural Office (ZAO) and Zonal Planning and Economic



Development Office (ZPEDO). Chennai is one of the predominant producers and most accessible throughout the year. Both primary and secondary data were used for the study and collected data were analyzed using descriptive techniques.

## RESULTS AND DISCUSSION

**Agroclimate of *Enset* Production:** *Enset* is cultivated within agroecological condition with altitude ranged between 1500 and 3100masl and mean annual temperature around 20°C. Most of these areas of *enset* culture receive a mean annual rainfall from 1100 to 1500mm with relative humidity of 60 to 80% (SNNPR and ECA 1996). Sometimes, it can grow at 900masl (Asnaketch 1997) where there are irrigational inputs to grow along with banana, coffee, and other plants (Westphal 1975). This implies that it adapts wide range of agroecological zones for it tolerates harsh climatic conditions such as drought, heavy rainfall and frost unlike other crops (Huffenagle 1961 and Westphal 1975). In most of the *enset* growing agroecological zones, soils have pH value ranging from 5.6 to 7.3 and organic matter from 2 to 4%. The soils have medium texture, deep and well drained profile development and high water holding capacity (SNNPR and ECA 1996).

**Production System of *Enset*:** *Enset* is a perennial crop, i.e., seeds of *enset* are produced after four years and above depending on its clone and agroecological environment, which is contrary to other perennial crops (Almaz 2001). About 85% of the people in the study area grow it as their basic food crop and the remaining 15% of the total people grow cereals like teff, maize, wheat, and sorghum. The current time dominant producers of *enset* are the Guraghe who adapted from Sidama and the Kaffa (Shack 1966). Farmers have two important criteria for selecting *enset* cultivation, namely resistance to wide climatic irregularities and high yield (Table 1). This can be substantiated from survey result of Tilahun and Robert (2006) from Areka: *enset* yields 223.41qt/ha, the highest of all crops (Table 2). Moreover, it was important food especially during drought condition.

Table 1 Reason for Preferences of *Enset* as Staple Food

No	Reasons for preferences	Sample Households	
		Numbers	Percent (%)
1	Resistance to drought	12	26.09
2	High yield	10	21.74
3	Both high resistance and yield	20	43.49
4	Others	4	8.70
	Total	46	100.00



Some farmers in the study area underlined their last experience as under:

“*Enset* and taro saved our life during the previous famine. If otherwise, all would have suffered like others and would also have taken away to distant villages where there was no more *enset* plant. We were not affected severely except the loss of our livestock and crops.” (translated in to English)

Table 2 Average Yield of Major Crops Grown in Areka, Wolaita Zone, SNNPR

No	Crops	Yield (qt/ha)	No	Crops	Yield (qt/ha)
1	Enset (kocho)	223.41	8	Teff	4.55
2	Taro	89.6	9	Wheat	9.93
3	Pumpkin	60	10	Barley	6.46
4	Kale	150	11	Pea	7.75
5	Sweet potato	120.7	12	Faba bean	7.52
6	Irish Potato	53.77	13	Common Bean	7.26
7	Maize	16.54	14	Sorghum	9.23

Source: Adapted from Tilahun and Robert (2006)

It is not appropriate to plant during rainy seasons as it impacts on quality and quantity of output. *Enset* is intercropped with root crops, coffee, etc for different reasons. Farmers mostly preferred intercropping to reduce risk of loss, increase yield and conserve cropland. Three-fourth of the respondents was in favor of the first two causes (Table 3).

Although *enset* is grown on different types of soils, the soils in the study area are mostly degraded and have relatively low pH value (Bezuneh and Feleke 1996). Manure is regularly accumulated and systematically applied by family members to both the homesteads and farmyards where *enset* is cultivated. *Enset* is a manure-loving plant and grows well with livestock derived organic matter.

Table 4 Reasons for Intercropping with *Enset*

No	Reasons for intercropping	Respondents	
		Numbers	Percent (%)
1	To increase yield	18	39.13
2	To reduce risk	18	39.13
3	To save cropland	8	17.39
4	Others	2	4.35
Total		46	100.00



**Gender Roles in *Enset* Production:** The role of gender in Chenna district, like other parts of the SNNPR, is remarkable throughout the cultivation and management of *enset*. Weed activity is a benchmark where the labor shared among male and female. Men were active in land preparation and planting while large number of women takes the responsibility of workloads after weeding (Table 4). As indicated in Table 4, women have been suffering from both technological and socio-economic drawbacks in *enset* production system.

Table 4 Gender Roles in *Enset* Production

No	Crop Calendar	Division of labor by number of respondents						Total	
		Done by Males		Done by Females		by Shared both		by	
		No	%	No	%	No	%	No	%
1	Land preparation	52	96	1	2	1	2	54	100
2	Planting	49	91	3	5	2	4	54	100
3	Weeding	10	19	6	11	38	70	54	100
4	Applying Manure	2	4	42	78	10	18	54	100
5	Harvesting	-	-	53	98	1	2	54	100
6	Processing	-	-	54	100	-	-	54	100
7	Marketing	1	2	49	91	4	7	54	100

They are culturally tied to laborious activities namely applying manure, harvesting, processing and marketing of *enset* products while men are engaged mostly in land preparation and planting. Such burdens on women are extensively occurring practices in the study area. Such work load together with other domestic, reproductive and socio-cultural roles and responsibilities deteriorates the energy, time, and intellect of women. For these reasons, females were not being allowed for education in the past and the vicious circle continues to next generation the problem being unresolved.

**Problems of *Enset* Production:** Several problems were associated with pre- and post-harvest including cultivation, harvesting and processing. With increase in population, land for *enset* cultivation becomes scant. The other most serious problem affecting *enset* production is a disease known as *Nusho* (in Kaffa local language). As a result, relatively less resistant variety clone is lost from the district in particular and the region at large. Addition of ash and immediate replacement of disease-resistant species or varieties were used as traditional measures to overcome *Nusho*. *Enset* producers also use pit-holes and burrowing as a local measure to overcome the challenges from wild pests. Challenges from *Nusho* and wild pests become beyond the farmers' capacity that called for severe intervention by different stakeholders.



The premature harvesting of *enset* is the other challenge as producers forced to consume due to lack of enough food items. The other problem is poor post harvest technology. *Enset* processing after harvest have been done by using traditional equipments that require much labor and time of females. Although there have been attempts to develop an appropriate post harvest technology for *enset* in the region, research and extension are lagging behind the urgent need of the technology.

## CONCLUSION

The SNNPR is the most dominant *enset* production region. *Enset* is the staple and costaple food and fiber crop for the dense population of the region. The intensive dependence of *enset* production on farmyard manure and women labor made it sensitive to cattle and women. However, there are various problems related to cultivation, harvesting and processing of *enset* production including *Nusho*, backward, tiresome and inefficient technology, premature harvest, weed and wild pest. This calls for proper intervention policies and strategies to improve *enset* production and to save time and labor of women for further capacity building in education and income-generating activities. Thus, local GOs, NGOs, research and extension agents should be integrated with local community so that *enset* would be more productive than ever not only in the study area but also it can be adapted in other parts of climatically dynamic world.

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## THE IMPORTANCE OF EDUCATION IN OUR LIFE

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Education carves out the career of a knowledge-seeker. We cannot draw the lines of fortune on our palms but the future can be shaped up by harnessing the youth potentials and also by unflinching enthusiasm, dexterous efforts and resolute determination. Education is a backbone on which the whole edifice of human personality stands. Education is a way by which one can make his individual identity.

Right from cradle to the grave, education plays a significant role. When a child plays in the lap of his mother, she whispers in his ears to inculcate in him the knowledge to fulfill the basic needs of life. When a child of placid disposition puts his feet on the steps of school and enters its portal, the level of knowledge is increased. As time flies, he crosses the fence of school to enter the college and then university. Thus, the show of life goes on and a day comes when the knowledge-seeker becomes a job-seeker. The learning of the whole life now becomes the field of work for him. He tries to earn and learn more to be a man of high repute. Finally when he says a parting goodbye to all of his friends and relatives then his name and fame both are written with golden letters on the pages of books and that gives him a boon of immortality.

Man is an exceptional living being. In this regard if we think deeply, then a truth flashes on the screen of the mind. The Plant Life is having food cell (Annamaya Kosh), Insects have food cell and vital air cell (Annamaya Kosh and Praanamaya Kosh), Birds are having food cell, vital air cell and mind cell (Annamaya Kosh, Praanamaya Kosh and Manomaya Kosh), Animals have food cell, vital air cell, mind cell and intellect cell (Annamaya Kosh, Praanamaya Kosh, Manomaya Kosh and Vigyaanmaya Kosh) and Human Beings are having food cell, vital air cell, mind cell, intellect cell and bliss cell (Annamaya Kosh, Praanamaya Kosh, Manomaya Kosh, Vigyaanmaya Kosh and Aanandmaya Kosh). This is the reason that man with his intelligence tries to create a harmonious, blissful and pleasant ambience.

The significance of education can be observed if we compare a literate person



with an illiterate one. The literate person always behaves decently, politely, soberly and speaks in requesting tone without a shadow of ego. On the contrary an illiterate person is indecent, harsh, and rude and speaks in a commanding tone with overflowing ego.

Education teaches us morality, ethics, decency and integrity. It guides us to do righteous action and keeps us away from lethargy and sluggishness. If a man is having plentiful knowledge but he never transforms his knowledge into action then he will be as good as a tree that gives neither fruits nor a shady shelter. His unused knowledge gets rusted and his wisdom will be drooped like a wilted flower.

A man of distinct vision should not confine his learning because a knowledge which is apt enough to give you certificates cannot widen your horizons. Such cleverness and expertise can provide you plethora of jobs but it cannot be the food for your thought. Therefore go beyond the syllabus, make the capacity of your mind more spacious to accommodate the ocean of knowledge and get the precious gems of wisdom.

Nowadays the whole world is connected by advance technology of software and internet. Simply a click of computer mouse can put on your monitor screen the information in abundance. Our narrow thinking should be now widened to change our obsolete traditions and also the system of education should be changed as per the need of hour. With pace of time many changes have occurred in the field of education. The chalk and talk method of imparting knowledge is now changed and the latest system of digital classroom teaching is spreading its wings. Smart Class and skill-based education are extending the area of learning to make the knowledge-seeker a whiz-kid and more and more genius as well.

Getting education is a fundamental right of human being. Education opens our eyes to know the facts and truths of life. During sleep we close our eyes and goes into the world of dreams and fantasies but in waking state of consciousness we are aware or the facts and perform all those actions which are legitimate and genuine.

Education teaches us how to come out from our shortcomings and weaknesses. We use our intelligence to discriminate between rationality and emotionality. Rationality teaches us the art of living, so we choose rationality to live a meaningful life to be a super human being. It inculcates in us the essence of virtues to make our actions more



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righteous and meaningful as well.

Education also polishes our behavior and makes our body language absolutely perfect to shine our personality in fullness. It guides us on every path that leads to success and fame. Education also teaches the art of giving respect and in return the manner of getting respect without a touch of ego.

There are two paths in this world. One goes to materialism and other to spirituality. The path of materialism is connected with our senses and mind while the path of spirituality is linked with intelligence and soul. We have to keep balance for maintaining the equilibrium or symmetry. The beauty and fragrance unite to produce a flower, similarly the beauty of lifestyle and fragrance of spirituality when unite it makes person a superman.

Correct use of knowledge enhances the personality and makes a person sage, genius, monk, leader etc such as Vivekananda, Abdul Kalam, Sister Nivedita, Mother Teresa and so on but the incorrect use of knowledge may make a person rebellion. History reveals the truth, how the kings and monarchs have done wonders to maintain a perfect amity and how some rulers had misused their powers.

Education sows in us the seed of forgiveness from which the evergreen plant of love comes out to develop the universal brotherhood. It widens our thinking and bridges the gap of different communities by universalizing the religions.

Swami Vivekananda says, "Each soul is potentially divine. The goal is to manifest divinity within by controlling nature. Do it either by work or worship, by psychic control or philosophy, by one or more or all of these and be free. This is the whole religion."

At another place Vivekananda says, "Arise, awake and stop not till the goal is reached." These words of Swamiji lift up our intellectual level of consciousness because it's a nectarine elixir of his speech that sharpens our intellect and shows us the path that goes to uprightness and decency.

In our country we extend our most reverential gratitude from the inmost depth of our hearts to our preceptors or teachers because they harness our unbridled youth potentials and take the reins of our childhood and adulthood in their hands and make our life fruitful and meaningful as well. Dr. Radhakrishnan, the former President of India and a great educationist gave much emphasis on education. He declared 5<sup>th</sup>



September of every year as a Teachers' Day just to inculcate in us the feeling of respect and honor for teachers. In fact teacher is the role model and a guide who sets out our voyage of learning in the right direction.

Nowadays, it's difficult to get admission in reputed school. The knowledge-seekers bang their heads on the closed gates of educational institutes because this the era of competition. We have to enhance our level of intelligence to stand in the queue where the scholars are standing to go in the campus or to be at the seat of learning.

Therefore strain every nerve, flex your muscles and be a voracious reader to get as much knowledge as you can. The mute books of dog-eared pages are lying on the shelves of library. Important information is hidden behind the screen of computer. Unless, we cast off our lethargy or sluggishness, the pearl of knowledge cannot be obtained from the closed shell.

In concluding paragraph I would like to wrap up the pages after saying once again that education is the radiance that shines on the face of a learner and it distinguishes the man from other living beings. We cannot call rose as a flower if it doesn't have sweet fragrance. Likewise, we cannot call man a rational being if he doesn't have the aroma of moral goodness.

When the orb of sun appears at the east horizon, the darkness goes out of its own because brightness and darkness do not move together. Similarly the illiteracy and education can't move together because of its contradictory nature. Education brings in the world a perfect amity and universal brotherhood as well.

Knowledge is a treasure which increases when we spend and give it to others. Therefore let us illuminate the lamp of literacy to spread everywhere the light of education.

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## NETWORKING AND RESOURCE SHARING OF ENGINEERING COLLEGE LIBRARIES OF RAJASTHAN: A PROPOSAL

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### **1.Introduction**

In the present age of information, it has immensely been felt that to serve users better, information needs of users must become the central focus of attention. Success of information service is more likely to be achieved by adjusting the services to meet the specific needs of an individual user to match what the output of the information system.

Engineering libraries play an important role in promoting engineering education. At present, there are 125 Engineering colleges and their libraries in Rajasthan. These libraries form the primary information support system for achieving the goals. These colleges have placed before them. No doubt, these are not in position to provide the required information support to their users. A wide difference persists between information support needed by users and the existing information resources and services. Due to the tremendous growth of technical literature and budgetary constraints prevailing in almost all the engineering libraries, the libraries at best can select and acquire only a limited portion of the total documents available. To achieve literature comprehensiveness and overcome financial constraints, engineering libraries are left with no alternative but to resort to resource sharing which can be successfully be implemented by forming a network amongst all engineering college libraries of Rajasthan.

While there is a deluge of information on one hand, the cost of collecting, processing, storing and disseminating information has been spiraling up on the other hand. This calls for heavy budgets for libraries even to maintain a reasonable level of acquisition of journals, books and reports. Information buying power of libraries has been declining year after year. Because of this, resource sharing and cooperative functioning through networking have become inescapable for engineering College



libraries and information centers. Rajasthan is no exception; for this matter, it is even more necessary to develop a Networking and Resource Sharing with all Engineering College Libraries in Rajasthan. Efficient resource sharing can be achieved by using the recent advances in information technology for realizing a network of engineering College libraries. Information technology signifies the coming together of the disciplines of electronics, computer hardware and software, communications (in particular telecommunications), artificial intelligence and human/ machine interface.

During the last six to seven years, Engineering Institutions are increasing very fastly in Rajasthan. Where 2000 -2001 only 10 Engineering Colleges were in Rajasthan, there in 2011, 125 Engineering Colleges established and providing vital role in Rajasthan and make place in Nation in technical education. Every engineering College have a well furnished and biggest Library established according to norms of All India Council of technical Education, New Delhi and Rajasthan Technical University, Kota. All engineering Colleges are trying to provide a better Library facilities of there Faculties, Staff and Students for there Research and developments. It is the need of the times of in an effort to tackle the ever increasing demands for better services, quantitatively and qualitatively, in an environment already over strained by financial pressures.

## **2. RAJASTHAN AT A GLANCE:**

Rajasthan is one of the 28 states situated in the north western part of India. It covers 342,239 square kilometers (132,139 square miles) and is the largest state of the Republic of India in terms of area. Rajasthan lies between latitudes 23 degree 3' and 30 degree 12', north and longitudes 69 degree 30' and 78 degree 17', east. The southern part of Rajasthan is about 225 km from the Gulf of Kutch and about 400 km from the Arabian Sea. Rajasthan is bounded by Pakistan in the west and north-west; by the State of Punjab in the north; by Haryana in the north-east; by Uttar Pradesh in the east, by Madhya Pradesh in the south-east and Gujarat in the south-west. It is the land of Great Indian Thar Desert (Dharti Dhora ri) 58%, surrounded by beautiful Aravalli hills Range, a land of Forts, and a land of ancient civilization in the banks of Sarsawti river. It is one of the most beautiful states of India which attracts very large number of domestic and foreign tourists in India.

At Rajasthan is divided in to at four parts on the basis of languages as Shekhawati, Marwari, Dhundari and Hadoti. The Northwestern (between the Thar Desert and the Aravalli Hills) region receives less than 750 mm of rain in an average



year, and summer temperatures can exceed 45° C in the summer months, and drop below freezing in the winter. The Godwar, Marwar, and Shekhawati regions lie in the Northwestern zone, along with the city of Jodhpur. The Luni River and its tributaries are the major river system of Godwar and Marwar Regions, draining the western slopes of the Aravallis and emptying southwest into the great Rann of Kutch wetland in neighboring Gujarat. The Ghaggar River, which originates in Haryana, is an intermittent stream that disappears into the sands of the Thar Desert in the northern corner of the state. The Aravalli Range and the lands to the east and southeast of the range are generally more fertile and better watered.

### **2.1 EDUCATIONAL STATUS IN RAJASTHAN:**

The education standard in Rajasthan is one of the fastest growing in the country. In the new global electronic era Rajasthan is pulling all strings to improve the existing system and is thus building new schools, colleges (Academic and Technical) across different cities of Rajasthan. A majority of population in Rajasthan is tribes and resides in villages. Therefore it was difficult task to spread the word of education in the state. So, both the Central and State authorities are working hard for the last couple of years to provoke more and more people in Rajasthan to take up education. It is for their constant efforts now that the rate of literacy in Rajasthan is 67.06% as per the census reports of 2011.

### **2.2 ENGINEERING EDUCATION IN RAJASTHAN:**

Initially, there are total 125 engineering colleges (Up to July 2011) (private and government) and following some important engineering colleges are approved by AICTE and Rajasthan Technical University, Kota in Rajasthan. Total 20 Govt. Universities and 40 self finance Universities are providing technical and academic education in Rajasthan. 4 Demmed Universities including well known Birla Institute of Technology and Science also at the Rajasthan.

### **2.3 ENGINEERING COLLEGE LIBRARY**

The library is one of society's appearances of cultural self-expression. In India, the development of higher education is closely associated with the steady growth and development of the library in the institution of higher learning. An academic library is affiliated with an academic institution, be it a school, college, or university. A college library, of which an engineering college library is one example, is a service component



of its parent body, and since it is a non-profit organization, it must manage its finances in a judicious manner.

### **3. Objectives of the Study**

The main purpose of the study is to link all engineering college Libraries of Rajasthan and develop a network model as Rajasthan Engineering College Library Network. For this purpose all engineering colleges of Rajasthan are:-

1. Sharing there resources each other.
2. Awareness of application of Information Technology in Libraries.
3. Access Union List and Online Public Access Catalogue with Libraries.
4. Satisfaction of engineering colleges Researcher, Faculties and Students.
5. To suggest to library for best use of there resources.
6. Give a proposal for developed A State level networking and resources sharing channel for all engineering college affiliated with Rajasthan Technical University, Kota.

### **4. Scope and Limitation of the Study**

The Study of Networking and resources sharing in Engineering Colleges Libraries of Rajasthan is limit to Rajasthan state only. The result of study is suggest a proposal for networking and sharing there resources of engineering college affiliated with Rajasthan Technical University only, Kota, Rajasthan Only. Deemed University, Technical, Agriculture, Ayurved, Homeopathic, Medical and other self finance universities of Rajasthan are not included and this study is also limited in the sense that the respondent (Librarians) have given their views in the situation prevailing at the time of survey.

### **5. Methodology of the Study**

For data collection a structured questionnaires were submitted to all Library Professionals of engineering College Libraries. Personal Interview also conducted by phone and personal meeting. The Rajasthan Technical University is a mentor of all engineering Colleges of Rajasthan, so also use the website for data collection.

### **6. What is Resource Sharing and Library Networking**

Resource sharing is a concept which has developed to include many



cooperative activities between libraries and other stakeholders. Interlibrary loan continues to be the mainstay of resource sharing. Resource sharing means sharing ones assets with others. Resource Sharing in libraries means sharing material or function or services; any of the two; or all. A library network can be defined as a group of individual libraries that are interconnected through different nodes situated at different locations. In the library networking, the aim is to achieve sharing of resources to provide better services to users. Library networks are established for exchange to data, information and resources.

### **7. Need of Rajasthan Engineering Colleges Library Network (RECLNET) in Rajasthan**

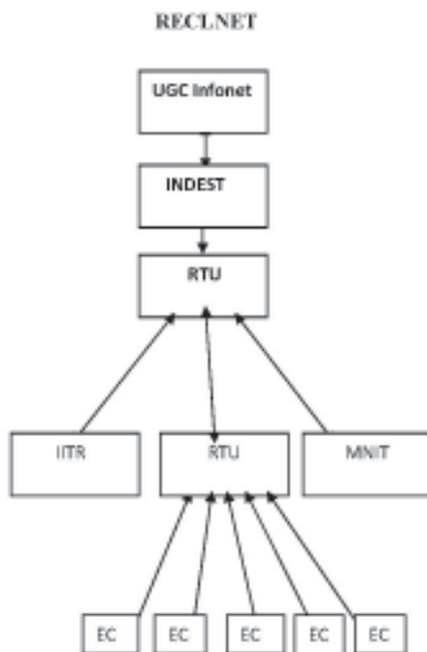
Since any engineering college library in Rajasthan states is not self-sufficient due to shrinking budgets and rising prices of library materials, equipment, manpower etc. Libraries cannot dream of acquiring all literature published worldwide individually, but the users have all right to ask for all. There are ever growing needs for nascent and recent engineering information resources and documents and the price escalation of publications caused heavy expenditure on libraries information materials and thus due to all these factors, the demands of readers are not fully met. Through this network (RECLNET) optimal sharing of resources will be possible among libraries. Duplication of investment in costly journals can be avoided also by this network resulting in overall economy and efficiency

### **8. Objective of RECLNET**

The objectives of proposed RECLNET would be as under-

1. To promote sharing of resource among the engineering college libraries through computers networking for maximum use of resources and better facilities for users.
2. To co-ordinate efforts for suitable collection development and reduce unnecessary duplication wherever it is possible.
3. To enable each engineering college library to provide its users access to the vast amount of information resources available with the other engineering college libraries.
4. To develop a wide ranges of information services and enhance the quality of services using latest information technologies.

5. To utilize the services offered at national level by INDEST, INFLIBNET, NIC, etc and different varieties resources of Indian networks such as DELNET, BONET, CALIBNET, etc.
6. To evolve standards and uniform guidelines of techniques, methods, procedures, hardwires, software's, services, etc and promote their adoption in participant's libraries.
7. To establish and maintain on-line union catalogue of books, serials and non-book materials, institutional depositories, digitized resources, etc oof including participating libraries.
8. Proposed Networking System



## 9. RECLNET: Proposed Networking System

Before Proposing the RECLNET (Rajasthan Engineering College Libraries Network)' it is necessary to look the entire networking and consortia at present are working in our country. INDEST (AICTE consortia) well performing in field of science and technology and has 1364 members institutions including 57 core members of IITs, IIMs, IISc & NITs,60 AICTE Supported Institutions. At present 1233 engineering colleges and institutions joined under self support new scheme. This consortium provide



vide rang of electronic resources including different worldwide publishers to respective institutional member's different worldwide publishers to respective institutional member's users. UGC- INFONET and CSIR (UGC) and CSIR consortia are also working in the field of Indian universities and CSIR institutions respectively. Internet connectivity provided by Bharat Sanchar Nigam Limiter also broadly available in Indian environment geographically.

As we know that there is no any network of Engineering College Libraries in Rajasthan. However Malviya National Institute of Technology, IIT Rajasthan, IIM Udaipur, Central University of Rajasthan, Rajasthan Technical University (RTU), Kota, BITS, Pilani and also some Self supported engineering Colleges (Total 31) are accessing the e-resources of the INSDEST. RTU, Kota is a Member of INDEST also. The concept of Library networking is not new but the speeds of networking activities involving are very slow in Engineering Colleges.

The reason assessed for such dismal situation are: pressure of access to explained information sources, financial constraints, space problems, lack of staff and the absences of an efficient systems of resources sharing while the surmounting of the first four constraints pre supposes huge investments but the development of resources sharing can contribute tremendously to boost information support and services without implying much financial strains on Libraries. Individual libraries may acquire the core publications which are needed and they should utilize the Information available at the other centers to satisfy the need of their users.

With the above objective, it is proposed to build a library and information network by interlinking all engineering libraries. Such a network may be named Rajasthan Engineering College Library Network. It is also consider, the point "How can the existing facilities of INDEST consortia utilized in Rajasthan Engineering College Libraries and then how can we interlink other electronics resources available at INFONET and CSIR consortium for utilization as well as other resources within country." Second point, RTU (Kota), MNIT (Deemed University, Jaipur) and IIT Rajasthan (Jodhpur) can play an active role. For this purpose, RECLNET will be planned with constituted a committee who can look after the informational needs of engineering libraries within region of Rajasthan. This networking will be in three phases: in the first phase, all engineering college libraries will have required to develop the necessary infrastructure for computerization and networking at their end; secondly



these libraries will be interlinked as part of the proposed network and should acquire the membership of INDEST So that they can avail and utilize the resources for their users; and third each libraries will have to computerize their in-house library operations, create databases of collection held and make their repository and send to them for union database.

### **10. Working of RECLNET:**

For the successful functioning of RECLNET, all the participating libraries are required to develop the necessary infrastructure first of all and they must computerize their library in-house operations, services and create database of their collection.

These would include adequate provision of computer systems with appropriate hardware's (A Mainframe at Regional Library and Personal Computers at local work centers) and software's, trained and skilled manpower, financial support and required training schedule to train library professionals. Secondly, to avoid unnecessary duplication of information resource and services, a central union catalogue of books, serials and non-book materials of all the participating libraries will be mentioned by which all the participating libraries will have the comprehensive collection in all subjects at their end and the users of libraries will also have an access from computer node from collection of not only their concerned library but also of other participating libraries' collection and resources available on network. For this, participating libraries should have adequate professionally qualified, skilled and experienced staff.

Standardization of techniques, procedures and methods is an essential and pre-requisite factor for any effective functioning of a network. Participating libraries will have to follow certain procedures and practices without which the resources held at there cannot be shared effectively and meaningfully. It will be quite advantageous RECLNET advocates the use of CCF so that records will be generated much faster and can be inter-changed with any ISO-2709 based format. AACR-2 for cataloguing and LSCH for standard subject descriptors could be used.

For monitoring the system, there should be a monitoring committee which would evolve policy and guidelines after discussing with the concerned engineering libraries. In this committee one each members represent from AICTE, RTU, MNIT; BITS, IITR, IIM within member institutions may be constitute. There should be also a provision of authority to which the monitoring committee would report. It is suggested



that they should come forward and take leadership to develop the network. To ensure the success of such an innovative venture, the AICTE which is taking care of the growth and development of engineering research in the country, should come forward to provide the necessary financial support, guidance and the encouragement for this project. The Department of Technical education, Govt. of Rajasthan, should provide the required finances for its establishment which would be ultimate beneficiaries of this project. The authorities of concerned engineering colleges should also make a provision for an appropriate allocation towards the library budget to contribute to the success of such a project.

### 11. Resources and their sharing

By the word ‘resource’ we mean library resources which encompass library materials, functions and services. Library materials are of two types documentary and non-documentary. Documentary materials are those which are in the form of documents that include books, periodicals, reports, patents, standards, theses, and soon. Non-Documentary materials include audio-visuals (A-V), microforms, machine readable databases, computer etc. The term functions connote acquisition, processing, storing, retrieving, maintenance, etc.

### 12. Benefits of Networking and Resource sharing in Engineering College Libraries.

Following resource can be share each other engineering college Library

Library Resources			
Personal	Materials	Functions	Services
Experience	Book		
Expertise	Periodical		Leading
	Patents	Acquisition	Reference
	Audio-visual aids	Processing	Documentation
	Equipment	Storage	Reprography
	Institutional	Retrieval	Translation
	Repository	Maintenance	E-Resources

### 13. Conclusion

The engineering college libraries can accomplish their activities and services effectively for their parent institution and user community for their need’s and their



satisfaction through implementation of RECLNET. The development and management of proposed network involve high commitment and dedicated efforts in present environment at where majority of libraries do not have adequate computer system facilities, budgetary provision and funds/ allocation, qualified and computer-skilled/ trained profession to introduce computerization and networking at their end. The success of the venture shall depend upon financial support, guidance and encouragement received from AICTE, RTU and the concerned State Government.

Further, as per norms from 2012-2013 of AICTE had compulsory rule to subscribe online e-journals of various reputed publishers to all Engineering Colleges of India. The costs of these online e-journals are very highly and not possible to subscribe every colleges/Institutions due to heavy financial expenditure. The average costs for every college are near to 10-12 lack per year. If all Engineering College of Rajasthan can be minimize their expenditure and maximize their facility, they should plan to make RECLNET of there Libraries with help of Rajasthan Technical University, Rajasthan Government and Library Professionals together. We can say that if we can make RECLNET portal of engineering college libraries network of Rajasthan, it would be very helpful to the faculties, students and managements of the every institution.

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## IDENTIFICATION OF A PROBLEM AND DEFINING THE PHRASES

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### INTRODUCTION :

“The heroes should engage themselves in Battles with unrighteous foes.

Endowed with genius and desirous of Acquiring and spreading special

Or Scientific knowledge-should train children”.

(Mantra-6, Mandala- I, Hymn- VIII, the Holy Rig- Veda)

Education is necessary to understand the life, the world, the nature, the happening and the invent a system for learning, earning, improving and distinguishing between the right and the wrong, the good and the evil, the vice and the virtue, the angel and the devil. Education is process in life to developing personality of an individual. The true goal of education is to teach a person about the way and means of learning language, interaction with difficult things in the world, acquiring moral and ethical values, adopting difficult kind of technique material and psychological in nature preparation of gainful employment and service in the society attainment of satisfaction of the mind and finally to become a flawless perfect person on earth.

Perfection is the basic principle in American and Western society. Everybody do his best to contribute to this principle of education and action. The moral values are so great in the field of universal learning in all fields. Their characters are reflected in social arrangement, administration, achievements, human approach and flawless behaviour. One of the important centers of the origin of education was the places of worships, sheltering saints, the priest and the deity. They all were .associated with Gods and Goddesses. In Hinduism education and knowledge are associated with Goddess “SARASWATI” goodness, beauty are part of the same. In Christian theology the form of good was identified with God. Plato described the form of the good as cause of all that is right and beautiful in all things. The result of the conflation of the form of the good, the one and beauty was the conception of a being in all respect perfect; perfect in beauty, perfect in goodness, perfect in divinity, perfect in every



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metaphysical property. This can happen only with the ‘Super being’, indeed, the God. So, the root of knowledge and education goes to the places of worship; the saint, the mystics and the related things. Mysticism and asceticism are often allied. In fact, asceticism was conceived of as the first stage on the process towards “MYSTICAL PERFECTIBILITY”. Plato makes perfectly clear that on his view “No man can achieve perfection except by way of perfect society, a society ruled by Philosopher kings<sup>1</sup>”.

LEIBNIZ wrote in 1714,

“Our happiness will never consist and ought not to consist in a full enjoyment in which there is nothing more to desire, and which would make over mind dull but in a perpetual progress to new pleasures and new perfections”<sup>2</sup>

So the Prime aim of education is to make a man flawless, complete and perfect or like perfect as far as possible. The real aim of education finally lies in making a child physically and mentally better and the best. And as he grows up with education, he should be flawless, full of goodness. And finally when he becomes adult and fully grown up as a man or woman he or she must be perfect. This quality should not be only reflected in his degree from a school or college or university but it should appear also in his life to others that he or she lives without flaws. Perfection therefore should be the main aim of education.

In the 1756 edition of political justice, GODWIN wrote,

“By perfectible is not meant capable of being brought to perfection. The world seems to mean that perfection is a State of being continuously made better and receiving perpetual improvement”<sup>3</sup> He explained that perfectible does not mean the capacity of being brought to perfection, there would be an end to our improvement. Hence the so called absolute perfection for men, at least in practice is meaningless.

They simply improve upon their present state of quality and morality, preferably, through education. Perfection is no more to be expected from the destruction of existing social institution. The chains which men bear they have imposed upon themselves; strike them off, and they will weep for their lost security. A person must be able to deal not only with situations that have arisen before but also with new one, including ones that could not have been anticipated by mentors or classical texts. In the particular cases, examined here, a continuing integration is called for between professional skills



and a persons' sense of character.

“That teacher or preacher only is glorified or  
Praised by his humble pupils or hearers who  
If forest desiring that all should get good  
Knowledge, proclaims his beautiful vigour  
Amongst men giving them good mind, Full  
Of knowledge and wisdom. He endowed  
With the admirable wealth of wisdom, showerer  
Of true percept, powerful and free, utters  
Words. That is full of wisdom and education.  
He is the granter of their noble desires”<sup>4</sup>

The importance of a teacher in the educational system is unquestionable. Teachers are key to optimum development of human resources. They not only impart knowledge to their students but also act as an agent of social change and mould the character of students. He is the backbone of the society.

**CHANAKY A's saying,**

“Shikshak kabhi sadharan nahi hota

Pralay or nirman us ki goad me palte he”

The place of teachers in our society is of vital importance.

He acts as the pivot for the transmission of intellectual and technical skills from generation to generation. They are the destiny of the nation. Therefore it is necessary to study the personality of the teachers. Secondary education is the connective link between primary education and higher education and it is often considered as the most important segment of an individual's learning. The major aim of secondary education is to enable the learners to acquire new knowledge; skills, use modern science and technology, and develop positive outlook and scientific attitude, to acquire skill for self employment and to inspire them with patriotism and religious, moral, cultural and social Values. So for imparting this kind of education, teacher must be PERFECT. The teacher bears the personality and so is the perfect teacher. This personality affects the and hence it becomes necessary to know the personality of the teacher. The sex, the qualification and the educational experience are the aspects which may affect the personality. Hence to know whether or not any relationship between these variables exists, the researcher has stated the problem as below.



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## **COMMUNITY STRUCTURES FOR SUSTAINABLE DEVELOPMENT OF TRIBES: AN INITIATIVE THROUGH NABARD TDF PROJECT**

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### **What is Sustainable development?**

Sustainable development aims at the creation of sustainable improvement in the quality of life for all people as the principal goal of development policy. Accordingly sustainable development has many objectives. Besides increasing economic growth and meeting basic needs, the aim of lifting living standards includes a number of more specific goals such as “bettering people’s health and education opportunities, giving everyone the chance to participate in public life, helping to ensure a clean environment, promoting international equity.” Thus meeting the needs of the people in the present generation is essential in order to sustain the needs of future generations. Sustainable development aims at accelerating economic development in order to conserve and enhance the stock of environmental, human and physical capital without making future generation worse off (Jhingan: 2011).

### **What is the scope to sustain the tribal population?**

As understood by the author, there is lot of scope to sustain the tribal families in several respects with the support of Governmental, Non-Governmental, Corporate Organisations and larger Civil Society across the country. Their compassionate response and enormous assistance and support are essential to sustain the tribal communities which are being provided constantly in one or the other form. Above all, the resources that are available in the forest areas, lands that are not used (waste) and services that are available can be managed in a systematic manner with the support of professional social workers. It clearly indicates that the tribal communities can be sustained and mainstreamed with existing services and resources by changing their attitude, providing assistance and generating awareness.

### **Actions aiming @ Sustainable Development**

These days, several organizations including Governmental, Non-Governmental,



Corporate organizations are focusing to develop the communities through community driven approach models, with these models people's participation can be ensured, service delivery can be assured and trust can be build among the target population. i.e. primary stakeholders of the project.

The DNR College Association with the initiation of Field Action Project (FAPs) concentrated on sustainable development and action that were launched. The action aiming at sustainable development such as formation and strengthening of community structures including Maa Thota Committees, Former's Clubs, Self Help Groups (SHGs) and activities related to 'Financial Inclusion' and 'Social Inclusion'.

### **What is Field Action Project?**

There are almost 350 schools/departments of social work in India. All the institutions were recommended to establish Field Action Projects which will be useful for both students and teachers lead to Continuous Professional Development (CPD). These Field Action Projects are helpful to the institutions in three ways: (i) growth opportunity to the staff, (ii) learning opportunity to researchers and students and (iii) service opportunity to the people.

Field Action Projects (FAPs) are to be considered as soul of social work practicum, where there is lot of scope to promote both students and teachers towards their professional development. Field Action Projects provide lot of scope to apply theories of social work in to practice, develop theories from practical experiences, identify current needs and design strategies to address those issues with social work perspective to improve the quality of life of different clientele.

The University Grants Commission (UGC-1978) clearly mentioned in its major areas of concerns for the development of social work education and training in India that is development of field action and field service project which should become reality in several universities in the days to come. In fact, several central and state universities have already established its own field action projects to train their own students to apply theories to practice and theories from as well as to generate new job opportunities.

National Assessment and Accreditation Council (NAAC, 2005), has stated in its manual that the Field Action Projects (FAPs) are social work projects initiated by the institutions for social work education, mainly to demonstrate innovative social work



interventions and provide field work placement to students, especially where other voluntary organizations are less in number. They also demonstrate the role of social work professionals to respond to the emerging needs, identified in the context of the changing social realities.

NAAC has also emphasized that there will be lot of scope to apply theories into practice and developing theories from practice through action research and process documentation. These projects may also influence the modification of the syllabus and develop teaching and learning material for social work education and training apart from generating new jobs with the association of faculty members.

More than 90 percent (a conservative estimate) of the social work educators have never practiced the profession. This has negatively affected the imparting of knowledge and the training of students in practicing the social work methods and skills. It is our considered view that all the social work teachers should practice in any of the numerous fields identified so as to improve his/her skills as well as to innovate and give consultation in their respective fields. Since most of the colleges face the difficulty of identifying suitable primary settings for sending the students for practicum, it is worth emulating the Field Action Project (FAPs) initiated by some of the social work Institutes in India. In this way teacher's practice as well as student's training would go hand in hand (Kurian and Sebastian, 2003)

Most institutions offering postgraduate courses expect an average of fifteen hours a week of concurrent field practicum for both the first and second year, and a block placement of four to six weeks at the end of the second year. Further most of the institutions provide field visits, study tours, a rural camp of ten to fifteen days duration and a few have laboratory exercises. Field instructors are school-based and agency-based. Training for agency-based field instructors, of whom a majority do not possess a professional graduate degree in social work, is rarely available. The integrative element between class and field is provided by the field instructor at the school through regularly scheduled supervisory conferences, utilizing the student's field record. Very few institutions have school sponsored field action projects (Devi Prasad and Vijayalakshmi, 1997:68).

After going through the recommendations of UGC and NAAC, well reputed department of social work at Post-Graduate Courses and Resource Centre, DNR College, Bhimavaram, Andhra Pradesh made it reality by launching its own Field



Action Projects (FAPs) for the last one decade to capacitate the learners under the meticulous leadership of Dr. Koteswara Raju, well known social work educator in India. That department's some of the projects are mentioned as follows: To work with (1) Self Help Groups (Ashajyothi), (2) Livelihoods generation (Nipuna), (3) Commercial Sex Workers (Guarava), (4) HIV positives (Asha Kiranam) (5) Tribal Development (Adivasi) and (6) Disabled groups (Alambana).

In most of those projects, the community structures play vital role in sustaining and mainstreaming the efforts made by the social work fraternity in and around the state of Andhra Pradesh. In the same lines, for sustaining tribes in the state of Andhra Pradesh, it was adopted to form and strengthen community structures aiming at sustainable development. Some of the community structures were mentioned below:

### **Community Structures**

In professional social work, we may have come across the certain methods to work with people in different ways to solve their problems, capacitate their potentialities and enhance their social functioning. Community Organization is one of the primary methods of social work to develop communities including tribal, rural and urban. According to Murry.G.Ross, Community Organization for developing any community, there is need of community structures and social organization. The task or problem is expected to be dealt with by some group, committee, council, commission or some other form of organization formal or informal. Since this organization or association becomes the main channel through which the community organization process moves, the principles which guide the development and work of this association therefore become the relevant principles of community organization.

There are several Field Action Projects aiming at developing people through community driven approaches by forming community structures and people's participation at every level of implementation by ensuring accountability and transparency. As stated by M.G.Ross Community structures are more important to the community development programmes.

The educational institution called DNR College Association stated working with tribal people with the support social work expertise to develop the tribal communities in its own district i.e west godavari, started forming and strengthening community structures such as 'Forming Maa Thota Committees', 'Promotion of



Formers Clubs', and 'Encouraging Women Self Help Groups'. In this particular project, the staff of NABARD-TDF Project adopted a three dimensional approach to ensure equal participation of all primary stakeholders in that community. The detailed description and its functioning are given below:

### **Formation of Maa Thota Committees**

MaaThota (Our Orchard) committees were formed in each and every village. The size of the committee consist of 10-15 members, among those one represents as 'President', one more represents as 'Secretary' to the group or committee. They conduct their meetings, discuss the problems, share the experiences and coordinate the activities on regular basis for growth and development of the orchard (Maa Thota). Later on the committee leaders discuss all the issues with the staff of Field Action Project and address those issues by using scientific knowledge and skills of social work (if needed they also take support and suggestions from other experts such agriculture, horticulture and civil engineers etc. ). Ultimately the projects will be converted in to community driven model aiming at sustainable development by strengthening these community structures. People's participation was encouraged in that project and it was considered as essential for the success of the project. About 30 Maa Thota Committees were formed and strengthened, the committees are working together to achieve the objectives of the project and develop themselves in several respects such as developing orchards, improving health conditions, generating awareness and enhancing skill sets. In this Maathota committee all categories of people were involved to ensure smooth functioning of all activities. There would be male, female and youth, those who are owning the land to develop orchards.

### **Promotions of Former's Club**

Former's clubs were promoted for taking initiatives in the areas of agriculture apart from taking care of the orchard development. These former's clubs were formed with the size of 10-15 members. They were capacitated and trained on various aspects. They were taken to different parts of the country to expose about the innovative initiatives to increase the productivity in several respects of their usual agriculture practices. Apart from that they were also exposed to develop the orchards, think for alternative crops based on the season and utilization of the un used or waste lands in their village. Identification and utilization of natural resources and generating livelihoods through forest products and produce also was the one of the aspect, that was



concentrated by the staff of MaaThota @ DNR College Association. Formers of that particular village would be involved to be the member of Former Club to have training on updated information with technological assistance aiming at high yielding.

### **Encouragement of Self Help Groups (SHGs)**

In the state of Andhra Pradesh, Women Self Help Groups (SHGs) are popularly known as sustainable initiative aiming at women empowerment. The members of the SHGs are involved in execution of the programme. In fact, some of them also are there in MaaThota Committees to strengthen the Mango and Cashew orchards aiming at economical sustainability, environmental sustainability as well as empowering the people on various aspects in the village to play an active role in the areas of health, education, employment, livelihoods and social security. SHGs are really helpful to achieve sustainability in tribal areas.

### **Financial Inclusion and Social Inclusion**

All the five hundred families were encouraged to open 'Bank Accounts', initially to ensure transparency and accountability in granting and paying money to the families under the Maa Thota-Wadi Model Project. It was collaboration between DNR College Association and Andhra Bank, Kannapuram Branch, with the technical support of NABARD. Ultimately it leads financial inclusion which was one of the activities of NABARD. Through this initiative, the tribal families were benefited in several respects such as awareness on transactions in banks, saving money, transparency in the transactions etc.

### **Conclusion**

The efforts and actions aimed at sustainable development of tribal people with the involvement and assistance of various stakeholders such as the funding organization i.e. NABARD, the project implementation agency i.e. DNR College Association, other implementation agencies that were already in existence for several years, the people i.e. beneficiaries and community structures are effectively striving to fulfill the objective. The basic feature and essence of sustainable development emphasizes the need for striking a balance between the needs of the present generation and future generation is focused which is made possible through the field action project with cooperation and collaboration of the people.



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## EFFECT OF YOGA TECHNIQUE ON SPORTS MEN DURING THEIR OLD AGE

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### **Introduction:**

Hippocrates (460-370B.C) and Galen (A.D.129-2100) knew the importance of exercise and harm of inactivity. Generally exercise and sports play the major role in the health and well-being of individuals. It is well known that the regular physical activity decreases the incidence of cardiovascular diseases, arthritis and diabetic mellitus.

Physical exercises affect only the muscles outwardly therefore, the body appears quite strong and healthy. But these exercises do not have as much impact on the internal organs of body as the yoga *Asanas*. *Yogasana* are very effective in throwing out all our body wastes and in activating our glands on the proper functioning of which depends our health and happiness. Age is an ongoing process, which never stops like time.\* During old age sports men frequently falls to frustration, which takes him to anxiety, depression etc, .These are the forms of mental stress, so if the mental stress is there, then no doubt physical problems will also be there.

### **Health problems :**

**Obesity**

**Hypertension**

**Diabetic mellitus.**

**Arthritis**

### **Obesity:**

Obesity may be described as a bodily condition characterized by excessive deposition or storage of fat in adipose tissue. It usually results from consumption of food in excess of physiological needs. Obesity is common among retired sports persons due sudden stoppage of physical activities. Extra fat puts strain on heart, kidneys and liver as well as the large weight –bearing joints such as knee and ankle joints.

### **Hypertension:**

Hypertension is particularly dangerous disease in old aged sports persons, as



it is a silent killer. The disease is usually complicated by one or more of the following

- \*Hardening of the arteries
- \*Blood vessels in the brain leading to rapture.
- \*Heart attack-myocardial infarction
- \*Kidney disease.
- \*Stretching of the aorta (aneurysm)
- \* Tissue destruction.

**According yogic point view :** Our physical body made up of five sheaths

1. *Annamaya kosha* - physical body
2. *Pranamaya kosha* - vital body
3. *Manomaya kosha*- intellectual I& (Lower mind) rational activity
4. *Vijnanamaya kosha*- intuition, (Higher mind) creative thought spiritual
5. *Anandamaya kosha*- causal or Bliss body.

Each of the bodies must be nourished by proper life style and food. For the physical body, moderation is required in diet, sleep and life style to prevent hypertension .The mind must maintain balance with the physical body and be kept free of anxiety and stress.

### **Diabetes Mellitus:**

Diabetes Mellitus (DM) seems to be known since the evolution of civilization. *Sushruta* (500 B.C) an ancient physician had described it as '*Madhumeha*' (excretion of sweet urine)\*. Broadly, there are two types of diabetes namely Juvenile onset diabetes and late onset diabetes. Juvenile onset diabetes is less common In India (it is about 2%) late onset diabetes is increasing exponentially in India particularly in retired sports persons .Here Hypothalamus which is master of the brain further affects pituitary gland. due to which secretion of several neuro hormones in the blood gets depleted. The hypothalamus links the nervous system to Endocrine glands. Due to hypertension high blood pressure is caused which further causes stress. Hence it is a feedback system Stress causes changes in secretion of certain neural hormones which further



causes abnormal secretion of certain endocrine and other hormones which result in high level of blood sugar in retired sports persons.

### **Arthritis:**

Osteoarthritis of knee joint is common problem among the old aged sports persons. The knee is the largest joint in the body, and has the function of supporting the entire body weight. The degenerative changes occur in knee joint due to obesity or to imbalance of the parathyroid glands in the neck ,other factors involving in knee joint pain, including mental and emotional stress and faulty lifestyle ,diet and lack of physical exercises.

### **What is a Yoga?**

*Yoga* is an ancient system of exacting spiritual discipline for the body, mind and spirit considered as an integrated and inseparable unit. The word *Yoga* used in variety of senses. It is often used in the sense of yoking. In the Upanisads and the Bhagavad-Gita, the Soul in its worldly and is estranged from the supreme soul. The word “*Yoga*” is derived from Sanskrit root “yuj” means ‘union’. In the six chapter of the Bhagavad-Gita, Lord Krishna explains to Arujana the meaning of *Yoga* as a deliverance from contact with pain and sorrow. It is said , when his mind, intellect and self (*ahamkara*) are under control, freed from restless desire ,so that they rest in the Sprit within, a man become a *yukta*, one in communication with God .

The system of *Yoga* enunciated by Patanjali consists of eight components, *yama*, *niyama*, *asana*, *Pranayama*, *pratyahara*, *dharana*, *dhyana* and *samadhi*. The first five components relate more to the body,they prepare the body for the next three components which relate more to the mind in this connection today *Yoga* is a holistic lifestyle management not only for management of psychosomatic disorders but also for prevention of diseases, preservation and promotion of health. This oldest science has been got recognition from World Health Organization (W.H.O .report-T.R.S.646, 1980)

### **Aims of Yoga:**

The practice of *Yoga* aims at overcoming all physical problems of the body. *Yoga* teaches that the goal of every individual’s life is to take the inner journey to the soul. *Yoga* offers both the goal and the means to reach it.



## Types of Yoga:

*Raja Yoga, Hatha Yoga, Mantra Yoga,  
Bhakti Yoga, Karma Yoga, Gnani Yoga  
and KundaliniYoga .*

### Raja Yoga:

The term *Raja- Yoga* derived from *Raja* means ‘best’ or ‘royal’ or ‘highest’ because Bhagwan Sri Krishna through his gospel “Bhagavad-Gita” taught this *Yoga vidya* to Arjuna in the *Kuruksheetra* battlefield. *Raja Yoga* prescribes a psychological approach, based on a practical system of concentration and control of the mind. Right conduct, a healthy body and steady posture, breath regulation, and withdrawal of the senses are recommended to achieve this *Yoga*.

### Bhakti Yoga:

The word “*Bhakti*” is derived from the Sanskrit root ‘*Bhaja*’ and ‘*Bhaja*’ means to be attached to God always. *Bhakti Yoga* is the *Yoga* of love, faith, trust, devotion and complete surrender to the will of God. A *bhakta* shows intense faith and love for God. This faith is generally in the God or supreme consciousness in any of the forms. It may be Lord Krishna, Christ, Mohammed, Buddha etc., It may be body as well as the mind, but also gives mental satisfaction.

### KarmaYoga:

*Karma* is derived from Sanskrit word ‘*Kri*’, to do this word also means the effect of actions. “*Karma Yoga*” – the *Yoga* of action of the work. Main principle of this *Yoga* is “The Secret of Work,” every human being is constituted of *Asanas*, desires and actions. A human is bound to act. But is free to choose the type of action he executes. *Karma Yoga* provides the course of right action leading one towards spiritual evolution. *Karma Yoga*, the path of action envisages an ideal in life. This is what is said by Lord Krishna in Bhagavadgeeta as:

“*Yogah Karmasu Kausalam*”

### Gnani Yoga:

*Gnani Yoga* is known as the “*Yoga of Wisdom*.” The word, “*Gnani*,” is derived from the Sanskrit root – word “*Gna*,” meaning “to know instead of *Gnani*,” often used “*Jnana*,” “*Gnyana*,” *Gnani Yoga* is the path to which student, philosophers’



men and women of the intellectual temperament – are attracted. Those who are attracted<sup>13</sup> by metaphysical reasoning and speculation, subtle intellectual research, philosophy, science, and similar lines of mental effort, turn naturally to “*Gnani Yoga*” as it holds out to them a pleasant and agreeable path to that which is dear to their heart. Through *Gnani Yoga* self – realization is attained by means of knowledge. The first stage is *viveka*, discernment of the real from the unreal; the second is *vairagya*, indifference to the knowledge of the world, its sorrows and joys. The third stage is release *mukti*.<sup>8</sup> (Yoga Ramacharaka, Yogi Philosophy and Oriental Occultism, p.125.)

### ***Kundalini Yoga* :**

In Sanskrit *kundal* means a coil. The word ‘*kundalin*’ actually comes from the word *Kunda*. *Kundalini Yoga* means a coil, this is a part of the tantric tradition. *Kundalini* is the name of a sleeping dormant potential force in the human organism and it is situated at the root of the spinal column. In the masculine body it is in the perineum, between the urinary and excretory organs. In the female body its location is at the root of the uterus, in the cervix. This centre is known as *mooladhara chakre* and it is actually a physical structure. It is a small gland which can even take out and press. How even *Kundalini* is a dormant energy and even if you press it, it will not explode like a bomb.<sup>9</sup>

**(Swami Satyananda Saraswati, Kundalini Tantra P-3)**

### ***Mantra*:**

First individual should be learn a suitable *Mantra* from a guru who knows *Yoga* and *tantra*. The *Mantra* must be chanted loudly, softly in million and billions of times, it permeates every part of brain and purifies whole physical, mental and emotional body. In this method the mind, the emotions and the whole personality are cleansed of all the dirt, complexes and the patterns of behavior that cause pain and fearing.<sup>10</sup>

### **Yogic management:**

### **Yogic diet:**

What we eat has a huge influence not only over our physical well being but also over our thoughts, and ultimately, our emotional and spiritual wellbeing. The *yogis* of ancient times knew this and many classical yogic texts, such as the *Hatha Yoga Pradipika*, contain advice on a yogic diet, Diet should be light avoiding meat, excessive



protein, oil and excessive spices. These should be replaced by whole grains, fruits and fresh vegetables. This will well reduce all health related problems in old aged sports persons .Meal times should be regular, and the avoidance of eating between meals should become a rule of life. Over eating must be avoided, as it undoubtedly strains the heart. The evening meal should be taken before 7p.m.These rules ensure that the digestive organs are not continually overtaxed, and liberate energy from digestion into healing.

### **Yogic diet chart of Old aged sports persons as follow:**

#### **Morning-**

- On rising take 1 to 2 glasses of luke warm water with limeon & honey.
- 8:30-9:30 A.M : 1glass of milk with honey +germinated sprouts  
1bowl .
- Lunch: 11:00-12:30 A.M :100-150 gm of cooked rice or 2 to3 phulkas +1 bowl steamed vegetable curry(both leafy & vegetable)+salad 1bowl
- Evening:4p.m Seasonal fruit or coconut water.
- Dinner: 7:00p.m 2-3 varieties of fruits and 1bowl of steamed vegetable curry+1bowl of salad.

**Note :** To drink 4-5 liters of water per day .

#### **Yoga techniques :**

**Asanas :** *Asanas* are non-violent and provide a gentle stretching that acts to lubricate the joints, muscle, ligaments, tendons and other parts of the body. *Asanas* help to tone the nervous system, improve circulation, release tension, and improve the general health of retired sports persons. These are as follow.

Practice	Rounds	Minutes
Duration 1 hour		
<i>Padanguli naman &amp; Goolf naman</i>	10 each way	2
<i>Janunaman</i>	10 each way	3
<i>Greeva sanchalana.</i>	10 each way	3
<i>Supta pawanmuktasana</i>	10each leg	3
<i>Supta udarakashanasana</i>	10each leg	3
<i>Rajjukarshanasana</i>	10each hand	3



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<i>Naukasana</i>	20 rounds	4
<i>Bhujangasan</i>	10 rounds	2
<i>Shalabhasana</i>	10each leg	2
<i>Shavasana</i>		5

### **Pranayama:**

*Pranayama* means a pause in the movement of breath(*prana*,breath;*aya na*, pause).This procedures to purify different *nadis* through which *prana* flow. Prnayama is an exact science. It is the fourth *Anga* or limb of *Ashtanga Yoga*. “*Tasmin Sati Svasa prasvasayorgativicchedah Pranayamah*”- Regulation of breath or the control of *Prana* is the stoppage of inhalation and exhalation .By practice of improve the vital capacity of lungs,the purification of the *Nadis*,the brightening of the gastric fire, hearing distinctly of the spiritual sounds and good health result.

Practice	Rounds	Minutes
Duration 20 Minutes		
Abdominal breathing		1
Thoracic breathing		1
Clavicular breathing		1
Nadi shodhana		4
Sheetali &Seetkari		3
Bhastrika	10 each nostril	4
Ujjayi Pranayama		2
Bhramari Pranayama		4

### **Meditation:**

Meditation is generally understood as deep concentration on any object. Meditation implies health, both physical and mental. It acts a holistic a whole, treatment for disease .Blood flow increases during Meditation. The heart and respiration rate is slow down .The reduced metabolic rate is due to control over the involuntary nervous system which develops through meditation.

### **Types of Meditations:**

1. Active Meditation
2. Passive Meditation



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### **Active Meditation:**

It occurs when one performs one's daily activities, when one walks, eats and so on. This is the aim of *Yoga*

### **Passive Meditation:**

Passive meditation is the aim of sitting in one pose and performing a meditational practice. Its aim is to still the ever restless and wandering mind and make it one pointed.

Practice daily 10 minute

### **Kriyas:**

The physical cleansing process to remove waste in the body, particularly to cleaning of the alimentary tract, blood vessels and other passages. These cleansing processes are six in number (1) *Dhauti* (2) *Basti* (3) *Neti*, (4) *Tratak*, (5) *Nauli* and (6) *Kapalabhati*.

### **Jala Neti:**

Jala Neti is a process of cleaning the nasal passage with salt water, and is essential in allowing free breathing.

### **Kunjal Kriya:**

Kunjal Kriya is a technique for cleaning the digestive tract from the stomach to the mouth. It involves drinking warm water, salty water until the stomach is full and then voluntarily expelling it through the mouth.

### **Conclusion:**

*Yoga* is a way of life and living which demands conscious effort on the part of practitioner. This conscious effort brings changes in the whole personality, attitude, lifestyle is in fact a way of transformation of life, mind and body. Studies conducted around the globe suggest positive changes at physiological, biochemical, psychological levels that are bound to bring an effective management of hypertension, diabetes, obesity, osteoarthritis etc, disorders. But it is sure that *Yoga* will help old aged sports persons both preventive as well as curative aspect.



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## Precognition in Dreams: A Philosophical Discourse

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### The Concept of Relative Validity

The biggest question in the existence of Human life, comes in the form of curiosity to know everything about everything including himself and a person tries to explore many ways to find out the answer. In this course, different sciences and philosophies originated in different parts of the world. A major problem arises in getting the knowledge about anything is the participation of the observer and the limitation of his senses, energy or instruments. In the words of Einstein: we can calculate the information about anything but always in relation to the other (Relativity Theory). This means, all the knowledge is Relative in its reality. The same exposition is laid by Indian Philosophical Systems. Each System of Indian Philosophy has tried to explain the Ultimate and The World we perceive by our senses & has stabilised their fundamental principles which are relative to The Ultimate. Let us take an example to make it more clear. Vedanta Philosophy states that the world, we perceive becomes illusory when we get the Direct Perception of *Brahman: The Ultimate*. In the same manner, when a person sees a dream, he remains entangled tightly into it until he comes in the waking state. Once he comes into the waking state, all the phenomena of dream vanish or disappear. Thus his dream also becomes illusory to him after coming into the waking state. So here it is very well clear that the Reality for a person is always Relative. The experiences of the awakened state are Real in relation to the State of Dream. Similarly, The Experience of the Ultimate or Pure Consciousness is Real in relation to the Wakened State. Thus the question of falseness of something always depends upon the Relativity. We always comprehend something as true or false in relation to some standards. This kind of Falseness or truthfulness gives rise to many questions in the realm of philosophy as well as in our daily life. What is true; what is false, how do we know? From the childhood, a child is always taught to do the things in a right way and to avoid the wrong way. But how this can be known? Who will tell the standards of saying something as right or wrong? Who...?

If we all are human beings, we all have a very narrow range of our senses and instruments. So we can't perceive those best standards relative to which one can comprehend all the Realities and Illusions. This problem has been sorted out in the philosophy of yoga, in which Yogic seers have expounded the standards and have told the way to experience themselves these standards for getting the answer to the curiosity about oneself. Yogic seers have told the mechanics of yoga practice to the Human Beings through which one can lead oneself to the experience of Ultimate: The Source of all the Standards of Knowledge. It is a very important aspect that yogic seers are also the human beings, but they can percept the source of all the standards i.e. The Pure Consciousness or The Ultimate, How...? This is, because they have practiced the Yoga, which is a ladder to reach towards the pure consciousness. Yogic seers do not formulate these standards but they experience and explore them because these standards are Natural Standards or *the Standards of the Nature or can be said 'Universal Laws of Nature'* that creates an order and harmony in the universe. If a person can experience these Standards, he will surely understand the other entire phenomenon which are subsidiary or secondary to them or can be said as Relative. Advaita Vedanta declares 'Sat' as something that is present in all the times (past, present & future) and space. This means Time & Space are no boundary or sheath for whose existence, can be called as 'Sat' (Existent). Acc. to this concept only Brahman



is 'Sat' because it is present in all time and space. Rest of the whole creation is 'Asat' because it remains present sometime and in some space but in another time and space it disappears. Thus the Ultimate is the only Natural Standard (Sat: existent) relative to which all other knowable things are 'Asat' (Non-existent).

### The Concept of Real Validity

Among all the Indian Philosophical Systems, Kashmiri Shaiva Philosophy is the only philosophy that states the world as Real as the nature of the Ultimate. It is only school which advocates that there is no need of any type of relativity for getting the knowledge about real or unreal. It stabilizes the concept of Real Validity in the form of its 36-th Principle Element as the Ultimate, known as Param Shiva or Amūṭara, which is both in nature: *Prakasha* (self-illuminating) & *Vācasha* (manifesting and illuminating others). It emphasizes on the fact that if the universe is the manifested form of that principle element or the ultimate, then how can it be Unreal? The Universe is the play of Param Shiva who is Real, so its play is also as Real as it is. Thus the state of dream or the state of waking is also as real as The Ultimate or Param Shiva. These stages are the manifestation of that Amūṭara which in its original form is of the nature of light. From a pure truth, a false manifestation cannot occur. So the manifested world is also as real as Param Shiva. This philosophy explains the limits of Human Consciousness through the continuous bonds of *Panchakandhuka* of *Maya* and explains that there is nothing which is devoid of consciousness; the only determining fact is the strength of the bond. In the non-living things this strength of the bond becomes maximum, so their capacities of dearship, mobility, willingness and knowability becomes least or almost null. This philosophy is maximally rich in its principles because it leaves no space to prove something very false and a person never hangs out between the conflict of right and wrong, true and false etc. This leads to have a very happy and satisfactory life without conflicts and also shows the way to recognise oneself through the path of yoga. This philosophy shows how Human Consciousness comes to know about its all pervasiveness (*sarvakartṛitva, sarvagrāhita, jnanatṛipatitva, nityatva & svatantraya*) by overcoming the bonds of limited strength. This process is known as *Pratyabhigya* (recognising oneself). As this concept of *PRATYABHIGYA* does not have anything like *MITHYA* so it does not need any *Pramana* for analysis. As it has been stated that nobody can step away his own shadow through his own feet. In the same way Shiva can't be attained through any *Pravama*.

*"svapsada swashirashobayam padullanghitanimitte,  
Padoddeshe shiro na svatatathayam bairavari kala."*

When Individual soul knows its authorship of five-fold act (*Sṛṣṭi, sthiti, Sankha, Anugraha and Tirobhava*) of creation, maintenance, dissolution, concealment & act of grace then the delusions generated by its own powers get destroyed. These five-fold acts (*Panchakryta*) are the nature (*swabhava*) of both *Shiva-The Absolute (Ultimate) and Parasha or Samsara or Jiva*. This becomes the cause through which the individual soul recognises its absolute nature of *Shiva*. The root cause of Recognition must be something that is beyond the binding categories of TIME, PLACE and PHASE for this Recognition Process. It is easy to understand that things that change with time etc, can't become a cause of recognition. NATURE (*SWABHAV*) is the only thing that does not change with time, place and phase. So individual soul recognises its real absolute form through the Universal Nature or *Swabhav of five-fold act (Panchakryta)* of individual and Absolute.

## Dreams: An Introduction

*Dreams are successions of images, ideas, emotions, and sensations that occur involuntarily in the mind during certain stages of sleep.*

The scientific study of dreams is called *Onirology*. Dreams mainly occur in the rapid-eye movement (REM) stage of sleep—when brain activity is high and resembles that of being awake. REM sleep is revealed by continuous movements of the eyes during sleep. At times, dreams may occur during other stages of sleep. However, these dreams tend to be much less vivid or memorable. Dreams can last for a few seconds, or as long as twenty minutes. People are more likely to remember the dream if they are awakened during the REM phase. The average person has about 3 to 5 dreams per night, but some may have up to 7 dreams in one night. The dreams tend to last longer as the night progresses. During a full 8-hour night sleep, two hours of it is spent dreaming. Dreaming takes place in different ways during four of the basic sleep stages. Dreams are not always composed of only images, since it is known that blind people and people who cannot visualize while awake also dream. Their dreams are made up of mostly auditory and sensory experiences. Dreaming can occur in any stage of sleep. Most dreaming occurs during REM sleep.

‘प्रसुप्तास्य ज्ञानं स्वप्नः।’

माण्डूक्योपनिषद् के अनुसार-

‘सर्वम् हि एतत् ब्रह्म अयमात्मा ब्रह्म  
सोऽयमात्मा अनुभवात् ॥२॥

जागरितस्थानो बहिष्पन्नः सप्ताह्म एकोनविंशतिमुखः स्थूलभुववेश्वरः प्रथमः पादः ॥३॥  
स्वप्नप्रस्थानोऽनृतः प्रजः सप्ताह्म एकोनविंशतिमुखः प्रविचिन्तभुक् तैजसो द्वितीयः पादः ॥४॥  
यत् सुप्तो न कञ्चन कामं कामयते न कञ्चन स्वप्नं पश्यति तत्सुषुप्तम् ।  
सुषुप्तस्थान एकीभूतः प्रजानां एवानन्दमयो इयानन्दभुक् वैतोमुखः प्राज्ञस्तृतीयः पादः ॥५॥’

## Precognition:

Precognition and Retrocognition (*Knowledge Of The Past And Future*) is one of the many *siddhis* (spiritual powers) described in the *Vibhuti Pada* of the *Yoga Sutra* of *Patanjali*. Precognition is defined as the ability to gain knowledge of something in advance of its occurrence or manifestation while retrocognition is the knowledge of something that already happened in the near or distant past. People who claim to have this power report that seeing the future or the distant past is like watching a movie with their mind's eye.

‘परिणामव्यसंयमादतीतानागतज्ञानम् ॥१६॥’ (विभूतिपादः : पातञ्जलयोगदर्शनम्)

धर्मज्ञापावस्यापरिणामेषु संयमाद्बोधिनां भवत्यतीतानागतज्ञानम्। धारणाध्यानसमाधि व्यसंकाव संयम उक्तः।

तेन परिणामव्यसंयमात्क्रियमाणमतीतानागतज्ञानं तेभु सम्पादयति ॥१६॥

#### Attainment of Knowledge of the Past and Future-

Precognition and Retrocognition can be acquired by performing *Sanyama Meditation on the Third Eye Chakra*. The reason for this is that the third eye chakra or "Ajna" represents the superior mental consciousness that gives you direct perception of the subtle aspects of manifestation. It is also the center of imagination, concentration, and intuition.

#### Acc. to Shadanga Yoga (Vigyan Bhairav):

"Attention between eyebrows, let mind be before thought. Let form fill with breath essence to the top of the head and there shower as light." – 5<sup>th</sup> Sutra (*Vigyan Bhairav: Osho, The Book of Secrets*)

"When in worldly activity, keep attention between two breaths, and so practicing, in a few days be born anew." – 6<sup>th</sup> Sutra (*Vigyan Bhairav: Osho, The Book of Secrets*)

"With intangible breath in center of forehead, as this reaches heart at the moment of sleep, have direction over dreams and over death itself." – 7<sup>th</sup> Sutra (*Vigyan Bhairav: Osho, The Book of Secrets*)

In the third eye, imagination and actualization are not two things. Imagination is the fact. Imagine, and it is so. There is NO gap between dream and reality. That is why *Shankara* has said that this whole world is nothing but the dream of the divine. This is because the divine is centered in the third eye – always, eternally – so whatsoever the divine dreams becomes real. If you are also centered in the third eye, whatsoever you dream will become real. *Scripture* came to *Buddha*. He meditated deeply, then many things, many visions started coming, as it happens with anyone who goes into deep meditation. He began to see heavens, he began to see hells, he began to see angels, gods, demons. And they were actual, so real that he came running to *Buddha* to tell him that such and such a vision had come to him. But *Buddha* said, "It is nothing – just dreams. Just dreams!" But *Scripture* said, "They are so real. How can I say that they are dreams? When I see a flower in my vision it is more real than any flower in the world. The fragrance is there; I can touch it. When I see you," he said to *Buddha*, "I do not see you as real. That flower is more real than your being here just before me, so how can I differentiate between what is real and what is dream?" *Buddha* said, "Now that you are centered in the third eye, dream and reality are one. Whatsoever you are dreaming will be real and vice versa also." So when *Shankara* says that this whole world is just MAYA, a dream of the divine, it is not a theoretical proposition; it is not a philosophical statement, it is, rather, the inner experience of one who is focused in the third eye<sup>2</sup>.

#### Precognition In Dreams:

A precognitive dream is a type of dream that comes true as a future event. F.W.H. Meyers defined pre-cognition as knowledge of impending events super normally acquired. G.N.M. Tyrrell narrowed the field of precognition in his definition: "If knowledge is acquired of an event which has not happened, but which later happens as foretold; and if this knowledge could not have been obtained by logical inference from present facts, and could not result from an intention to fulfil the prediction, and is of too precise or detailed a character for its fulfilment to be attributed to chance, then the case is said to be one of precognition. Precognition thus means the direct perception of events which have not yet happened." Some persons have the capability to directly perceive the events in the Dreams. Western Scholars have done their studies on the precognitive capability of dreams but they reject many cases by saying that the description as told by a person about what he has seen in dream do not



exactly match with the real event.

#### Types of Precognitive Dreams

1. Symbolic Precognitive Dream.
2. Literal Precognitive Dream.
3. 3rd Person Precognitive Dream.
4. Lucid Precognitive Dream.

#### Symbolic Precognitive Dream

Dream symbolism abstracts the precognitive information and generally is not realized up until the actual event. This can be a very difficult type of dream to identify as a type of precognitive dream, however certain symbols in the dream can match or greatly exaggerate the future event when it actualizes. The accuracy and quality of this type of dream should be considered of a low grade type of precognition.

#### Literal Precognitive Dream

From a first-person view, this type of precognitive dream in literal detail. What you sense, think and feel in the dream can actualize in the future-tense when the dream actualizes.

#### 3rd Person Precognitive Dream

From a third-person vantage point, this type of precognitive dream can take on both symbolic and literal similarities however does not suggest that the information being observed will occur from a first-person point of view.

#### Lucid Precognitive Dream

A lucid dream is a dream where a person is awake and realizes that they are dreaming. This alert and awakened focus state also can emerge within the phenomena of precognitive dreams. Robert Waggoner explains there are two types of lucid precognitive dreams: Active and Ambient. In an active lucid precognitive dream, the dreamer actively tries to engage the precognitive dream, where in an ambient lucid dream the dreamer passively observes the dream remaining within the usual dream flow.

### Vedic Discourse

#### Dreams in Atharv-veda

In atharv veda there are mantras to avoid the effect of bad dreams. There are prayers done to please *Agni Dev* and *Vasavi Dev* to save from the effects of bad dreams. Those mantras mention that when our *Manas* is of bad thoughts, then we become entangle in the web of bad dreams, or when we do some sinful activities of harshness from very close or from remote whether in the waking state or in the sleeping state, then we get the bad dreams and we have to face the bad consequences of them. So in the mantra there is prayer to devas to avoid the ill effects of those bad dreams through *Angirasa Mantras*. These mantras explain that dream is neither alive nor dead, it takes birth from the *vasarava* of wakened states which reside in the subconscious mind. They depict *Vasuvata* as the mother and *Fava* as the father of dreams and *Araru* as the name of bom.



child that is Dream. These dreams come from the loka of yama who is the deity of *Ayamohasana*. The representatives of yama – *Chitragupta* reside secretly and auspiciously in the sub-conscious mind. The whole material of dream is rooted by *Ashita* (the deity) on the order of *Varuna* in *Trit: Man, Budehi & Chitta*. Dreams are also said as the Hands of *Yama*.

स्वप्न व्यापक संदर्भों में प्रयुक्त होने वाला शब्द है। कोशग्रंथों में शीले समय मानसिक रूप से दिखने वाले दृश्यों के अतिरिक्त मानसिक कल्पनाएँ दर्शन आदि संदर्भों में भी इस शब्द का प्रयोग हुआ है। सत्पुरुष भविष्य के लिए जो श्रेष्ठ जानना जाना बुझते हैं, उन्हें भी स्वप्न कहा जाता है। ऐसे स्वप्नों को साकार करना, मौर्य और सौभाग्य का विषय माना जाता है। विद्याला ने भी सृष्टि रचना का स्वप्न संज्ञाया था, ऐसा इस सूक्त के ऋषि का मत है।

यमस्य लोकादध्याः कभूविध प्रमदा मर्त्यान् व युनिषि धीरः ।

एककिना सरथं यासि विद्वान्त्स्वपनं शिमानी असुरस्य योनीं ॥१॥ (अथर्ववेद)

If dreams are false and they are of no use then what can be the purpose to pray to avoid the ill effects of them. It is a point worthy to note that the persons might be affected by the dreams, so in *Atharv-veda*<sup>8</sup> mantras prayer is done to attain good dreams and to avoid the bad dreams. Thus Dreams can't be a subject of just negotiation.

## Precognition In Dreams: Literary Background

In Sanskrit Literature, *Purana*, *Ramayana*, *Mahabharata* and other literary dramas constitute the references of precognition in dreams. In *Agni purana*<sup>9</sup>, *Devi Parvati* suggests *Usha* to dream about her beloved with whom her marriage will be finalised and the same occurs. In *Agni Purana*<sup>9</sup>, the time of the ripening of the fruit of dream has been mentioned. In *Bhavishya Purana*<sup>9</sup>, the fruit of dreams has been described. In *Swapnavasavadatta*<sup>7</sup>, King *Udaya* dreams of his beloved wife *Vasavadatta* who was sleeping near to him on the same bed unknowingly. Thus he realizes that she is alive. In *Ramayana*<sup>8</sup> *Rakshasi Trijata* sees that a powerful monkey will destroy *Lanka* and all the *Rakshasa* family will go to end along with *Ravana* and his relatives. She gets the looks of coming *Rama* and *Lakshmana* along with *Sita* in her dream. Her dream converts into reality afterwards and well known to everyone today.

## Precognition In Dreams: Philosophical Backbone

The phenomenon of Pre-cognition has been supported by many references. One such event has been mentioned in '*Shivasutrasamashini*' of '*Kabirajia*' where *Param Shiva* himself ordered *Vasugupta* in his dream to discover the secret hidden under the rock and to illuminate it among the people. After coming back from his dream state when *Vasugupta* investigated the rock, he found '*Shivasutras*' beneath the big rocks<sup>7</sup>. In '*Spandasarvasva*'<sup>10</sup> it has been mentioned that after attaining yogic heights, yogi gets the knowledge of past, present and future events in all of the three states i.e. *jagrata*, *nashupti* and *swapna*<sup>11</sup> (dream).

Shaiva philosophy describes the Dream (*Svapna*) as-

**‘स्वप्नो विकल्पः ।’ (१.९) शिवसूत्र**  
अर्थात् मन की संकल्प-विकल्पात्मक अवस्था स्वप्नावस्था है ।

**‘विद्यासंहारे तदुत्थस्वप्नदर्शनम् ।’ (२.१०) शिवसूत्र**  
अर्थात् विद्या के समाधि में लय हो जाने पर उससे अलौकिक स्वप्न एवं ज्योतिदर्शन होते हैं ।

**‘जाग्रत्स्वप्नसुषुप्तिभेदे तुर्या ओगसम्भवः ।’ (१.७) शिवसूत्र**  
अर्थात् समाधि से व्युत्थानावस्था में आने पर जाग्रत, स्वप्न एवं सुषुप्ति में भी तुर्यावस्था का आनन्द मिलता है ।

Acc. to Buddhist<sup>12</sup> Philosophy-

Dream is not an illusion, it is far different from illusion because in illusion there is some point of substratum upon which the false knowledge of something is dependent but in dreams such substratum are themselves not present. Illusion becomes known as false when the real object comes to our knowledge but in dream there is nothing which can be treated as real or false. In dream *vijyan* takes the shape of objects and their cognition is also the work of *vijyan*. *Avajya* is the sheath that covers them to be taken place within the range of time and space. The whole universe is also in the same sense is a type of dream. Thus due to the actions of *avajya* the two phases are in existence. The only difference is in the time period and intensity of the exposure.

Acc. to Vedanta<sup>13</sup> Philosophy-

The state of dream is true until we don't come into the state of waking. The same is with the wakened state. It is also true until we don't understand about the Ultimate. Thus relatively both the states are true or false (illusion). So the stand of dream is also an important phenomenon.

## CONCLUSION

Dreams have their own significance and they are a type of knowledge process. Their presence is a necessary and non detachable process in all the human beings and perhaps in other one's also. If dreams are false then the whole wakened state is also as false as the dreams because in relation to the ultimate reality both of these stages can't be said as true or real. Precognition in Dreams is a unique procedure to have vision in future and it is not a miracle. It is real and scientific. Philosophy supports it and literature refers it. In Indian Philosophical Discourse *Yogasāstra* have the hidden secrets about the precognitive capability of dreams. The persons who have precognitive dreams are the special ones and their life style is unique in accordance of the aspects of yoga. Their capability is not their disease or any type of abnormality rather it is the boon of the pure consciousness who relates itself to the reflected consciousness in advance time and space. This kind of relation and communication is natural because the consciousness is the energy and energy is able to interact through different means within the time & space or beyond the time & space. Precognition in dreams is one of those means of communication.

*"Consciousness is the master of all. It is a kind of light that illuminates the three stages in the life of the whole universe: Wakened, Dreaming and Deep sleep. The fourth stage is the transcendental reality or Turija which is nothing but the pure consciousness itself in the term of philosophical discourse. Dreams are the images of reflected consciousness within the bonds of Maya. Precognition in dreams is the play of superimposition of the images of reflected consciousness in the sheath of Maya. Consciousness illuminates all and creates all. They are as real as the reality itself."*

## REFERENCE-

### स्वप्न की सत्यता

छान्दोग्योपनिषद् में एक रोचक आडम्बर आया है, जिसमें प्रजापति और इन्द्र के सम्वाद द्वारा अज्ञान चैतन्य के विविध स्तरों का विवेचन उपलब्ध है। इसमें आत्म चैतन्य के उल्लेखित अक्षुब्ध चार स्तर निर्दिष्ट हैं— जाग्रत चैतन्य, स्वप्न चैतन्य, सुषुप्ति चैतन्य, तुरीय चैतन्य। स्वप्न भ्रम नहीं अतित एक सत्य है, क्योंकि भ्रम में वस्तु आदि के रूप में किसी अधिष्ठान का होना आवश्यक है किन्तु स्वप्न में ऐसा कोई अधिष्ठान नहीं होता। स्वप्न में देश और काल नियम रहते हैं क्योंकि स्वप्न विशिष्ट पदार्थ देखविशेष और कालविशेष में देखे जाते हैं, सब स्वप्नों में और सब समयों में नहीं। यद्यपि स्वप्न व्यक्तित्वगत होते हैं, तथापि वह असम्भव नहीं है कि कहीं व्यक्ति एक साथ एक ही स्वप्न देखे; अतः सन्तान्तनियम भी स्वप्न में सिद्ध हो सकता है। कृत्स्न क्रिया तो स्वप्न में सिद्ध है ही। स्वप्न के पानी में प्यास बुझाने की क्षमता है, स्वप्न के भोजन में भी स्वप्न में तृप्ति देने का सामर्थ्य है। इतना ही नहीं, स्वप्न दृष्ट सिंह की गजना सीढ़ उड़ाकर भय और रोमांच आदि उत्पन्न कर देती है जिसका प्रभाव जागते पर भी कुछ समय तक अनुभव किया जाता है। स्वप्न में, वाह्य अर्थ और इन्द्रिय सम्बन्धन के बिना ही, अर्थात् मनोविज्ञान उपपन्न होता है। जाग्रत में, वाह्य अर्थ के बिना ही अर्थात् इन्द्रियविज्ञान उपपन्न होता है और उससे तद्वत् प्रतीत होने वाला मनोविज्ञान। स्वप्न और जाग्रत दोनों में अर्थोत्तर विज्ञान का अनुभव होता है, किसी पदार्थ का नहीं। इस रूप में दोनों में समानता है। स्वप्न पदार्थ शीघ्र, पुंघने और अल्पकालिक और व्यक्तित्वगत होते हैं, तथा जाग्रत के पदार्थों का अनुभव लीह, स्पष्ट और अधिक समय तक टिकने वाला और समष्टित्व होता है। स्वप्न में व्यक्तित्वगत निष्पत्त मनोविज्ञान अर्थोत्तर लेकर प्रतीत होता है; जाग्रत में समष्टित्वगत अर्थोत्तरविज्ञान जाग्रतिक पदार्थों का उत्तर लेकर प्रतीत होता है। जिस प्रकार घातमायिक सत्य का ज्ञान होने पर व्यक्ति को व्यावहारिक जगत मिथ्य प्रतीत होने लगता है, उसी प्रकार जब व्यक्ति जाग्रत अवस्था में आता है तो उसके स्वप्न का बाधा हो जाता है। यहाँ यह महत्त्वपूर्ण है कि स्वप्न दृष्टा को स्वप्नगत वस्तुओं का अभाव प्रतीत नहीं होता, उनके लिए वे सब सत्य ही होते हैं।

(Bhartiya Darshan: Alochana aur Anushekan by C.D. Sharma, Pub: Motilal Banarasidas, Varanasi)

2. Vignyan Bhairav Tantra, Volume 1, by Osho: The Book of Secrets, Pub- St. Martin's Griffin, 1998 (page no. 64)

3. परोऽपेक्षि मनस्थाप किमशस्तानि शंससि ।

परेहि न त्वा कामये वृक्षां वनानि सं पर गृहेषु गोषु मे मनः ॥१॥ (१४२८)

अवशस्ता निःशसा यत् पराशसोपारिम जायतो यत् स्वपन्तः ।

अग्निविकल्पान्यप दुष्कृतान्यजुष्टान्यारे अस्मद् दधातु ॥२॥ (१४२९)

यदिन्द्र ब्रह्मणस्पतेऽपि मृषा चरामसि ।

प्रचेता न अडिरसौ दुरितात् पाल्वंहसः ॥३॥ (१४३०)

यो न जीवोऽसि न मृतो देवानामृतवर्माऽसि स्वप्न ।

वरुणानी ते मज्ञा यतः पितारर्कामासि ॥१॥ (१४३१)

विद्यन् ते स्वप्न जनिबं देवजानीनां पुरोऽसि यतस्य करणः ।

अन्तकोऽसि मृत्युरसि। तं त्वा स्वप्न तथा सं विद्यन् स नः स्वप्न दुष्पन्थात् पाहि ॥२॥ (१४३२)

यथा कक्षां यथा शकं यथार्णं संजयसि ।

एवा दुष्पन्थं सर्वं दृषिते सं जयामसि ॥३॥ (१४३३) - (अथर्ववेद)

4. एक दिन वैशाख पर्वत पर भगवती चार्वती भगवान् शंकर के साथ झींझ कर रही थीं। उन्हें देखकर उषा के मन में भी पति की अभिलाषा जाग्रत हुई। चार्वती जी ने उनके मनोभावों को समझकर कहा- 'वैशाख मास की द्वादशी तिथि को रात के समय रात के समय स्वप्न में जिस पुरुष का तुम्हें



दर्शन होया, वही तुम्हारा प्रति होमा।" पायेली जी की बात सुनकर उषा बहुत मसन्न हुई। उलट गिरि को उसा यह अपने घर में सो गयी, तो उसे वैसा ही स्वप्न दिखाई दिया। उषा की एक सखि चित्रसेखा थी। वह बाग्यासुर के मन्त्री कुम्भसागर की कन्या थी। उसके अनाथ हुए पितापद से उषा ने अनेकद को पहचाना कि वे ही स्वप्न में उससे मिले थे। - अश्विन कुराण (पृ. २३)

5. रात के पहले सहर में देखे हुए स्वप्न एक वर्ष तक कल देने वाले होते हैं, दूसरे सहर में देखे हुए स्वप्न छः महीने में, तीसरे सहर में देखे हुए स्वप्न तीन महीने में, चौथे सहर में देखे हुए स्वप्न पन्द्रह दिनों में और अस्फोदय की वेला में देखे हुए स्वप्न दस ही दिनों में अपना कल व्यक्त करते हैं। -अश्विन कुराण ( ११२ अध्याय, पृ. ६२५)

6. "अहम्मा जी योने: वाजयन्तया जी उपकिल सप्तमी में उपवास करके विधिविपुत्रक सूर्यनारायण का पूजन, जप एवं हवन आदि क्रियाएँ सम्पन्नकर रात्रि के समय अनाथ सूर्य का प्रयास करते हुए शयन करता है, तब उसे रात्रि में जो स्वप्न दिखाई देते हैं, उन स्वप्न -कालों का ही अर्थ वर्णन कर रहा है।" - अश्विनकुराण (अध्याय १५, पृ. ५४)

7. King (Talking in his sleep) - O Vasvodatta !  
Vasvodatta (Starting up) Ah! It is my lord and not Pashupati. Has he seen me? If so, the elaborate scheme of the noble Yaugandharayana will come to naught.  
King - O daughter of Avanti king!  
Vasvodatta - Happily my lord is only dreaming. There is no one about. I shall stay a little while and gladden my eyes and my heart  
.....  
King - So then it was only a dream. If that was a dream, how glorious never to wake again; if this be illusion, long may that illusion last. [9]  
Jester - There is a nymph dwelling in this city named Avantisambari. That's what you must have seen, my dear fellow.  
King - No, no, at the end of my dream I awake and see her face; the eyes strangers to collyrium and the long unbraided locks were those of a lady guarding her virtue. [10] Beside, see, comrade, see this arm of mine was closely clasped by the agitated queen. Even now it has not ceased to thrill with joy though it felt her touch only in a dream. [11]

- Bhaskar: The Vision of Vasvodatta (Svagna-Vasvodattam) translated by A.C. Woolner and Lokeshman Sarup; in parentheses Publications, Sanskrit Drama Series, Cambridge, Ontario 1999 (page no 30 to 32).

8. रामायण में किराटा जग की खाली ने अपने स्वप्न में एक काल को समस्त अंश को उखाड़ते हुए और शयन एवं रात्रि कुल का विनाश देखा था, जो बाद में यथावत् सत्य सिद्ध हुआ।

"अंशो ह्यथा मया स्वप्ने पराशरामिरजिता ।

दग्धा रामस्य हृद्रेण वानरेश तदस्मिन्ना ॥३६॥" (सुन्दरकाण्डे सप्तविंश सर्गः, पृ.१०५-११२- श्रीमद्वाल्मीकीयरामायण, नीलहंस, गोरखपुर - ५० वां पुनर्मुद्रण, सम्बत् २०६८)

9. "जगदीश्वर्यादिभिः सिद्धैर्नैस्तिवसनां पुरःस्थैः ।

आकल्पो जीवालोकेऽस्मिन्नात्मात्पवरादिदशाभिः ।

रहस्यसम्बन्धाधीः च मा विन्देद्वैत्यनुपपन्ना ।

सर्वोपमा विवस्वामि सम्बलितक शिवात्मने ॥

सहादेवसिरी स्वप्ने सङ्हरकरसिद्धान्त्ये ।

उचदिवन वसुः श्रीमद्भुमका सम्बन्धोक्तिः ।

दयया स्वयमेवासीद्विश्वो यस्य सङ्करः ।

दैविकं दैविकतां तं वसुभुपां ससु भुमः ॥"

"कदाचित् असी 'द्वैतदर्शनापिवास्तित्तवाये जीवालोके रहस्यसम्बन्धयामा विन्देदि' इत्याशयतः अनुविष्णुशापेण वसुं शिवेन स्वप्ने अनुसुहृक उल्लिख्यपरतिमः कृतः पद्ये 'उत्तर महाभूति सङ्घे शिवात्मने रहस्यं अस्ति ; अतः उचितमेव अनुपपद्येभ्येणु प्रकाशक' इति ।" अर्थात् 'कहीं शैवदर्शन की अद्वैत दृष्टि तुल्य न हो जाए' इस बात की विन्तानुरताय अनुविष्णुशापयामा, कल्पामूर्ति परमेशिव ने वसुभुपा को स्वप्न में अपनी कृपा से उन्मिषित प्रतिम बनाकर यह आदेश दिया कि- 'यहाँ पर्यट की एक बहुत बड़ी शिलालय पर एक अति रहस्यमय वस्तु है। उसे तुम प्राप्त करके अनुपपद्येभ्येणु लोको में प्रकाशित करो ।' स्वप्न एवं निद्रा से जागकर वसुभुपा ने उक्तव अनुसंधान करते हुए एक बहुत बड़ी शिला को अपने करस्पर्शनाय से पलाट कर और अपने स्वप्न को सत्य पाकर 'शिवोचलेश्वरसङ्करस्य' शिवशुद्धी को यहाँ से प्राप्त किया ।

-शैमराज (शिवसुशिवसिरी)

10. Spandasarasvata- karika 33, 34 and 35.

11. "पदत अग्नी देहाग्निमान मे ही अवस्थित, किन्तु नियमित रूप में बोधाभ्यास करने वाले बोधी द्वारा संकल्पानुसंग इन्द्रियके रूप में अभिव्यक्ति मिल जाने पर, उसके बोधी से अत्यन्त तीव्र अभिधानतन्त्रक शक्ति का उदय करके उसके ज्ञात अवस्था में ही उन्हीं पदार्थों का दृष्टान्त करवाता है, जिसको देखने की इच्छा उसके इन्द्रिय में हो। स्वप्नावस्था में ही अवश्य अतिव्यक्तित पदार्थों का साक्षात्कार करवाता है।" - कालसीमिण बौद्धदर्शन एवं स्वप्नव्याख्यान (स्वप्नशास्त्रज्ञात दृष्टिकोटी, चौथम्बक मुद्रासारी प्रकाशन, काठमाण्डौ, पृ.३८६)

12. विज्ञानवाद के अनुसार-

"विज्ञानवाद से स्वप्न को भ्रम से बढकर माना है क्योंकि स्वप्न में विषयता का कोई संशय नहीं रहता। रज्जु सर्प के भ्रम में रज्जु अधिष्ठान के रूप में बनी रहती है, सले ही यह भ्रम में लिप्त न हो; किन्तु स्वप्न में एसा कोई अधिष्ठान नहीं होता। स्वप्न में विज्ञान की अर्थाकार लेकर प्रतीत होने की शक्ति किसी विषय का पदार्थ की अपेक्षा नहीं रखती। भ्रम और स्वप्न में व्यक्ति-विज्ञान की अर्थाकार-प्रतीति की शक्ति सिद्ध होती है। जगत के पदार्थों के विषय में भी वही बात लागू होती है, भेद केवल इतना है कि ये पदार्थ सर्वव्यापी आत्म-विज्ञान की सृष्टि हैं। यह जगत की विघट-भ्रम और समष्टि-स्वप्न है, जिसमें आत्मविज्ञान विविध अर्थाकार लेकर प्रतीत हो रहा है। अर्थाकार-प्रतीति के लिए अर्थ का होना अनिवार्य नहीं, इसके लिए केवल विषयता का विज्ञान आवश्यक है, क्योंकि विषयता की भावना विषयी से जुड़ी है, अतः विषयी-विषय का, बाह्य-बाह्य का वाच्यता- प्रयोग का दृष्टान्त अतदि बाह्य-बाह्य कासना से उत्पन्न होता है और इसका आशय विज्ञान है। यह विषयता का विज्ञान या बाह्यकासना इन्द्रियानुभव-साधने नहीं है। यह मूल अविद्यजन्य है।

(\*Bhartiya Darshan: Alokana aur Anusheelan by C.D. Sharma, Pub: Motilal Banarsidass, Varanasi, page no – 99 to 101)

13. "ब्रह्मात्मैक्य के अपरोक्षानुभव पूर्व सभी जगत्-व्यवहार सत्य है, जिस प्रकार जाग्रतावस्था के पूर्व स्वप्न व्यवहार सत्य है। प्रतिभास और व्यवहार के पदार्थ अपने - अपने स्तर पर अर्थाकारसमर्थ हैं। स्वप्न में सर्पदंष्ट्र व्यक्ति स्वयं को मृतक मान लेता है। स्वप्न जल में स्वप्न की प्यास मजे में बुझती है।

"स्वप्नकालाव्यापामेव ब्रह्मब्रह्मात्मताविज्ञानात् सत्यत्वोपपत्तेः स्वप्नव्यवहारस्यैव वाक् प्रबोधान् ।" - शारीरकशास्त्र

(\*\*Bhartiya Darshan: Alokana aur Anusheelan by C.D. Sharma, Pub: Motilal Banarsidass, Varanasi, page no- 248-249

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## ENVIRONMENT AND POLLUTION

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### INTRODUCTION

Problem of environmental quality are not something NEW; in fast history is filled with bleak examples of environmental degradation, from deforestation by ancient peoples of mountain of horse manure in urban areas in the days before automobile. But today's world is different. For one thing, many people in economically developed countries, having reached high levels of material well being, are beginning to ask questions; what good is great material wealth if it comes at the cost of large-scale disruptions of the ecosystem by which we are nourished? More fundamental, perhaps, is the fact that with contemporary economic, demographic, and technological developments around the world, the associated environmental repercussions are becoming much more widespread and lethal. What once were localized environmental impacts, easily rectified, have now become widespread effects that may very well turn out to be irreversible. Indeed some of our most worrisome concerns today are about global environmental impacts.

It is no wonder, then, that the quality of the natural environment has become a major focus of public concern. As we would expect, people have responded in many ways. Environmental interest groups and advocates have become vocal at every political level, especially in those countries with open political systems. Politicians have taken environmental issues into their agendas; some have sought to become environmental statespersons. Environmental law has burgeoned, becoming a specialty in many low schools. Thousands of environmental agencies have appeared in the public sector from local conservation commissions to environmental agencies at the united nations. At the scientific level environmental problems have become a focus for chemists, biologists, engineers, and many others.

### MEANING AND CONCEPT OF ENVIRONMENT:

The term of environment means the surroundings or all conditions, circumstances and influences surrounding and affecting the life of an organism or group of organisms.



“Environment is the sum total of all the physical, biological, ecological and social factors influencing and interacting with organisms”

“Environment is the sum total of all external conditions and influences affecting the organisms. The environmental may be divided into biotic (living) and abiotic (non living) components.”

“Environmental includes a complex of natural built and social components in the life of humans and that social components constitute a set cultural, moral and personal values and inter-relation”-Tbilisi-1997

“Environment is word which describes all of the external forces, influences and conditions which affect the life, nature, behavior and the growth, development and maturation of living organism.”-Douglass and Holland

It may also be defined as the whole complex of climatic edaphic, physiographic and biotic factors that act upon an organism or an ecological and ultimately determine form and survival

“Environment covers all the outside factors that have acted on the individual since he began life. The environment is everything that influences the individual except his genes.”-Woodworth.

Man not only lives with other organisms of the biosphere but also lives with other human beings. Thus man is able to make environment by his own activities. It includes historical, cultural, economic, civic, political and moral and aesthetic aspect of human life.

“Environment is the sum total of conditions which surrounded man at given point space and time. Environment is also defined as the physical surrounding of which he is a part an on which he is dependent for his activities like physiological functioning production and consumption. This physical environment stretches from air water and land to natural resource like energy carriers, soil and plants animals and ecosystem. Water is present around the living beings and above the land on the surface of the earth and under the earth.” –park commercial (1980).

“Environment is the representation of physical components of earth where in man is the important factor influencing his environment.”-Goudie A (1984)

“The environment is not only the sum of all the material things that constantly interact



with each other and which make up the mosaic of the country side landscape. It is much more than this. It also includes look and habits of people in different parts of the world.” –Brazilian Scientists.

The total environment is made up some non-living components as well as some biotic components, thus making the non-living environment and living environment respectively. The non-living environment includes the non-living factors both physical and chemical which influences the life of organisms. They are the temperature light, energy, water, atmosphere including atmospheric gas and air current, fare gravity, topography (the configuration of the earth’s surface), soil and nutrients etc. the living environment include the living or biotic factors i.e., animals and plants.

An accurate analysis of the environment must always consider he impact of human being and their culture o all the surrounding elements and the ecological factors on every aspect of human life.

All plants and animals are interdependent on one another. The branch of science which deals with the plant and animals relationship with their environment is known as Ecology. In the words of Hankel, ecology is “the study of the total relations of the animal both to its inorganic and its organic environment including above all, its friendly and inimical relations with those animals and plants and plants with which it comes directly or indirectly in contact.”

According to Odum (1963) ecology is “the study of the structure and function of nature.”

The environment is part and product of nature and is governed by natural laws and principals. Some natural occurrences can create, alter and destroy an environment, but cannot natural laws.

## **DEFINITION OF POLLUTION**

**Pollution** - Presence of matter (gas, liquid, solid) or energy (heat, noise, radiation) whose nature, location, or quantity directly or indirectly alters characteristics or processes of any part of the environment, and causes (or has the potential to cause) damage to the condition, health, safety, or welfare of animals, humans, plants, or property

Environmental pollution is any discharge of material or energy into water, land, or air that causes or may cause acute (short-term) or chronic (long-term) detriment



to the Earth's ecological balance or that lowers the quality of life. Pollutants may cause primary damage, with direct identifiable impact on the environment, or secondary damage in the form of minor perturbations in the delicate balance of the biological food web that are detectable only over long time periods.

Until relatively recently in humanity's history, where pollution has existed, it has been primarily a local problem. The industrialization of society, the introduction of motorized vehicles, and the explosion of the human population, however, have caused an exponential growth in the production of goods and services. Coupled with this growth has been a tremendous increase in waste by-products. The indiscriminate discharge of untreated industrial and domestic wastes into waterways, the spewing of thousands of tons of particulates and airborne gases into the atmosphere, the "throwaway" attitude toward solid wastes, and the use of newly developed chemicals without considering potential consequences have resulted in major environmental disasters, including the formation of smog in the Los Angeles area since the late 1940s and the pollution of large areas of the Mediterranean Sea. Technology has begun to solve some pollution problems (see pollution control), and public awareness of the extent of pollution will eventually force governments to undertake more effective environmental planning and adopt more effective antipollution measures

## ANCIENT CULTURES

Air pollution has always accompanied civilizations. Pollution started from the prehistoric times when man created the first fires. According to a 1983 article in the journal *Science*, "soot found on ceilings of prehistoric caves provides ample evidence of the high levels of pollution that was associated with inadequate ventilation of open fires." The forging of metals appears to be a key turning point in the creation of significant air pollution levels outside the home. Core samples of glaciers in Greenland indicate increases in pollution associated with Greek, Roman and Chinese metal production, but at that time the pollution was comparatively less and could be handled by nature.

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## EMPLOYEE'S STRESS IMPACT ON THEIR JOB SATISFACTION: A CASE STUDY

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The twentieth century has been called the Age of Anxiety. Now we entered in 21<sup>st</sup> century. This is the age of Globalization. Previously western countries; metros and cosmopolitan cities in developing countries had faced the problems with stress. Because of Globalization the world becomes a village, so everywhere in the world is facing stress related problems. This alarming tendency, increases in health problems related to tension, stress and anxiety, it what may be called as the 'Globalization Stress', which is directly impact on employees satisfaction. This is the right time to focus the significance of Employee Stress and Employee Job Satisfaction.

There should be enormous amount of research has to be taken place to answer the queries like - What is Employee Stress? What is Employee Job Satisfaction? How far Employee Stress and Employee Job Satisfaction are correlated? How far Employee Stress and Employee Job Satisfaction are related to Pupil out comes in different demographic and socio-economic conditions? The impacts of Employee Stress and Employee Job Satisfaction on achievement of Organizational objectives are to be answered.

The absence of a high dropout rate and job turnover among Indian employees does not necessarily mean that they do not experience stress and lack of job satisfaction. This may be due to entirely different reasons like non-availability of alternative job opportunities and fear of taking risks. It is hard to believe that they do not experience stress and are not frustrated and disillusioned with their professional life under the situations prevailed in the institutions and social conditions. Experiencing constant dissatisfaction with the job has many repercussions for the individual's adjustment to work as well as in personal and social life and may have magnetic impact on individuals' total personality and resulting substandard performance.

Coats and Thoresen (1976) in their review of studies on Employee anxiety quote the NEA report to show the growing incidence of employee anxiety. Kyriacou



and Sutcliffe (1978) in a study of 257 employees of 16 Organisations in England noted that 15.6% found being an employee

‘very’ stressful while 4.3% found it ‘extremely’ stressful (total 19.9%). David, W.Chan and Eadaoin, K.P.Hui (1998) reported that regardless of gender and guidance status, employees with low stress and high support levels generally reported less general psychological symptoms, and employees with high support level reported less specific symptoms related to anxiety and sleep problems. Whereas the studies of Arikewuyo and M.Olalekan (2004) disclosed that the average Nigerian employee prefers to organize him/herself in such a way that his/her pedagogic duties will not be hampered by domestic chores. It also implies that, whenever the employee is stressed, he/she consoles him/herself with the fact that work is not everything and therefore feels less stressed. The employees never use the active cognitive strategies. Their feeling is that nothing probably can be challenged in stressful situations. The employees also express mixed feelings about the adoption of inactive behavioural strategies.

While in the case of Employee Job Satisfaction the studies of Garrett, R.M. (1999) that the evidence available from mature educational systems identified a complex picture in which job satisfaction, itself a multi-faceted concept, was closely related to the other key factors of work life complexity and work centrality. The studies of Zembylas, Michalinos; Papanastasiou, Elena(2004) findings “An adapted version of the questionnaire developed by the “Employee 2000 Project” was translated into Greek and used for the purposes of this study that had a sample of 461 K-12 employees and administrators. This showed that, unlike other countries in which this questionnaire was used, Cypriot employees chose this career because of the salary, the hours, and the holidays associated with this profession. While Naik, G.C. (1990) found that ad hoc teaching assistants of the M.S.University, Baroda, were satisfied with their jobs mainly because of their favourable attitude towards the teaching profession, financial consideration and the facilities which they were getting for further studies; marital status, age, experience and gender did not affect their level of job satisfaction; leadership qualities of heads of institutions promoted job satisfaction, and group goals and objectives were essential parameters in determining the job satisfaction of employees. Sex, experience and background variables had no bearing on job satisfaction.



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## Organization Profile:

Coromandel International Limited, Visakhapatnam is in the business segments of Fertilizers, Specialty Nutrients, Crop Protection and Retail. Coromandel manufactures a wide range of fertilizers and markets around 2.9 million tons making it a leader in its addressable markets and the second largest phosphate fertilizer player in India. Coromandel has also ventured into the retail business setting up more than 425 rural retail centers in the agro and lifestyle segments.

The Company clocked a turnover of Rs.9668 crores (USD 2.2 billion). Coromandel was ranked among the top 20 best companies to work for by Business Today and was also voted as one of the ten greenest companies in India by TERI, reflecting its commitment to the environment and society. It gives importance to human resources and it lays emphasis on human safety and welfare. Presently the company comprises of about 600 employees among whom about 425 employees are non managerial and about 175 employees are managerial.

## OBJECTIVES OF THE STUDY:

The specific objectives of the study are:

1. To studying the relationship between Employee Stress and Employee Job Satisfaction; and also find relationship between the various dimensions of Employee Stress and Employee Job Satisfaction;
2. To identify the Significance of difference between demographic and professional variables like Sex, Locality, Qualification, Age, Marital Status, Experience and Type of Institution in respect of Employee Stress and Job Satisfaction.

## Hypotheses:

1. There is no significance of relationship among the selected sample of Employees in their Stress and Job Satisfaction
2. There is no significance of relationship between the dimensions of Employee Stress and Employee Job Satisfaction Scales.
3. There is no significance of difference between the Employees in their Stress and Job Satisfaction taking the Variables like Sex, Locality, Qualification, Age, Marital Status, Experience and Type of Institution.



### **Sample:**

The sample selected for the present investigation is covering with 178 employees from Coromandel International Limited, Visakhapatnam. Random sampling technique is followed to draw the sample for the present study.

### **Tool Description:**

The Stress tool was originally devised and standardized by Dr.Indirasen for her research study in commerce. Dr.B.Indira (1998) used this tool with slight modification for her research study with five dimensions viz., Intensity of work (08 items), Behaviour (07 items), Professional Growth (08 items) and Extrinsic Annoyers (17 items).

Where, the Job Satisfaction tool was constructed and standardized by Dr.VSR, Pakalapati for the purpose of his research study in which four dimensions have been incorporated viz., Professional (07 items), Learning (06 Items), Innovation (06 items) and Inter-Personal Relations (06 items).

### **Procedure:**

In order to test the hypotheses the investigator is planned and executed in four phases. In the first phase developing and standardization of Employee Stress and Employee Job Satisfaction self-rating scales. In the second phase measures the Employees' opinion with the help of above two self-rating scales. In the third phase using appropriate statistical procedure is adopted to find out the significant relationship between Employee Stress and Employee Job Satisfaction. In the fourth phase uses appropriate statistical procedures to find out the significant difference between the different demographic variables of employees in their Stress and Job Satisfaction.

### **Analysis of Data:**

The following statistics ere calculated for arriving at conclusions like co-efficient correlation to find the relationship between employees Stress and Job Satisfaction and also obtained the Critical Ratio values variables wise.



**Table 1**

**Table showing significance of 'r' between Employee Stress and Employee Job Satisfaction**

Variable category	N	df	'r'	Probability
Employee Stress Employee Job Satisfaction	178	176	0.69	Significant at 0.01Level

**Table 2**

**Table showing the inter-correlation Matrix of various Dimensions of Employee Stress of Uday's Scale**

	Intensity of work	Behaviour	Professional growth	Extrinsic Annoyers	Total Employee Stress
Intensity of wor					
Behaviour					
Professional Growth					
Extrinsic Annoyers	-	-	-	1.00	0.45
Total Employee Stress	-	-	-	-	1.00

**Table 3**

**Table showing the inter-correlation Matrix of Various Dimensions of Employee Job Satisfaction Scale**

	Professional	Learning	Innovation	Inter-Persona Relations	Total Employee Job satisfaction
Professional	1.00	0.56	0.48	0.37	0.29
Learning	-	1.00	0.65	0.45	0.34
Innovation	-	-	1.00	0.39	0.47
Inter-Personal Relations	-	-	-	1.00	0.38
Total Employee Job Satisfaction	-	-	-	-	1.00



**Table 4**

**Table showing the significance of difference of Mean between Employees taking the various variable into consideration in their Stress**

Variable category	Mean	S.D	N	C.R
Male Employees	92.65	22.97	86	2.01*
Female Employees	99.28	20.91	92	
Rural area Employees	100.11	22.13	67	2.16*
Urban area Employees	93.15	18.61	111	
Employees with Technical Qualification	94.74	22.36	56	2.29*
Employees without Technical Qualification	102.54	19.33	122	
Below 15 years Experience	85.37	22.91	80	1.54@
Above 15 years Experience	90.64	22.74	92	
Married Employees	102.37	19.31	94	1.8@
Unmarried Employees	96.74	22.09	84	
Below 35 years Age	97.29	20.86	98	2.06*
Above 35 years Age	103.51	19.46	80	
Employees reside in Quarters	96.72	21.73	74	3.87**
Employees reside out of the quarters	91.14	17.85	104	

\*\*Significant at 0.01 level \*Significant at 0.05 level @Not Significant at any level

**Table 5**

**Table showing the significance of difference of Mean between Employees taking the various variable into consideration in their Job Satisfaction**

Variable category	Mean	S.D	N	C.R
Male Employees	94.65	21.62	86	1.78@
Female Employees	100.26	20.22	92	
Rural area Employees	99.49	18.71	67	2.65**
Urban area Employees	92.12	16.87	111	
Employees with Technical Qualification	95.54	20.44	56	1.84@
Employees without Technical Qualification	101.45	18.51	122	
Below 15 years Experience	94.75	21.69	98	2.69**
Above 15 years Experience	85.73	22.72	80	
Married Employees	100.85	22.29	94	2.27*
Unmarried Employees	93.74	19.43	84	
Below 35 years Age	102.15	19.63	92	2.36*
Above 35 years Age	93.69	20.86	86	
Employees reside in Quarters	101.52	21.37	74	1.98*
Employees reside out of the quarters	92.59	18.52	104	

\*\*Significant at 0.01 level \*Significant at 0.05 level @Not Significant at any level



**Table 6**

**Table showing the Mean values of the Dimensions in respect of Job Satisfaction and Stress (N = 178)**

	Job satisfaction			Stress	
Dimension	Mean	S.D	Dimension	Mean	S.D
Professional	24.38	4.29	Intensity of Work	24.8	5.99
Learning	19.88	3.94	Behaviour	22.36	4.72
Innovation	16.57	3.71	Professional Growth	25.63	6.11
Inter-Personal relations	18.45	3.29	Extrinsic Annoyers	45.67	9.98

**Results & Discussion:**

- 1) There is significance of relationship between Stress and Job Satisfaction among the Secondary School Employees.
- 2) There is significance of relationship between the dimensions of Employee Stress.
- 3) There is significance of relationship between the dimensions of Employee Job Satisfaction.
- 4) In respect of Employee Stress, there is significance of difference between the variables – Sex, Locality, Qualification, Age and Residential place. Whereas the Employees in respect of Experience and Marital Status categories do not differ significantly.
- 5) In respect of Employee Job Satisfaction, there is significance of difference between the variables – Locality, Experience, Age, Marital Status and Residential place. Whereas the Employees in respect of Sex and Qualification categories do not differ significantly.
- 6) In respect of Job Satisfaction Professional aspect is highest in the merit order followed by Learning, Inter-Personal Relations and Innovation. While in the case of Stress – Extrinsic Annoyers aspect is in the highest in the merit order followed by Professional Growth, Intensity of work and Behaviour.



## Conclusions:

A certain amount of stress is essential for normal health. Minimum amount of stress is a must to stimulate us to do the daily tasks. Without stress you can't do any thing. If stress exceeds limits, it will harm you. The result of the study disclosed that the Job Satisfaction aspect influenced in respect of variables Sex, Locality, Qualification, Age, Experience and Residential place, whereas the Stress aspect influenced in respect of variables Locality, Age, Experience, Marital Status and Residential place. There is significance of difference between the Employees in their Job Satisfaction and Stress in respect of variables – Locality, Experience and Residential place. From the above findings it is concluded that the Employee Stress and Job Satisfaction aspects are independent and interdependent.

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## ACADEMIC ANXIETY AMONG THE SCHOOL GOING ADOLESCENTS OF LAKHIMPUR DISTRICT OF ASSAM

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### INTRODUCTION

Education is a process of all round development of child. It expresses the capabilities and abilities of child and provides the opportunity for growth and development. The secondary stage of education is considered as important because this stage provides the base for future education. At this level adolescents face some sort of anxiety. Anxiety is the uncomfortable feeling of dread that occurs in response to extreme or prolonged periods of stress (Smeltzer and Bare, 2000). During the past three decades or so, the concept of anxiety has figured prominently in the psychological literature, almost all the individual experience general uneasiness, a feeling of tension in situation. Anxiety may be a result in certain psychological symptoms, similar to those generated by emotions of fear (Power, A.B. ISRJ, V-2, I-6.). According to Freud, anxiety has three components.

1. A specific, unpleasurable character
2. Different and discharge phenomenon
3. A perception of that phenomenon

Academic anxiety plays an important role at secondary level of education because they have to appear in the first Board examination. They become highly tensed as on one hand they wish to secure good percentage for getting admission for their further education and on the other hand they also want to prove themselves better than the high age group adolescents.

The present research paper is an attempt to study the academic anxiety level among the school going adolescents in Lakhimpur district of Assam. The present study also tried to trace out the significant difference between the adolescent boys and adolescent girls, adolescents studying in the English medium and Assamese medium schools in respect of their academic anxiety level



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## REVIEW OF RELATED LITERATURE

Verma, V.P. (2002). "A study of needs, frustration and anxiety among adolescent" and found that urban slum and non slum adolescent students did not exhibit any significant difference in the study and no significant difference was found in frustration.

Trivedi, R.M. (2004). Studied on anxiety level and academic achievement of under graduate students and found negative relationship between the anxiety level and academic achievement among the girl students.

Patel, C.P. (2005). Concluded that no effect of test anxiety and test defensiveness

and sex has been found on the achievement but there was a significant effect of anxiety and sex. Thus it is concluded that the combine effect of test anxiety and sex plays a role on achievement score in mathematics.

Gail A. Bernstein (2000). Examined the relationship between of anxiety and depression on physical symptoms. The 40 teenage students were selected the study. The result showed that some symptoms were related to specific form of anxiety.

Jerrell C. Cassady (2005). Studied the stability of undergraduate students' cognitive

test anxiety levels and the results demonstrate that there was a very strong correlation between the students reports of cognitive test anxiety across three points in the semester. Further the correlation between test anxiety and bodily symptoms are significant.

Freud (1949) studied anxiety and stated that anxiety is unpleasant and is associated with the emotions of fear. Sullivan (1948) classified the distinction between feat and anxiety. Spielberger (1966) has distinguished "state anxiety" and "trait anxiety". State anxiety is a transitory state or condition of the organism. Trait anxiety is relatively stable personality.

Allport and Haber (1960) made a distinction between "facilitating anxiety" and "debilitating" anxiety. Sarson and Mandler (1952) gave a detailed description of an anxiety questionnaire and presented finding on the relation of test anxiety. Martin (1959) reported that anxiety



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factor was relatively independent of motivation in psychological experiment.

## **NEED AND JUSTIFICATION OF THE STUDY**

Present study has been justified on the ground that no such exploratory work has been done on academic anxiety of the school going adolescents of the district. Review of related literature shows that in the district Lakhimpur no such work has been done emphasizing academic anxiety and academic achievement of the school going adolescents.

## **STATEMENT OF THE PROBLEM**

The present study “Academic Anxiety among the School Going Adolescents in Lakhimpur District of Assam” is an endeavour to provide necessary information in the light of the given justifications.

## **OBJECTIVES**

- To study the level of academic anxiety among the school going adolescents in Lakhimpur district of Assam
- To study whether the boys and the girl adolescents differ significantly in respect of their academic anxiety
- To study whether the school going adolescents studying in English medium schools and Assamese medium schools differ significantly in respect of their academic anxiety.

## **HYPOTHESES**

- There exist significant difference between the adolescent boys and girls in respect of their academic anxiety
- There exist significant difference between the adolescents studying in English medium schools and Assamese Medium schools in respect of their academic anxiety

## **RESEARCH DESIGN:**

**METHODOLOGY OF THE STUDY:** The descriptive survey method has been employed for the present study.

**POPULATION AND SAMPLE:** The population of the present study is the school going adolescents of Lakhimpur district of Assam and the sample is confined to 100 adolescents. The sample distribution is shown in **Table A**.

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Table A: Distribution of Sample

Type	Adolescents EMS	Adolescents of AMS	Total
Boys	25	25	50
Girls	25	25	50
Total	50	50	100

EMS –English Medium Schools AMS- Assamese Medium Schools

**PROCEDURE FOR SELECTION OF THE SAMPLE:** The sample for the present study has been selected applying the stratified random sampling method. Total 100 school going adolescents were selected out of which 50 boys were selected and 50 girls were selected. Out of the 50 boys 25 school going adolescents were selected from English medium schools and 25 were selected from Assamese medium schools. Again out of 50 girls 25 were selected from English medium schools and 25 were selected from Assamese medium schools. The school going adolescents were selected from the ten secondary schools of the district and these are Laluk H.S. School, St. Xavier’s High School, Bihpuria H.S. School, St. Merry’s High School, Gogamukh H.S. School, John Ferth High School, Lakhimpur Girls H.S. School, Harmotty H.S. School, Asian Public School, Sangam Academy . From each school ten students were selected out of which five boys and five girl students were selected. Only class X students were considered for the presents study as the respondent.

**TOOLS USED:** For the present study the researcher developed one Self Structured questionnaire-

1. Questionnaire to study the academic anxiety of the school going adolescent boys and girls.
2. In order to collect the supporting data interview was also done.

**DESCRIPTION OF THE TOOL:** The self structured Academic Anxiety Questionnaire was developed as Likert type five point scale questionnaire having five options Strongly Disagree, Disagree, Undecided, Agree and Strongly Agree for each statement. The score for Strongly Disagree is 1, for Disagree it is 2, for Undecided it is 3, for Agree it is 4 and for Strongly Agree the score is 5. It was prepared with 50 items. All these items were distributed in the following factors of academic anxiety- First Board Examination, Frequent class tests and unit tests, Over loaded home works,



Time consuming in private tuitions, Parents' pressure for good academic results, Pressure from the school, High achievement motivation of the youths, and Competitions among the classmates. After constructing the questionnaire it was translated into Assamese as the Assamese medium school going adolescents were also selected as the respondent for the present study. The validity and reliability of the questionnaire was established using appropriate statistical techniques and suggestions of experts in the field.

### **STATISTICAL TECHNIQUES USED:**

The analysis of the data has been done both qualitatively and quantitatively. For the quantitative analysis of the data the following statistical techniques-

- ? Frequencies
- ? Tables
- ? Pie Diagram
- ? Mean
- ? Standard Deviation
- ? 't' test

### **DELIMITATIONS OF STUDY**

The present study has been delimited to

- o The study is confined to the school going adolescents of the district.
- o Only class X students were selected for the present study.
- o The study is delimited to one district of the State that is Lakhimpur district.

### **ANALYSIS AND INTERPRETATION OF THE ATUDY**

The collected data has been analysed and interpreted objective wise.

**Objective no. 1.** To study the level of academic anxiety among the school going adolescents in Lakhimpur district of Assam adolescent boys and girls in respect of their self concept.

In order to meet the need of this objective the investigator at the very first step administered the Academic Anxiety questionnaire to the sample adolescents. Each individual adolescent's score was calculated and from these scores the mean and standard was calculated which is presented in



**Table B**  
**Mean and standard deviation of the school going adolescents**  
**in respect of their academic anxiety**

	N	Mean	Standard Deviation
Adolescents' AA	100	146.45	10.76

AA- Academic Anxiety

**Table B** shows that the mean score is found to be 146.45 and the standard deviation is 10.76. As per the norms prepared in the questionnaire constructed for the present study it can be considered as the high academic anxiety. Here it can be interpreted that the school going adolescents in Lakhimpur district have a high academic anxiety.

**Objective no. 2. To study whether the boys and the girl adolescents differ significantly in respect of their academic anxiety**

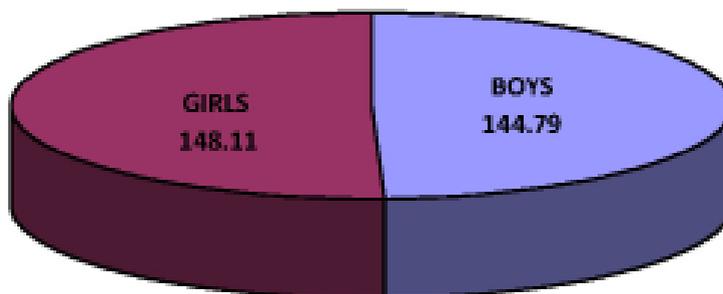
In order to meet the need of this objective the investigator grouped the collected data into two groups- boys and girls. From these two groups of data the mean, standard deviation and the 't' value is calculated and the result is presented in Table C and it is also presented with a pie diagram in **Figure A**

**TABLE C**  
**The mean and standard deviation of the Boys and Girls school going adolescents in Lakhimpur district.**

CATEGORY	N	M	SD	't' Value	SIG.
Boys	50	144.79	10.93	1.74	*
Girls	50	148.11	10.59		
Total	100	146.45	10.76		

**\*\* -Significant at 0.05 level**

**Figure A**  
**Pie Diagram of Boys' and Girls' mean scores in respect of their self concept**



From **table C**, it is observed that 't' value is found to be 1.74 which is not significant. So here it can be interpreted that there exist no significant difference between the boys and the girl school going adolescents in Lakhimpur district of Assam in respect of their academic anxiety.

**Objective no. 3. To study whether the school going adolescents studying in English medium schools and Assamese medium schools differ significantly in respect of their academic anxiety.**

In order to serve this objective the investigator grouped the collected data related to the academic anxiety of the school going adolescents in two groups- English medium and Assamese medium. From this two group of scores the mean, standard deviation and 't' value is calculated and the result is presented in Table D. The Pie diagram for the same is also presented in Figure B



**Table D**  
**Mean and standard deviation of the school going adolescents studying in English medium and Assamese medium schools in respect of their academic anxiety**

CATEGORY	N	M	SD	't' Value	SIG.
Adolescents (EMS)	50	149.33	11.32	2.68	**
Adolescents (AMS)	50	143.57	10.2		
Total	100	146.45	10.76		

EMS- English Medium Schools, AMS- Assamese medium Schools,

\*\* Significant at 0.01 level

**Figure B**  
**Pie Diagram of Boys and Girls mean scores in respect of their academic achievement**

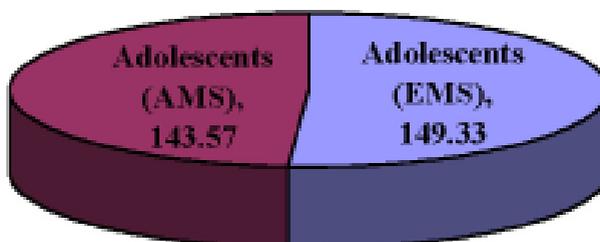


Table D shows that mean academic anxiety score of the English medium school students is 149.33 and the Assamese medium school is 143.57. The calculated 't' value is found to be 2.68 which is significant at 0.01 level. Here it can be interpreted that there exists significant difference between the school going adolescents of English medium schools and Assamese medium school in Lakhimpur district of Assam.

#### **FINDINGS OF THE STUDY**

- The academic anxiety level of the school going adolescents is found to be high.
- The academic anxiety level of the girl school going adolescents is higher than the boys and the difference between the boys and the girl adolescents is found significant in respect of their academic anxiety.
- The school going adolescents studying in the English medium school have higher academic anxiety than the school going adolescents studying in



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Assamese medium schools. The difference between these two is found to significant.

## CONCLUSION AND SUGGESTIONS

Being academically successful and making a place for oneself in the society is the priority of the youths. Nowadays academic anxiety amongst adolescent boys and girls is very common and natural. First Board Examination, frequent class tests and unit tests, over loaded home works, time consuming in private tuitions, parents' pressure for good academic results, pressure from the school, high achievement motivation of the youths, and competitions among the classmates etc. cause the academic anxiety among the school going adolescents, basically the class X students.. Sometimes such anxiety misleads the youths and creates trouble to them. So it is very important to find the reasons of academic anxiety in adolescent boys and girls and adopt necessary measures to prevent it.

The study may develop an insight to authorities so that they can find the reasons of academic anxiety in adolescent girls and the measures may be taken to prevent it. The results of study may provide the ways of solving the problems related to academic anxiety of adolescent girls. The findings may be useful in providing the opportunities and exposure for rural adolescent girls for developing the healthy competitive feelings.

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## युवा वर्ग में नैतिक चेतना

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### सार-संक्षेप

युवा वर्ग में नैतिक चेतना युवा वर्ग जीवन के नैतिक कर्तव्यों से परिपूर्ण है। जिसका पालन करना युवा वर्ग का नैतिक धर्म है। सर्वप्रथम पारिवारिक सदस्यों की नैतिक आवश्यकताओं, मान, सम्मान को ध्यान में रखना, देश के गौरव की रक्षा करना, विश्व में इसकी बेहतर छवि का निर्माण करना, समाज की परम्पराओं की रक्षा करना, स्वच्छ नैतिक वातावरण के निर्माण के लिए संघर्ष करना, नैतिकता के साथ अध्ययन के प्रति सजग रहना, नशाखोरी की प्रवृत्ति से बचकर रहना, किन्तु युवा वर्ग में नैतिक चेतना के कर्तव्यों से विमुख होता जा रहा है। युवा वर्ग में नैतिक चेतना से हट कर अंधकार के गर्त में डूबा जा रहा है। देश को आगे ले जाने वाला यह वर्ग ही अपने नैतिक मूल्यों से भटक जाय तो देश की इससे अधिक घातक स्थिति और क्या हो सकती है।

आज का युवा वर्ग दिशाहीन, कर्तव्य-विमुख और स्वार्थी तथा घूर्त प्रतीत होता है। वह अपने कर्तव्यों के प्रति सजग तो है। और उसका सही उपयोग भी करता है। किन्तु वह आरजक तत्वों के द्वारा संचालित और निर्देशित होकर अनेक प्रकार के विध्वंसक और अनैतिक कार्यों में संलग्न हो जाता है। युवाओं में भ्रष्ट आचरणों की प्रवृत्ति तथा चारित्रिक पतन जिस प्रकार दृष्टिगोचर हो रहा है, वह स्थिति मुख्य रूप से सामाजिक, आर्थिक तथा संस्कृतिक मूल्यों में आए अनैतिकता के कारण उत्पन्न हुई है। अनैतिक गतिविधियाँ फिल्मी अश्लीलता, आदर्श, नेतृत्व का आभाव होता जा रहा है। युवाओं को भ्रष्टता, चारित्रिक पतन और विचार शून्यता की ओर ले जा रहा है।

### शोध समस्या :

युवा वर्ग में नैतिक चेतना का आभाव होने के कारण अनेक असमानताएँ उत्पन्न हो रही हैं। युवक चाहे शिक्षित हो या अशिक्षित, जीविकोपार्जन के लिए कार्य की निश्चितता चाहता है। वह अपने बड़ों पर निर्भर नहीं रहना चाहता। रोजगार उसका प्रधान लक्ष्य होता है। बेरोजगार, लक्ष्यहीन युवाओं का समूह किसी भी समाज के लिए बड़ा हानिकारक होता है। खाली दिमाग शैतान का घर होता है। बेरोजगार युवा मानसिक वेदना का शिकार होता है। वह अपनी डिग्री लिये फिरता है। उसे नौकरी नहीं मिलती। जिससे हतोत्साहित होकर

शिक्षित बेकारों ने आन्दोलन का मार्ग अपना लिया है। अब विद्यार्थी वर्ग और युवा वर्ग काम की माँग को लेकर आन्दोलन करते हैं। ये आन्दोलन उनके असन्तोष की ही अभिव्यक्ति है। गरीबी दूसरा कारण है जो युवाओं को अक्रोश, अनैतिक कार्यों के लिए प्रेरित करता है। क्योंकि युवा आज भी आत्म निर्भर नहीं हो पाया। बड़ी कठिनाइयों से लोग बच्चों को पढ़ाते हैं। परन्तु लिख पढ़ कर उन्हें नौकरी नहीं मिलती जिसका कारण भ्रष्टाचार है।

नैतिक शिक्षा भी युवाओं को सही मायने में नहीं मिल पाती जिस कारण से उनमें अनैतिक भावनाएँ घर कर लेती हैं। आज सबसे ज्यादा देखने को मिल रहा है कि युवाओं का चरित्रिक पतन एवं भ्रष्ट अनैतिक आचरण के अकल्पनीय कुकृत्य आज समाज में प्रायः आये दिन सुनने और देखने को मिल रहा है। और इस अनैतिक कार्य एवं अश्लीलता के लिए नशीले पदार्थों का सेवन, फैशन सा बन गया है। परम्परागत नैतिक मूल्यों का हास्य भी युवाओं में भटकाव का प्रमुख कारण है। आज का युवक पाश्चात् संस्कृति के प्रभाव से पूर्णतया प्रभावित है। इस सम्बन्ध में उनके वेश भूषा व रहन-सहन पर भी प्रभाव डाला है। आज की युवतियों के इस तरह के वस्त्र होते हैं। जिनमें उत्तेजक एवं अद्भुत नजर आने वाले व पहनावों के कारण अनैतिक युवाओं में कुत्सित भावनाओं का विस्तार हुआ है।

इस लिए अन्य युवा भी भ्रष्ट हुए हैं। मनोरंजन के साधनों में पाश्चात्य अध्यानुकरण होने से भटकाव स्वाभाविक है।

युवा नैतिक चेतना के कारण दिशाहीन हो गया है। वह न तो नैतिक लक्ष्य निर्धारित करने में अपने को समर्थ समझता है और न उसके सामने कोई रचनात्मक कार्य होता है। विश्वविद्यालय प्रशासन शिक्षा का स्तर बढ़ाने के लिए नहीं अपितु सरकार के हिमायती विद्यार्थियों की मदद करने के लिए रखे जाते हैं। शिक्षा संस्थानों में राजनीतिक हस्तक्षेप बढ़ रहा है। बड़े-बड़े केन्द्रीय और प्रान्तीय मंत्री छात्र संघ के चुनावों का निर्देशन कर संचालन करते हैं। छात्र गुट बंदी के शिकार हो जाते हैं। वे अराजकतापूर्ण कार्यों में उलझने लगते हैं। नैतिकता का स्वतंत्र अस्तित्व नहीं रहा। स्वतंत्र विचारों का गला घोटने के लिये चर्चा का सुदृढ़ पंजा सदा जागरूक है। इस कारण आज का युवा नैतिक चेतना के कारण सांस्कृतिक परम्परा अपने पूर्वज और आपने इतिहास पर न गर्व अनुभव करता है और उसमें न ही रुचि है। वह परीक्षा में नकल करने के लिए आन्दोलन करता है, अपनी ही फीस के पैसे से बने कालेज के शीशे और कुर्सियाँ तोड़ता है, वह हर प्रकार के समाज विरोधी अनैतिक कार्य करता है।



विदेशी जीवन पद्धति के अनुकरण में आनन्द लेता है— उस पद्धति में जिसे स्वयं पश्चिम के लोग छोड़ रहे हैं। कभी वह लम्बी चौड़ी रंग-विरंगी पोसाक पहनने लगता है। कभी वनवासियों की तरह—लम्बे-लम्बे बाल रखने लगता है, कभी वह गोंजा पीता है, कभी नशीले पदार्थों की दवाइयों एवं गोलियों का सेवन करता है, कभी वह ब्लाइटनर को सूघता है, कभी परमामेन्ट मारकर को सूघता है। पर वह यह सब क्यों करता है ? वह तात्कालिक मानसिक शान्ति के लिए नशीले पदार्थों का सहारा लेता है।

क्योंकि वह असंतुष्ट है। दिशाहीन है, वर्तमान भारत की सामाजिक और आर्थिक व्यवस्था का खोखलापन उसके सामने है। बड़े-बूढ़ों के अब्यावहारिक आदर्शों पर उसे विश्वास नहीं रहा है। उद्देश्यहीन दिशा और लक्ष्यहीन जीवन में उसे माधुर्य की अनुभूति नहीं होती। उसे यौवन की झिलमिलाती हुई आभा की आशाएँ राख के ढेर के समान नजर आने लगी हैं। अतः उसके मन में समाज के प्रति शेष है, वह सामाजिक व्यवस्था से अन्तुष्ट है।

#### शोध प्रविधि :

प्रस्तावित शोध-पत्र की प्रवृत्ति सैद्धान्तिक हैं अतः शोध समस्या के अनुरूप तथ्य संकलन के द्वितीयक स्रोतों का प्रयोग अध्ययन के दौरान किया गया है। जिसमें मौलिकता एवं नैतिकता के साथ यह शोध पत्र प्रस्तुत किया जा रहा है। सन्दर्भग्रन्थ पत्र-पत्रिकाओं एवं नेट के माध्यम से अध्ययन सामग्री का चयन करके युवा वर्ग में नैतिक चेतना विषय पर वर्तमान तथ्यों का विश्लेषण करने का प्रयास किया गया है।

#### परिकल्पना :

नैतिक जीवन में युवा वर्ग के जीवन का प्रभाव है, परन्तु एक बात स्मरणीय है। कि जो आदर्श राष्ट्र या समूह के लिए होता है। वही व्यक्ति विशेष के लिए अनुचित हो सकता है। इस परिस्थिति में युवा वर्ग का असंतोष बढ़ना स्वाभाविक ही है। यही असन्तोष देश और समाज के लिए घातक सिद्ध हो सकता है। युवा-वर्ग का असन्तोष उन्हें विद्रोह बना सकता है। नक्सलपन्थी क्रान्ति के रूप में युवा वर्ग का नैतिक प्रकट हो चुका हैं असन्तुष्ट युवा शक्ति किसी भी विध्वंसक नेतृत्व के पीछे लग जाये तो अनर्थ हो सकता है।

सत्य की दिशा में अविश्राम आगे बढ़ते रहना दर्शन की नियति है और ज्ञान के क्षेत्र में नये-नये क्षितिज खोलते रहना उसकी महती योजना है।

यदि कोई दार्शनिक यह जिद करता है कि व्यवस्था के प्रति उसका विचार ही अन्तिम रूप से सत्य है तो यह उसकी असम्य जिद कही जायेगी। उसे यह समझना चाहिए कि वह सत्य का नियत न होकर सत्य का अनुसन्धानकर्ता है। सच तो यही है कि मानव



जिज्ञासा कभी भी पूरी तरह शान्त नहीं होती है क्योंकि यदि ऐसा हो जाय तो मानव के चिन्तन की प्रगति रुक जाय। वास्तव में दर्शन का लक्ष्य समस्याओं का अन्तिम समाधान प्रस्तुत करना न होकर चिन्तन की क्रिया को निरन्तर बनाये रखना है।

नैतिकता से आसय यह लगया जा सकता है। की कुछ सुखवादी एवं भौतिकवादी विचारकों का मानना है की नैतिक वह कार्य है। जिसमें व्यक्ति या किसी को सुख प्राप्त हो, चाहे वह नशा खोरी हो, या चाहे किसी की हत्या करने से या चाहे काम वासना, से उसकी इच्छा पूर्ति हो वही उसके लिए नैतिक है।

परन्तु यह नैतिकता से जुड़े सबाल पर जो भारतीय संस्कृति के अन्तर्गत षट् दर्शन हैं। वह यह मानने और कहने के लिए तैयार नहीं है। की किसी ईमानदार व्यक्ति की अपराधी प्रवृत्ति के व्यक्ति ने हत्या कर दिया यह नैतिक नहीं है, काम वासना करना भारतीय संस्कृति में यह प्रकृतिक तरीके से उपयोग करता है, तो नैतिक है, परन्तु यही इच्छा शक्ति को मिटाने के लिए अप्रकृतिक रूप से काम वासना की पूर्ति किया जाय वह नैतिक नहीं हो सकता, यह भारतीय संस्कृति और भारतीय विधि की दृष्टि से जघन्य अपराध की श्रेणी में आता है। यह कदापि नैतिक नहीं हो सकता।

युवाओं में नैतिक चेतना में कुछ सुखवादी एवं भौतिकवादी विचारकों का मानना है कि जिससे हमें सुख की अनुभूति हो वह नैतिक है। परन्तु भारतीय विचारकों का मानना है। कि नैतिक होना काल और स्थिति के आधार पर वह नैतिक हो भी सकता और नहीं भी हो सकता है। जिस प्रकार से नदी के तट पर अगर कोई भी भक्ति भावना में लगा हुआ है। उसी कोई बालक उस नदी में डूबता हो तो क्या उस भक्त के लिए नैतिक हो सकता है ? नैतिक तो उस भक्त के लिए तब होगा जब वह उस बालक को डूबने से बचा ले। यह हमारी संस्कृति और धर्म कहता है। नैतिक दृष्टि से संस्कृति का सम्बन्ध नैतिकता, सच्चाई, ईमानदारी, आदर्श नियमों एवं सदगुणों से है। संस्कृति का सम्बन्ध 'सत्यम् शिवम् सुन्दरम्' से है। हीगल, काण्ट, एवं लॉबेल, आदि ने संस्कृति का नीतिशास्त्रीय अर्थ में प्रयोग किया है इस अर्थ में संस्कृति का सम्बन्ध उन वस्तुओं से है जो मानव जीवन को आनन्द प्रदान करती है, जो सुन्दर है, जो ज्ञान से सम्बन्धित है, जो सत्य है और जो मानव के लिए कल्याणकारी एवं मूल्यवान है। नैतिकता में संस्कृति शब्द का प्रयोग धार्मिक एवं नैतिक गुणों से युक्त आचरण के लिए किया जाता है।

युवाओं में इस भटकाव की स्थिति को रोकने के लिए इस वर्ग की शिक्षा में पुरातन, भव्य और उत्कृष्ट परम्परागत नैतिक मूल्यों का समावेश होना चाहिए। माता-पिता व



अभिभावकों का भी वह कतर्ब्य है कि वे आपने बच्चों को अपनी संस्कृति से सम्बन्धित परम्परागत नैतिक मूल्यों से अवगत कराएँ। ये दुर्लभ कार्य सिद्धान्तों से ही नहीं होगा बल्कि स्व आचरण द्वारा इन बच्चों के कोमल मस्तिष्क के भव्य द्वारा को खोला जा सकता है। तभी वे आगे चलकर अपने राष्ट्र व धर्म के प्रति कतर्ब्यपरायण व निष्ठावान व सकेगें। असन्तोष को दूर करना सामाजिक स्वस्थ और राजनीतिक व्यवस्था दोनों दृष्टियों से आवश्यक है। युवा नैतिक चेतना के निराकरण के लिए राष्ट्रीय जीवन स्तर के योग्य जीविकोपार्जन करने के लिए प्रत्येक शिक्षित अशिक्षित युवक को रोजगार दिये बिना युवकों का असन्तोष कम नहीं हो सकता। भविष्य में बेरोजगारी की समस्या का निराकरण करने के लिए शिक्षा-नीति में परिवर्तन करना होगा। महाविद्यालयों एवं विश्वविद्यालयों को राजनीतिक केन्द्रों के बजाय व्यावसायिक प्रशिक्षण-केन्द्र बना देने से युवा वर्ग का तथा समाज का बहुत कुछ लाभ होगा।

प्रशासनिक और राजनीतिक भ्रष्टाचार को समाप्त किये बिना युवा पीढ़ी का असन्तोष कम नहीं हो सकता और इसे सही दिशा भी नहीं दी जा सकती इस दृष्टि से नैतिक क्रान्ति होना आवश्यक है। जिसमें युवाओं में नैतिक चेतना का विकास करने के लिए शिक्षा विद् ही युवाओं की मस्तिष्क में प्रवाहित अनैतिक धारा की दिशा को बदल कर उसका सर्वोत्कृष्ट विकास की दिशा में ढाल सकते हैं।

#### निष्कर्ष :

युवा वर्ग में नैतिक चेतना इस भटकाव पर नियन्त्रण करने के लिए सर्वप्रथम पाश्चात् सभ्यता का अंधानुकरण छोड़ना होगा। हमारे देश में व्यपित मनोरंजन के साधनों को भी हमारी भारतीय संस्कृति के अनुकूल होना होगा।

इसके अतिरिक्त निर्धनता, बेरोजगारी आदि समस्या की ओर भी सरकार को समुचित कदम बढ़ाना होगा तभी नैतिक शिक्षा का प्रसार, युवाओं का दृढ़ संकल्प, महत्वाकांक्षाओं को भी युवाओं को अपने ऊपर हावी न होने देना, साथ ही मेहनत, ईमानदारी संयम व लगन से ही स्वर्णिम भविष्य का निर्माता बन सकता है।

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## **A STUDY OF THE EFFECT OF LEADERSHIP STYLES OF SCHOOL PRINCIPAL ON TEACHERS' JOB SATISFACTION**

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### **INTRODUCTION**

The Principal is the keystone in the arch of school administration, she is the hub of educational effort, and she is organizer, leader, governor, teacher, guide, philosopher and friend.

Since the emphasis of the present research problem is on the impact of different styles of functioning of school Principals on the job satisfaction of teachers, hence it becomes appropriate to discuss what leadership is, what is role of leadership, what are various styles of leadership, various theories of leadership styles and their impact on job satisfaction of teachers.

### **DEFINITION OF THE KEY TERMS**

After defining the variables of the study, it becomes appropriate to define the two main key terms viz: leadership styles and job satisfaction of teachers, as used in the present study.

#### **Meaning of leadership**

Leadership generally defined as influence, the art or process of influencing people so that they will strive willingly and enthusiastically towards the achievement of organizational goals. George R Terry says "Leadership is the ability of influencing people to strive willingly for group objectives." Koontz O Donnell has defined leadership as "influencing people to follow the achievement of a common goal. It is the ability to exert interpersonal influences by means of communication towards the achievement of a goal".

#### **Leadership and its components**

One concept that is found in common among the leaders is their ability to influence others. In some situations a person may be compelled by his followers to



head and in other situations a leader may be merely tolerated for the time being. A complete definition of leadership must include the nature of the context in which leadership occurs. Jago (1992) has defined leadership as the use of non-coercive influence to direct and co-ordinate the activities of members of an organized group towards the accomplishment of group objectives.

### **Importance of leadership**

Leaders perform several essential functions for the group they serve. They are responsible for generating and maintaining the required level of effort needed from individual group members. Leaders are also responsible for directing the effort of group members in ways that promote group survival and goal accomplishment. Leaders help move a group in directions consistent with its mission and at the same time hold the group together.

To sum up, leadership is cohesive force, which holds the group intact, the disciplinary power that keeps the group working, the electric current that energizes the human action, the insight that converts despair into hope. In fact there is no substitute for effective leadership.

### **LEADERSHIP STYLES**

Leadership requires followership and there are various approaches to the study of leadership ranging from trait to the continuum approach. One such approach focuses on three styles, the Autocratic, the Democratic and the free-rein. Likert identified four systems of management ranging from exploitative to authoritative through participative group, which he considers the most effective system. The managerial grid identifies two dimensions: concern for production and concern for people. Based on these dimensions, five extreme styles are identified. All approaches to leadership have their own advantages and disadvantages.

After extensive study of leadership styles, the present study makes an attempt to assess the effort of four different styles viz: Autocratic, Benevolent-Autocratic, Democratic and Laissez-faire on teachers' job satisfaction, based on amalgamated theoretical views of different researchers and thinkers.

### **Likert's Four Styles of Management**

Rensis Likert proposes four basic styles of organizational leadership that have evolved from many years of research. A brief description of the Likert's four mgt



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style is given below:-

- a. Autocratic** - The managers under this system make all work-related decisions and order their subordinates to carry out the decisions. The subordinates have absolutely no say in the decision making process. The communication is highly formal in nature and downward in direction. Such managers believe in threats and punishments to get things done. They exercise strict supervision and control over the subordinates. The principle in this is- the leader orders and the subordinates obey.
- b. Benevolent-Autocratic**- In this, managers allow some freedom to subordinates to carry out their tasks within the prescribed limit. Subordinates are regarded for accomplishment of goals. The manager adopts patronizing attitudes towards the obedient and faithful subordinates. But subordinates who do not carry out their task are treated harshly. Thus, carrot and stick approach of motivation is adopted under this system.
- c. Laissez-faire** - Laissez-faire leadership, also known as delegative leadership, is a type of leadership style in which leaders are hands-off and allow group members to make the decisions. Researchers have found that this is generally the leadership style that leads to the lowest productivity among group members. Group members are expected to solve problems on their own.
- d. Democratic** – Under this, managers are friendly and supportive in their attitude towards the subordinates. In addition to economic rewards, subordinates are given a sense of purpose and feeling of worth. The communication system is completely open. The democratic leadership style is characterized by the leader spending time listening to people and seeking their ideas. It was found to increase flexibility and responsibility within organizations. In addition, workers' morale was improved when leaders demonstrated democratic leadership. It is best used when leaders are not sure what the best direction is for the organization to take, and when they have able employees to include in decision making. However, it has negative aspects including long meetings, wasted time, escalating conflicts, and indecision.



Likert suggested that Democratic style is the ideal system towards which organizations should work. He found that organizations with this style outperformed those with other styles. Democratic is the best way to develop and utilize human resources. A democratic manager enjoys full trust and confidence of his subordinates.

### **CONCEPT OF JOB SATISFACTION**

Teaching is by far the largest of those occupations, which lay claim to professional status. Status is the relative standing of an individual in the eyes of other members of society. Like the personnel working in various departments, teachers of education departments should also get proper facilities with regard to their conditions of work service. But it was observed conditions of teachers serving in different institutions are far from satisfactory. Teachers' have no freedom in educational matters. The economic condition of teachers is also not satisfactory. They yield no respect in the society. This has made them pessimistic. No regular avenues of promotions are available to them. This has an adverse effect on their efficiency and job satisfaction.

Job satisfaction is a positive emotional state that occurs when a person's job seems to fulfill important job values, provided these values are compatible with one's needs.

Brook, Russel and Price, (1988) stated that job satisfaction indicates an individual's general attitude towards her job. Caldwell, (1991) noted that job satisfaction is an attitude that individuals maintain about their job. Their attitude develops a positive emotional state, resulting from the personal analysis of one's work. Knoop, (1994) stated that an individual's judgment of what takes place at work would be expected to influence her satisfaction with the job.

### **CONCLUSION- JOB SATISFACTION**

Job satisfaction is the result of various attitudes possessed by an employee. In this study, these attitudes are related to the job and concerned with such specific factors as to the styles of functioning of school Principals, supervision, condition of work, fair evaluation of work, fair treatment of employer etc.

### **TOOLS USED IN THE STUDY**

Since the study required to categorize the private school Principals on the basis of their leadership behavior into Autocratic, Democratic, Benevolent Autocratic and

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Laissez-faire leadership styles and the study required to find the impact of Principals' styles of functioning on job satisfaction of teachers, two categories of tools have been used-

- i. Tools adopted
- ii. Tools developed
- i. **TOOLS ADOPTED-** to categories the private schools on the basis of their leadership behavior into Autocratic, Democratic, Benevolent Autocratic and Laissez-faire leadership styles; leader behavior description questionnaire was adopted.

**LBDQ (leader behavior description questionnaire)** this was adopted to obtain descriptions about leadership behavior of Principals by the teachers of their school. This was revised by Ralph M Stogdill (1963)

#### **Scoring of the questionnaire- LBDQ**

The LBDQ contains five possible responses to each question i.e. A, B, C, D and E. the questionnaire was administered to school teachers both the Post Graduates and Trained Graduate Teachers working under the Principal whose leadership behavior was to be studied. The respondents were instructed that A, B, C, D and E stood for 'Always', 'Often', 'Occasionally', 'Seldom' and 'Never' respectively. They were told to tick or encircle any one of the five choices for each question.

#### **SUMMATED SCALES (OR LIKERT TYPE SCALES)**

Likert type scales are developed by utilizing the item analysis approach wherein a particular item is evaluated on the basis of how well it discriminates between those persons whose total score is high and those whose score is low. Those items or scores that best meet this sort of discrimination test are included in the final instrument.

Thus, summated scale consists of a number of statements which express either a favorable or unfavorable attitude towards the given object to which the respondent is asked to react. The respondent indicates his agreement or disagreement with each statement in the instrument. Each response a given a numerical score, indicating its favorableness or unfavorableness, and the scores are totaled to measure the respondent's attitude.

Most frequently used summated scales in the study of social attitude follow





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positively related to Principals' style of functioning.

## **EDUCATIONAL IMPLICATIONS**

Number of significant implications emanates from the foregoing conclusions. They may be described as-

The main aim of educational implication is to provide education in a better and improved form. For this, teacher-Principal relationship becomes the index of school climate. Though many factors contribute towards this but major factors considered are Principal-teachers' relationship and its impact on teachers' job satisfaction. Though Principal occupies the highest level in the administrative hierarchy, the role of teacher cannot be ignored. She occupies a key position in the educational process. Such teacher-Principal relationship flourishes under Democratic style of school Principals.

It is established fact that satisfaction brings good production. Now teaching is also considered as its output. If teachers are satisfied with their jobs, they will teach better, and better teaching will bring better results. If it is desired that teachers should attain job satisfaction, Principals will have to adopt a style of Democratic leadership.

The findings and conclusion also helped the investigator to recommend that Principal should try to provide a Democratic atmosphere in their institution giving more opportunity to teachers to be creative, giving them more freedom to choose their own methodology while teaching. Principal should provide more benefits and rewards than burden and costs for teachers. There must be positive exchange between Principal and teachers for group goals to be accomplished.

According to the findings of the present study it can be concluded that the Principal must establish Democratic relationship. This attitude here is not to reason why, but to carry out orders, good, bad or indifferent- will create the frustration among the teachers. The relationship must be Democratic. Teachers need to be given a much bigger share in the actual day to day administration of the school and the Principal should strive to establish support within the staff through informal and formal, individual and group consultations and conferences. There should be frequent staff meetings of the whole staff or sections of the staff, at which there is full and frank discussions and two way traffic of ideas on all matters pertaining to welfare of schools. Principals and teachers can educate each other about new developments in education theory and practice.



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Another implication of the study suggests that Principal should have adaptive style of leadership that leads to effectiveness. This becomes important implication for pre-service/in-service training programs of Principals. The Principal should be easy to access but certainly not one to be trifled with. She/he should see that she is respected but not feared.

## **RECOMMENDATIONS**

Considering the finding of this study, it was recommended that school principals should imbibe a mixture of autocratic and democratic styles of leadership in their school administration in order to enhance better job performance among teachers. As such, Principals could use the democratic style of leadership in some occasions. They should be autocratic in certain situations in order to increase productivity among teachers. The use of the Laissez-faire leadership style should be discouraged by school principals as it could not bring a better job performance among teachers. The State Ministry of Education should organize regular inspection to schools to monitor the style of leadership used by principals that could enhance better job performance among teachers.

## **SUGGESTIONS FOR FURTHER RESEARCH**

The present day situation requires research in the field of education on account of the growing emphasis on the Democratic way of living. Action research seems to be completely missing in our educational institutions; hence this should be taken care of.

Other suggestive areas of research in this field are as follows:

- a. A critical study of the supervisory problem of Principals of various schools of primary, middle and senior secondary schools can be taken up.
- b. A study of the effects of the supervisory behavior and practice of job satisfaction can be taken up.
- c. An investigation into the relationship between the administrative authorities and the Principal of the higher secondary school can also become an interesting topic for further research.
- d. An investigation into the sources of dissatisfaction among school supervisors can also be further taken up.



- e. A study can also be done on the administrative behavior of Principals in relation to selected school variables.
- f. A further similar research may be done by including Government schools also.
- g. Relative contribution of schools Principals, having different styles of leadership, on variables like school results, co-curricular activities, etc, may also be studied.

## CONCLUSION

The present study was undertaken to find out what is the impact of different styles of functioning of school Principals on job satisfaction of teachers. The data collected was analyzed and interpretations led to the findings. This research directly highlights how to improve academic excellence by adopting the right style of functioning by Principals.

Experiences of teachers under different styles of functioning have been found to be different. Conclusively it can be said that in training programs focus should be shifted to improve behavior and attitude of Principals. Last but not the least- this research helps in creating an effective school climate.

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## IMPERATIVE ISSUES OF AD HOC ON DEMAND DISTANCE VECTOR (AODV)

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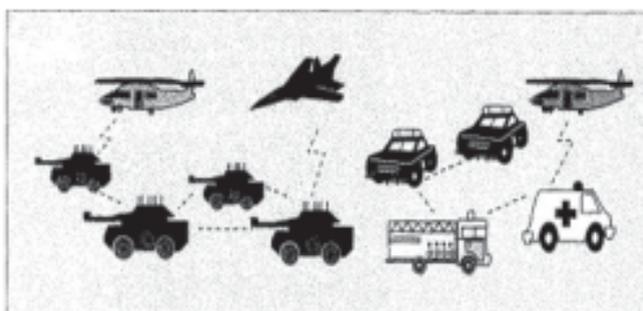
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### I. Introduction:

A **mobile ad-hoc network (MANET)** is a self-configuring infrastructure less network of mobile devices connected by wireless links. *Ad-hoc* is Latin and means “for this purpose”. A MANET is a type of ad hoc network that can change locations and configure itself on the fly. Because MANETS are mobile, they use wireless connections to connect to various networks. This can be a standard Wi-Fi connection, or another medium, such as a cellular or satellite transmission. Some MANETs are restricted to a local area of wireless devices (such as a group of laptop computers), while others may be connected to the Internet. For example, A VANET (Vehicular Ad Hoc Network), is a type of MANET that allows vehicles to communicate with roadside equipment. While the vehicles may not have a direct Internet connection, the wireless roadside equipment may be connected to the Internet, allowing data from the vehicles to be sent over the Internet. The vehicle data may be used to measure traffic conditions or keep track of trucking fleets. MANET can be established extremely flexibly without any fixed base station in battlefields, military applications, and other emergency and disaster situation.



**Figure1: An example of MANET applications**



Because of the dynamic nature of MANETs, they are typically not very secure, so it is important to be cautious what data is sent over a MANET.

Since there is a lack of infrastructure and the node mobility is way larger than in wired network new routing protocols are proposed to handle these new challenges. With the nature of ad hoc networks was the idea of on demand routing protocols born and these have been shown more efficient in both computational and communicational resources. Although often less efficient there exist algorithms, which are more like the ones that are used in the wired networks. These provide faster routing but at the cost of more computational resource or periodic updates of routes that are seldom used.

Cellular Network	Ad Hoc Network
Fixed, pre-located cell sites and base stations	No fixed base stations, very rapid deployment
Static backbone network topology	Highly dynamic network topologies with multi-hop
Relatively benign environment and stable connectivity	Hostile environment (losses, noise) and sporadic connectivity
Detailed planning before base stations can be installed	Ad Hoc network automatically forms and adapts to changes

Table 1: Differences between ad hoc and cellular networks

The mobile ad hoc network has the following typical features:

1. Unreliability of wireless links between nodes. Because of the limited energy supply for the wireless nodes and the mobility of the nodes, the wireless links between mobile nodes in the ad hoc network are not consistent for the communication participants.
2. Constantly changing topology. Due to the continuous motion of nodes, the topology of the mobile ad hoc network changes constantly: the nodes can continuously move into and out of the radio range of the other nodes in the ad hoc network, and the routing information will be changing all the time because of the movement of the nodes.
3. Lack of incorporation of security features in statically configured wireless routing protocol not meant for ad hoc environments. Because the topology of the ad



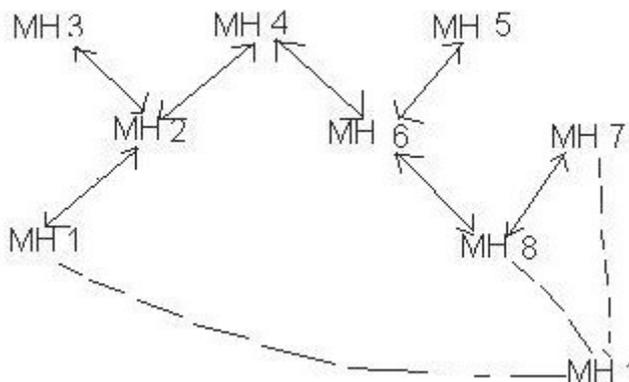
hoc networks is changing constantly, it is necessary for each pair of adjacent nodes to incorporate in the routing issue so as to prevent some kind of potential attacks that try to make use of vulnerabilities in the statically configured routing protocol.

Because of the features listed above, the mobile ad hoc networks are more prone to suffer from the malicious behaviours than the traditional wired networks. Therefore, we need to pay more attention to the security issues in the mobile ad hoc networks. MANET is particularly vulnerable due to its fundamental characteristics, such as open medium, dynamic topology, distributed cooperation, and constrained capability. Each mobile node operates not only as a host but also as a router.

## II. Routing Protocol in Ad Hoc Networks

In the case of a mobile ad hoc network the topology is highly dynamic. This leads to quickly changing link states. Some links get broken while other pairs of routers create other links. Routing plays an important role in the security of the entire network. In this figure the mobile host 1 (MH1) is moving from the vicinity of MH2. As it gets closer to MH7 and MH8 new links are established to these hosts. These characteristics are different from the one that appears in most wired networks. The routing algorithms used in the wired case have problems with topology changes, and if these happen often the problems are just getting worse. Another problem that arises in wireless networks that is not as common in wired routing is the asymmetrical links. That is, one node can reach another but the return path is not the same.

**Figure2:An adhoc mobile nodes**





**a. Routing protocols of MANETs can be classified into two categories • F**

- Table-driven
- On demand

**III. The routing protocols for a MANET are**

- Destination-sequenced distance-vector routing protocol (DSDV)
- Dynamic source routing protocol (DSR)
- Ad hoc on-demand distance vector (AODV)

**Destination-Sequenced Distance Vector Protocol**

Destination-Sequenced Distance Vector (DSDV) is an ad hoc version of the commonly known distance vector algorithm. To overcome the problems with slow convergence in the ordinary distance vector algorithm and prevent routing loops in highly dynamic topologies this algorithm adds a sequence number to the routing table entries. Each node has individual sequence number. The destination nodes update the sequence numbers when new links to them are detected. Also, when a node detects a broken link it sends this out together with an updated sequence number. The receiving nodes check for higher or equal sequence numbers. If a route update packet is received with lower sequence number it is discarded. In the case of a sequence number that is equal to the one already held the metric is checked to see if it is better or worse.

To save bandwidth the protocol uses two types of route update messages. First one is a full dump that a node sends to all its neighbours. These messages contain the complete routing table. The other variant is an incremental update that only updates the routes that has changed since the last full update. In this way it is possible to send only small packets, conserving bandwidth and transmission time for most cases. When these incremental updates are getting too big the node can send a full dump instead in hope to be able to send smaller packets after that.

To get rid of the possibility of an oscillating system update messages are only sent out after a delay. After this delay the routing information has stabilized and is not that sensitive to oscillation. The delay is computed using a running, weighted average over the most recent updates.

Since the topology might change the route update messages are sent out at certain time intervals. However, there is no need for synchronizing the different nodes



as the update events are handled asynchronous. The use of these repeating update messages keeps all the nodes busy when not in need for communication. However, when the needs arrive all nodes are ready to forward the data directly.

The DSDV algorithm gets rid of the undesirable properties that the original algorithm possesses. It propagates the bad news of broken links fast and keeps the path updates stable. Also, using the sequence number rules for updating distance vector values it guarantees loop-free paths to each destinations at all times.

#### **a. Dynamic Source Routing**

The Dynamic Source Routing (DSR) protocol is completely demand based. It does not need any kind of periodic updates or node announcement messages. Instead, the protocol acquires the needed routing information on demand. The routing protocol is divided into two parts. The first is the route discovery and the second is route maintenance.

The discovery phase is initiated when a node needs to send information to another node that is not available in its current path cache. The node broadcasts a special discovery packet with the destination and a unique identification number. All nodes within the wireless transmission range receive the packet. They, if they are not the destination, add their node address to the path in the packet header and retransmit the discovery packet. A packet with the same identity as has already been seen is discarded. Also, if the node itself is mentioned in the path header the packet is discarded. This technique efficiently cuts down on duplicate packets in the air. When the packet finally finds its way to the destination, the destination node returns a route reply. The reply is sent using the routing cache if present. Otherwise a new route discovery is initiated but in this case with the route reply piggy backed on the discovery packet. If this piggybacking is not allowed there is a great risk of infinite looping of route discoveries. Another way is to reverse the source path collected by the route discovery; however, this takes for granted that all links are bi-directional which may not always be the case. A simple example of the broadcast of source route discovery packets is shown in figure3.

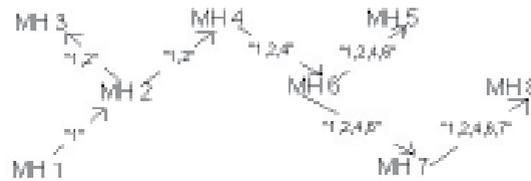


Figure 3: DSR with Initiator MH 1 and Target MH 8

After a path has been discovered the second phase of the protocol is in use. This is the maintenance phase. During this phase all communications are done using the previously found paths. Each node on the path is responsible for resending packets that are not acknowledged by the next hop node. After a maximum limit number of retries a route error message is sent back to the source node indicating that the path is broken.

A number of different optimizations of the protocol are possible. For example, each node on a path that is not actually originating a route discovery can cache some part of the messages that they see go by. This can speed up route discovery but may also place some overhead on the software and the processing time of the processor.

### **b. Ad Hoc On-Demand Distance Vector Routing**

In contrast to the DSDV, the Ad hoc On demand Distance Vector (AODV) is an on demand protocol. It borrows the idea of route discovery and maintenance while still using a distance vector approach to the routing.

Each node keeps a distance vector for each known destination and its next hop neighbour. If a destination that is needed is not in the list a route discovery is initiated. By issuing a broadcast packet to its neighbours containing source and destination addresses and a sequence number the node hopes to find a path to the destination.

If a node, that is not the actual destination, receives a request it checks its own routing table. If it can find the destination there it replies to the source node with this information. If, however, this information is not in the node's routing table it adds the source as a destination in its own table using appropriate hop count, increments the request packet's hop count and rebroadcasts it to its neighbours.

This procedure is continued until the destination is reached and a route reply packet is sent back to the source. After this all data traffic is routed using the discovered



path. If the nodes move and some links break a route error packet is sent out to tell the nodes that the path is no longer available. If this happens the source node initiates a new route request. An example of a route discovery and path setup is shown in Table 2.3

Route Request		Route Reply	
1	S →*: < RREQ, S, D, 0, S >	5	D → C: < RREP, S, D, 0, D >
2	A : d[S] = 1, n[S] = S A →*: < RREQ, S, D, 1, A >	6	C : d[D] = 1, n[D] = D C → B: < RREP, S, D, 1, C >
3	B : d[S] = 2, n[S] = A B →*: < RREQ, S, D, 2, B >	7	B : d[D] = 2, n[D] = C B → A: < RREP, S, D, 2, B >
4	C : d[S] = 3, n[S] = B C →*: < RREQ, S, D, 3, C >	8	A : d[D] = 3, n[D] = B A → S: < RREP, S, D, 3, A >
5	D : d[S] = 4, n[S] = C		S : d[D] = 4, n[D] = A

**Table 2.3.** Simplified route discovery example in AODV. Host S is the initiator of the route request (RREQ) and the destination is host D.

**a. Open Problems in Ad Hoc Networks**

- Scalability
- Energy-efficiency
- Quality of service (QoS)
- Security
- Robots and sensors
- Lack of well defined and widely accepted models for RF path attenuation, mobility, and traffic

Scalability in ad hoc networks can be broadly defined as whether the network is able to provide an acceptable level of service to packets even in the presence of a large number of nodes in the network. As in wired networks, this capability is closely related as to how quickly network protocol control overhead increases as a function of an increase in the number of nodes and link changes.

Since ad hoc networks do not assume the availability of a fixed infrastructure,



it follows that individual nodes may have to rely on portable, limited power sources. The idea of energy-efficiency therefore becomes an important problem in ad hoc networks. Surprisingly, there has been little published work in the area of energy-efficiency of ad hoc networks until fairly recently.

Most existing solutions for saving energy in ad hoc networks revolve around the reduction of power used by the radio transceiver. At the MAC level and above, this is often done by selectively sending the receiver into a sleep mode, or by using a transmitter with variable output power (and proportionate input power draw) and selecting routes that require many short hops, instead of a few longer hops.

The ability of fixed, wireless networks to satisfy quality of service (QoS) requirements is another open problem. Ad hoc networks further complicate the known QoS challenges in wire-line networks with RF channel characteristics that often change unpredictably, along with the difficulty of sharing the channel medium with many neighbours, each with its own set of potentially changing QoS requirements. A similar multi-layer issue is that of security in ad hoc networks. Since nodes use the shared radio medium in a potentially insecure environment, they are susceptible to denial of service (DoS) attacks that are harder to track down than in wired networks. Also, since a large portion of the network nodes will be dynamically reorganizing and forwarding packets on behalf of others, ad hoc networks are particularly susceptible to the injection of bogus network control traffic. Finally, ad hoc networks can be victims of specialized kinds of security attacks such as DoS attacks that cause a node to use its transceiver so much that it depletes its battery. A newly emerging challenge is the design of ad hoc networks that can take advantage of the properties of new hardware technologies. One example is that of smart (beam-forming) antennas. As in cellular networks, the ability to focus or steer RF energy can provide increased throughput and reduced delay through an increase in spatial reuse. However, most protocols have been designed for omni-directional antennas, resulting in inefficiencies or even failure when used with beam-forming antennas. Robots and sensors also provide new hardware capabilities ripe for new methods of enhancing ad hoc efficiency.

Finally, a problem that overarches all these others is the lack of well defined and widely accepted models for RF path attenuation, mobility, and traffic. These tightly interrelated models are needed for quantifying and comparing ad hoc system



performance to a common baseline. The physical processes of refraction, reflection, and scattering of RF radiation is moderately well understood but difficult to quantify in detail when including a large number of complex objects such as foliage, cars, or buildings. In contrast, the pattern of movement of the nodes and the flow of traffic can certainly be easily described in detail, but the dependency on the target application, the lack of existing systems available for study, and the likely interactions between connectivity, movement, and user applications, causes these models to be ill-defined.

#### **IV. Proposed solutions for some problems**

Researchers proposed possible solution to the black hole problem, is to disable the ability to reply in a message of an intermediate node, so all reply messages should be sent out only by the destination node. But there are two disadvantages in this method. Another solution is using one more route to the intermediate node that replays the RREQ message to check whether the route from the intermediate node to the destination node exists or not. The proposed method require each intermediate node to send back the *nexthop* information when it send back a RREP message

The routing overhead is greatly increased if we do the process every time an intermediate node sends back a reply message. With this method the AODV protocol can be secured from black hole attacks and achieve increased throughput, while keeping the routing overhead minimal.

#### **Conclusion**

Routing security in wireless networks appears to be a nontrivial problem that cannot easily be solved. It is impossible to find a general idea that can work efficiently against all kinds of attacks, since every attack has its own distinct characteristics.

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## A COMPARATIVE STUDY OF PHYSICAL GROWTH AND NUTRITIONAL STATUS IN JATAPU TRIBAL CHILDREN OF VIZIANAGARAM DISTRICT

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### **INTRODUCTION:**

Anthropometry means the measurement of men whether living or dead, and consists of primarily in the measurement of the dimensions of the body. Growth and development are indicators of the health and nutritional status of a population. The human phenotype is a result of different interacting factors. On one side, there is the genetically programme which determines the normal growth pattern of the child. On the other side growth pattern are influenced by nutritional and hygienic factors and secondarily or indirectly by the socio-economic conditions. Epidemiological factors are to be taken in to knowing the effects of various factors on growth. The severity of the stress, the length of this stress and the age of stress are observed to have considerable influence on growth (susane 1987).

### **MATERIAL AND METHODS:**

The present study was under taken on Jatapu boys and girls of Komarada mandal, Vizianagaram district, Andhra Pradesh. Respondents were drawn at random from the study villages to study growth and nutrition. The field work team consisted of students from physical, and social anthropology specialization guided by experienced teachers. The students were assigned different problems in their respective fields. The villagers were randomly selected and a pilot team was sent well in advance to collect the first hand information regarding the tribe under study. On the basis of the teams report, the field investigation was under taken in certain identified villages with accurate design. The subjects were randomly selected from the following 14 villages of Komarada mandal, Vizianagaram district, Andhra Pradesh.

The purpose of the present study is together anthropometric data on the body



dimensions of the village and school children. It is purely random selection and the data was collected from the village and school children belonging to Jatapu tribal population. Komarada mandal was selected in the present study from which the sample has been drawn. About 91 some tribal boys and 84 girls were randomly selected in the age range of 0+ to 5+ years.

The present study was aimed to study the effect of age on different body measurements throughout the period, regression coefficients, amount & rate of growth and also to study the nutritional status and compare them to find out the differential status and to compare this population with the available data on Indian populations, to find out the population differences in physical growth and nutritional status.

## RESULTS AND DISCUSSIONS

The analysis can be divided into two parts physical growth and nutritional status. The mean values of various measurements in 0+ to 5+ years age groups of Jatapu boys and girls are detailed as follows. Mean body weight among various age groups: The mean body weights were recorded between 5.92 kg to 13.25 kg. among the some tribal boys and 6.82 kg to 12.33 kg in girls. The weights were observed to be increasing with advancement in age (0+ to 5+ years) at an average of one and half kg per year in both sexes. Here also the difference was very much significant in the age groups 2+ to 3+ years at 1% level in boys versus girls. The maximum mean annual increase has occurred between 2+ and 3+ years (Table-1).

**Table -1 Mean, standard deviation, annual increments and T-test significance in body weight (kg) (o+ to 5+) among tribal boys and girls.**

Boys					Girls				
N	X	SD	An	Age	N	X	SD	An	T
5	5.92	1.26	-	0+	13	5.82	1.78	-	0.13
14	7.29	1.25	1.37	1+	16	6.86	1.15	1.04	0.97
19	9.42	1.39	2.13	2+	22	9.56	1.39	2.70	0.31
22	11.28	1.74	1.86	3+	12	9.66	1.37	0.10	2.97***
25	12.37	1.39	1.09	4+	15	11.92	1.66	2.26	0.86
6	13.25	1.57	0.88	5+	6	12.33	0.81	0.41	1.26

**Significant at 5% level \*\* significant at 1% level \*\*\* significant at 0.1% level**



1. Mean (height) stature among various age groups: The mean stature were recorded between 60.82 cm to 98.50 cm among the some tribal boys and 61.17 cm to 94.16 cm in girls. The stature were observed to be accelerating sturdily with advancement in age at an average of 6 cm per year in both sexes. Here also the difference was very much significant in the age groups 2+ and 3+ years at 5% level in boys versus girls. The maximum mean annual increase or juvenile bput has occurred between 4+ and 5+ years. (table -4, fig: 2).
2. Mean upper arm circumference among various age groups: The mean upper arm circumference were recorded between 13.62 cm to 15.42 cm. among the some tribal boys and 13.42 cm to 16.09 cm in girls. The upper arm circumference was observed to be increasing with age at an average of quarter cm per year in both sexes. Here the difference was not significant in the age groups 0+ to 5+ years in boys versus girls. The maximum mean annual increase has occurred between 1+ and 2+ years in boys and 3+ and 4+ years in girls. (table-8, fig.6.)

### **Regression lines:**

This deals with the correlation matrices between age and all twelve measurements. All the values of 'r' are positive showing a direct relationship between age and different measurements.

### **Nutritional status:**

The distribution of some tribal boys aged 0+ to 5+ year according to weight for age shows 10.98 percent of normal, 7.69 percent of grade- I, 19.78 percent of grade -II and 61.54 % of grade-III malnourished were observed . (table -22).

The distribution of some tribal girls aged 0+ to 5+ years according to weight for age shows 20.23 % of normal, 13.94 % of grade-I, 17.85 % of grade- II and 50.00 % of grade -III malnourished were observed (table-23).

The distribution of some tribal boy aged 0+ to 5+ year according to height for age shows 32.96 % of normal, 10.98 % of grade- I, 14.28% of grade -II and 41.75 % of grade -III malnourished were observed.(table-24). The distribution of some some tribal girls aged 0+ to 5+ year according to height for age shows 28.57 % of normal,



15.47% of grade-I, 13.09 % of grade-II and 42.85% of grade-III mal nourished were observed. (table-25).

The distribution of some tribal boys aged 0+ to 5+ year according to upper arm circumference for age shows 24.17 % of normal, 9.80% of grade-I , 26.37 % grade-II and 39.56 % grade- III mal nourished were observed. (table -26). The distribution of some tribal girls aged 0+ to 5+ year according to upper arm circumference for age shows 28.57 % of normal, 13.09 % percent of grade –I, 27.38%, grade-II and 30.95% grade-III mal nourished were observed. (table-27). The distribution of some tribal boys aged 0+to 5 +year according to triceps for age shows 32.96 % of normal, 12.08 % of grade-I, 14.28% of grade-II and 40.68 % grade-III mal nourished were observed. (table – 28). The distribution of some tribal girls aged 0+ to 5+ year according to triceps for age shows 28.57 % of normal, 15.47% of grade-I, 13.09% of grade-II and 42.85 % grade –III mal nourished were observed. (table-29).

**Table:1 Sample size of some tribal boys and girls according to the age groups**

Age group	Boys	Girls
0+	5	13
1+	14	16
2+	19	22
3+	22	12
4+	25	15
5+	6	6

**Table – 4: Mean, standard deviation, annual increments and T-test significance in height (cm) (0+ to 5+...) among some tribal boys and girls.**

Boys					Girls				
N	X	SD	An	Age	N	X	SD	An	T
5	60.82	4.7	-	0+	13	61.17	7.80	-	0.17
14	70.37	7.03	9.89	1+	16	71.06	6.15	9.89	0.28
19	78.88	9.02	3.04	2+	22	74.10	16.24	3.04	1.18
22	84.84	5.43	5.96	3+	12	81.33	5.74	7.23	1.73*
25	90.62	6.31	5.30	4+	15	86.63	9.14	5.30	1.49
6	98.50	6.25	7.53	5+	6	94.16	2.85	7.53	1.54

Significant at 5% level \*\* significant at 1% level \*\*\* significant at 0.1% level.



**Table: 8 Mean, standard deviation, annual increments and T-test significance in Upper arm circumference (cm) (0+ to 5+) among some tribal boys and girls.**

Boys					Girls				
N	X	SD	An	Age	N	X	SD	An	T
5	13.62	1.52	-	0+	13	13.42	1.10	-	0.26
14	13.12	1.52	-0.5	1+	16	13.27	2.34	-0.15	0.20
19	13.85	1.34	0.44	2+	22	13.69	1.00	0.42	0.44
22	13.53	1.23	-	3+	12	13.84	1.77	0.15	0.35
25	14.10	1.02	0.57	4+	15	16.09	8.67	2.25	0.88
6	13.48	0.78	-0.62	5+	6	14.65	1.90	-1.44	1.38

Significant at 5% level \*\* significant at 1% level \*\*\* significant at 0.1% level.

**Table: 18 Regression characteristics for various measurements with age among some tribal boys.**

Variable	Regression Co-efficient	Regression equation	F	R2
Body Weight	0.81	0.81x+5.88	169.43	0.66
Height	0.78	0.78x+62.87	1458.4	0.62
Head	0.49	0.56x+42.68	41.87	0.32
Chest	0.56	0.56x+42.68	41.87	0.32
Abdomen	0.45	0.45x+39.23	22.71	0.20
Upper Arm	0.15	0.15x+13.27	2.15	0.02
Calf	0.20	0.20x+15.20	3.81	0.04
Triceps	0.09	0.09x+7.86	0.75	0.008
Biceps	0.34	0.34x+5.91	11.65	0.11
Fore Arm	0.40	0.40x+6.56	17.29	0.16
Sub scapula	0.28	0.28x+6.69	7.62	0.09
Supra I.Liac	0.34	0.34x+7.30	12.14	0.12
Abdomen (skin)	0.17	0.17x+5.65	2.66	0.3
Anterior Thigh	0.18	0.18x+9.86	3.13	0.03
Middle Calf	0.42	0.42x+11.04	19.23	0.7

Significant at 5% level \*\* significant at 1% level \*\*\* significant at 0.1% level.

**Table : 19 Regression characteristics for various measurements with age among some tribal girls.**

Variable	Regression Co-efficient	Regression equation	F	R2
Body Weight	0.80	0.80x+5.51	144.62	0.63
Height	0.65	0.65x+60.96	60.29	0.42
Head	0.41	0.41x+41.28	16.82	0.17
Chest	0.52	0.52x+39.96	30.74	0.27
Abdomen	0.45	0.45x+38.51	20.63	0.20
Upper Arm	0.22	0.22x+12.55	4.32	0.05
Calf	0.32	0.32x+14.84	9.70	0.10
Triceps	0.11	0.11x+7.44	1.00	0.01
Biceps	0.10	0.1x+5.77	0.83	0.01
Fore Arm	0.29	0.29x+6.07	7.34	0.08
Sub Scapula	0.27	0.27x+6.62	6.74	0.07
Supra I.Liac	0.54	0.54x+8.23	34.97	0.29
Abdomen(skin)	0.15	0.15x+5.82	2.06	0.02
Anterior Thigh	0.21	0.21x+10.07	3.78	0.04
Middle Calf	0.33	0.33x+10.67	10.07	0.10

Significant at 5% level \*\* significant at 1% level \*\*\* significant at 0.1% level.



**Table: 20 Value for 'R' for different measurement with age among some tribal boys.**

Correlation	R	Probable error of 'r'	T
Body Weight	0.81	0.01	15.33
Height	0.78	0.02	35.10
Head	0.48	0.05	78.38
Chest	0.56	0.06	49.11
Abdomen	0.45	0.05	25.10
Upper Arm	0.15	0.08	42.29
Calf	0.20	0.08	16.14
Triceps	0.09	0.09	17.75
Biceps	0.34	0.06	18.39
Fore Arm	0.40	0.06	20.32
Sub Scapula	0.28	0.07	17.68
Supra LLiac	0.34	0.06	14.56
Abdomen(skin)	0.17	0.08	16.39
Anterior Thigh	0.18	0.08	20.28
Middle Calf	0.42	0.06	28.03

Significant at 5% level \*\* significant at 1% level \*\*\* significant at 0.1% level.

**Table: 21 Value for 'R' for different measurement with age among some tribal girls.**

Correlation	R	Probable error of 'r'	T
Body Weight	0.79	0.02	15.99
Height	0.65	0.03	26.67
Head	0.41	0.06	42.29
Chest	0.52	0.05	37.27
Abdomen	0.44	0.06	28.13
Upper Arm	0.22	0.08	14.87
Calf	0.32	0.07	36.01
Triceps	0.11	0.09	17.29
Biceps	0.10	0.09	18.89
Fore Arm	0.29	0.07	26.13
Sub Scapula	0.27	0.07	23.95
Supra LLiac	0.54	0.05	22.04
Abdomen(skin)	0.15	0.09	17.02
Anterior Thigh	0.21	0.08	24.51
Middle Calf	0.33	0.07	28.48

Significant at 5% level\*\* significant at 1%level \*\*\* significant 0.1% level



**Table : 22 Distribution of some tribal boys Aged 0+ to 5+ years according to weight for age**

Weight for age				
Age	Normal (90%>)	Grade I (90-95%)	Grade II (85-90%)	Grade III (<85%)
0+	0	0	0	2
1+	0	0	2	8
2+	0	1	4	15
3+	3	2	6	18
4+	4	2	3	5
5+	3	2	3	8
Total	10(10.98%)	7(7.69%)	18(19.78%)	56(61.54%)

**Table: 23 Distribution of some tribal girls aged 0+ to 5+ years according to weight for age**

Weight for age				
Age	Normal (90%>)	Grade I (90-95%)	Grade II (85-90%)	Grade III (<85%)
0+	0	0	0	2
1+	0	0	1	7
2+	2	3	2	14
3+	4	2	3	15
4+	5	3	4	10
5+	6	3	5	4
Total	17(20.23%)	11(13.94%)	15(17.85%)	42(50.00%)

**Table: 24 Distribution of some tribal boys aged 0+ to 5+ years according to Height for age**

Weight for age				
Age	Normal (90%>)	Grade I (90-95%)	Grade II (85-90%)	Grade III (<85%)
0+	0	0	0	1
1+	0	0	0	6
2+	0	0	1	8
3+	10	4	2	10
4+	12	3	5	9
5+	8	3	5	4
Total	30(32.96%)	10(10.98%)	13(14.28%)	38(41.75%)



**Table: 26 Distribution of some tribal boys aged 0+ to 5+ years according to Arm circumference for age.**

Age	Weight for age			
	Normal (90%>)	Grade I (90-95%)	Grade II (85-90%)	Grade III (<85%)
0+	0	0	2	0
1+	0	0	3	3
2+	6	0	4	6
3+	4	1	6	8
4+	8	3	3	10
5+	4	5	6	9
Total	22(24.17%)	9(9.8%)	24(26.37%)	36(39.56%)

**Table: 27 Distribution of some tribal girls aged 0+ to 5+ years according to Arm circumference for age.**

Age	Weight for age			
	Normal (90%>)	Grade I (90-95%)	Grade II (85-90%)	Grade III (<85%)
0+	0	0	2	0
1+	0	0	3	3
2+	0	1	5	4
3+	6	1	6	5
4+	8	2	4	8
5+	10	7	3	6
Total	24(28.57%)	11(13.09%)	23(27.38%)	26(30.95%)

**Table: 30 Age wise comparison of body weight (kg) of some tribal boys & girls with other population.**

Age in years	Present study in boys	Chenchu	Gadaha	Porja	Present study in Girls	Chenchu	Gadaha
0+	5.92	6.06	5.72	5.40	5.82	4.33	5.54
1+	7.29	8.45	8.05	8.00	6.86	7.54	7.11
2+	9.42	10.25	8.55	9.00	9.56	9.90	8.00
3+	11.28	10.88	9.60	11.30	9.66	10.80	11.25
4+	12.37	13.47	13.20	12.55	11.92	11.73	11.60
5+	13.25	15.00	17.10	13.96	11.33	14.62	13.35

1. Dharma Rao, et al 1998
2. Dharma Rao, and Busi 1997
3. Dharma Rao, and Busi 1996



**Table: 40 Age wise comparison of body Stature (cm) of some tribal boys & girls with other population.**

Age in years	Present study in boys	Chenchu	Gadaba	Porja	Present study in Girls	Chenchu	Gadaba
0+	60.82	64.04	66.28	62.50	61.17	58.75	61.80
1+	70.37	74.02	78.33	76.96	71.06	71.00	80.28
2+	78.88	85.51	82.59	82.10	74.10	82.38	83.51
3+	84.84	89.18	87.62	91.31	81.33	88.93	91.81
4+	96.62	99.93	97.01	95.40	86.63	95.93	95.74
5+	98.50	105.84	107.44	103.05	94.16	107.24	96.40

1. Dharma Rao, et al 1998
2. Dharma Rao, and Busi 1997
3. Dharma Rao, and Busi 1996

## SUMMARY AND CONCLUSION:

In the preceding chapters, a cross sectional study of physical growth and nutritional status of the some tribal boys and girls of Komarada mandal aged between 0+ to 5+ years from Vizianagaram district, Andhra Pradesh has been dealt collaboratively. The sample for the present study consists of 91 boys and 84 girls of 0+ to 5+ years age group. The Anthropometric measurements viz. Body weight, stature, head circumference, chest circumference, abdominal circumference, upper arm circumference, calf circumference, triceps, biceps, subscapular, suprailiac, abdominal, anterior thigh, medial calf and fore arm were taken. The present study has been mainly aimed to study the physical growth and nutritional status, correlation and regression, co-efficient, amount and rate of growth and compare them to find out the differential growth patterns, and nutritional status studied through 15 linear, circumferential and skinfold measurements among tribal of the present study. The method adopted in the present study is the cross sectional type. The material is drawn from the Komarada mandal of Vizianagaram district. The subjects are chosen at random without any consideration of economic status. The ages were calculated after Eleventh and Tanner (1976). The present study 15 measurements recommended by Martin (1928) (weiner and Lourie) (1969) and W.H.O (1964) for the growth study have included the state of variability correlation and regression co-efficient regression lines and amount and rate of growth. The growth is evaluated of different age groups on regards to stature and body weight were progressively increasing with advancement



in age. It is observed that the rate of growth of variation is due to the differential rate of somatic growth. It will be inferred from the tables that the mean values for all of these measurements increase with advancement of age with a few fluctuating discrepancies of a minor nature because the data is cross sectional.

The mean values of all measurements have been plotted against mid values of respective age groups to obtain the pattern of linear growth in the form of distance curves among tribal boys and girls. The distance curves tell us at a glance the growth rate in a child. The velocity explains the gains per year in any measurements and they determine the pattern of growth of any particular period of time which is one year interval in the present study. The period of maximum annual increment has been taken as the highest peak velocity in different measurements concerned. Each of the 15 measurements under the study have been correlated by age the by process 15 value of correlation coefficients. These value ranges from a minimum to triceps 0.09 to a maximum in body weight 0.81 in boys and minimum in biceps 0.10 and maximum in body weight 0.79 in girls. The value of 'r' and positive and three values are lesser than  $+0.50$  but it indicating a higher order of relationships with age among boys and girls which are significant of 0.1% level of probability. The juvenile growth spurt of these boys and girls have been attained between 4+ and 5+ years. These boys and girls in the present study were more or less similar to that of other tribal population on of Andhra Pradesh the regression lines follows a linear pattern with maximum rate per unit of age. The distribution of some tribal boys and girls according to weight for age, height, for age, upper arm circumference for age and triceps skin fold for age shows higher percent of grade -III and malnourished were observed. The present study compared with other tribal boys and girls are more or less similar ato that of Porja, Gadaba, and Chenchu tribal boys and girls (Dharmarao and Busi 1996 to 1998) (Table-30 to 45). Thus both extensive and intensive research is conducted among tribal boys and girls to under stand disorders to suggest programmes and strategies for improvement of the nutritional status and proper management of health.



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## GROWTH AND DEVELOPMENT OF CHILDREN IN EDUCATION

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### INTRODUCTION

“By educating I mean an all-round drawing out Of the best in child and man- body, mind and spirit”

### GANDHI

“Education is the deliberate and systematic influenced person upon the immature through instruction, discipline and harmonious development of Physical, Social, Emotional, Moral, Aesthetic, Linguistic, Cognitive, spiritual powers of human being. According to their essential hierarchy, by and for the individual and social uses and directed towards the union of the educed with his creator as the final end”

### -REDDEN

The sole aim of education is to bring an all round development in the personality of educed. Educational Psychology, being a science and technology of education should help in the realization of this aim. Human life starts from a single from a fertilized cell. The constant interaction with the environment results in the growth and development of the innate capacities abilities and potentialities of the child. The aim of formal as well as informal education is to help in this path of growth and development.

“Education is natural harmonious and progressive development of man’s innate powers”

### PESTALOZZI

It is only with the knowledge of growth and development of learner at each stage of his life that it is possible for the teacher to render proper guidance, arrange the learning situations and plan the instructional programmes for bringing desirable harmonious development in their personalities.

**Ross** says that education must be religious, moral intellectual and aesthetic. None of these aspects may be neglected if a harmoniously developed personality is to

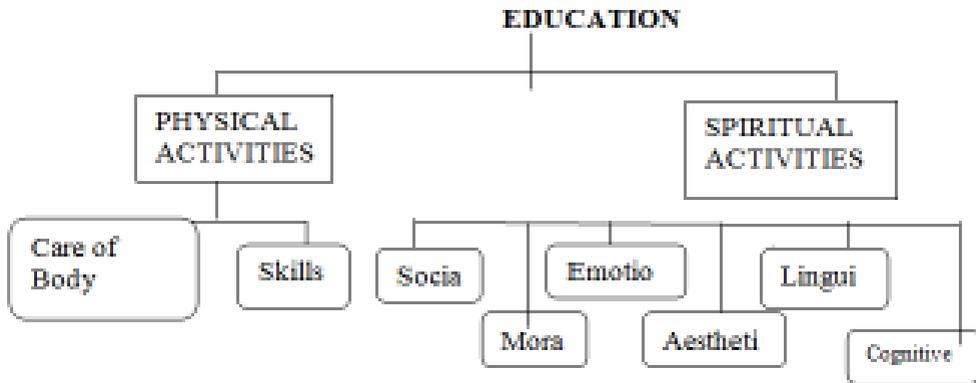
be the result. He has suggested two types of activities:-

- On the one hand, we should have Physical activities.

So far as physical activities are concerned the health and the fitness of the body must received due attention and secondly there must be a fostering of the body skills represented by subjects.

- On the other hand, we should have spiritual activity.

Spiritual activities include the intellectual, aesthetic, moral, and religious studies.



The purpose of education is the growth and development of the individual. The children of today are the citizens of tomorrow and will constitute the society. Education creates a desire for continued growth and development and provides means for its realization.

### **NEW WAYS OF LOOKING AT THE GROWTH AND DEVELOPMENT-**

Mostly these two terms are used interchangeably and taken synonymous terms. Both relate to the measurement of change occurred in the individual after conception in the womb of the mother. Change is the law of nature. An individual starting from fertilized egg turns in to a fully-fledged human adult. In this turn over process of growth and development.

The lifespan approach views development from a number of perspectives. Among these four perspectives, especially helpful for understanding children and adolescents: biological, psychological, sociological and historical perspective.



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❖ **Biological perspective-**

Development is the orderly set of changes that occur over a period time as individual's move from conception to death. Three features characterize these changes: growth, differentiation and complexity. Growth is the result of metabolic process in which proteins are broken down and used to make new cells. New cells are produced when old cells divide. This process is called mitosis. Gains in height of several inches each year are a striking example of growth during adolescence. Although this rapid growth may feel chaotic to adolescents and parents, it is still an orderly process. This is fortunate, because someone estimated that if we continued to grow at the rate governing the very first cell divisions of life we would weigh two billion times the weight of the earth by the time we reach adulthood. Development progresses from general to specific. This aspect of growth is known as differentiation. Differentiation brings new complexity and with it a need to organize new cells into a functioning whole.

❖ **Psychological perspective**

The significance of biological changes should be confused with inches, pounds, curves, or hairs. The real significance of biology, even when it is ones own is determined by others. Biological changes are always interpreted. Does muscular development signal a new maturity or the burden of adult responsibility? Does the onset of menstruation mean that one has become women, or the loss of childhood? A perspective on development considers the impact of changes such as these on adolescent's sense of mastery over his body and surroundings.

❖ **Sociological perspective and Historical perspective**

Seen from this perspective development involves a change in social roles. The sociological perspectives views development in terms of the progress that people make in passing through social institutions. Ones role in the family, in school or at work change with age. Individuals moves from role to role and enter and leave institutions in response to societal expectations for different ages. This pattern of change is known as age grading.

Societies like individuals change with time. Our society has changed in significant ways even within our lifetime. These changes affect us at every stage of the lifespan. For example, the experience of adolescence, or for that matter of any age, is as much



a product of our society as video games or personal computers. Even though the pattern of growth is the same for each generation, people age in different ways depending on when they are born. Their year of birth defines their cohort group. Members of a cohort group undergo similar experiences in the course of their development experiences they share and that frequently set them apart from other cohorts. Societal changes affect the availability of jobs or scholarships, the number of potential mates, the quality of schools and housing, and innumerable other life circumstances.

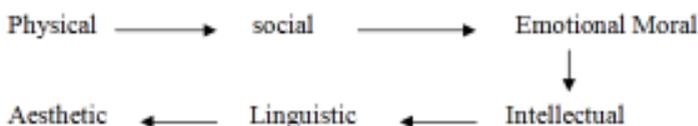
❖ **Stages of growth and development.**

The human organism life starts from a fertilized ovum in the womb of the mother. Not only before birth but also after birth to many years the child is a helpless organism until or unless he became a full confident man or women. He is helped by the continuous process of growth and development and attains maturity he is ceased to be called on adolescent and labeled as an adult member of society. He is supposed to play a responsible role in the society. Before being called as adolescent he is named as child or infant etc...

There are certain common practical or common developmental characteristics belong to each stage. The human organism shows peculiar and qualitative and quantities changes in his body and behavior with the help of which we can say at what particular as in individual belong to which definite stage of his life. The following are the different stages of growth and development.

1. Pre natal stage ( from conception to birth)
2. Stage of infancy ( From birth to 5 years)
3. Childhood stage ( from 6 to 12 years)
4. Adolescent stage (from 13 to 19 years)
5. Adulthood (above 20 years)

**Different Ares of all round Development**





## AN ASSESMENT OF THE ETHNO – DEMOGRAPHIC HISTORY AND CHANGES OF COOCH BEHAR

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Social boundaries are traversed with the assimilation of social groups from different ethnic origins where a distinct identity is created with each other, through a common heritage that is real or assumed. Ethnic identity is further marked by the researcher Seng Yang in the recognition from others of a group's distinctiveness and the recognition of common cultural, linguistic, religious, behavioural traits as indicators of contrast to other groups.<sup>1</sup>

Ethnicity is an important means through which people can identify themselves. According to "Challenges of Measuring an Ethnic World: Science, politics, and reality", a conference organised by Statistics Canada and the United States Census Bureau (April 1–3, 1992), "Ethnicity is a fundamental factor in human life: it is a phenomenon inherent in human experience." However, many social scientists, like anthropologists Fredrik Barth and Eric Wolf, do not consider ethnic identity to be universal. They regard ethnicity as a product of specific kinds of inter-group interactions, rather than an essential quality inherent to human groups.<sup>2</sup> Processes that result in the emergence of such identification are called ethnogenesis. Members of an ethnic group, on the whole, claim cultural continuities over time. Historians and cultural anthropologists have documented, however, that often many of the values, practices, and norms that imply continuity with the past are of relatively recent invention.<sup>3</sup>

India, throughout its ancient and modern history, has been witness to large scale ethnic assimilations and movements, which sometimes had been the source of significant conflict and instability, or have been integral in the maintenance or creation of new ethno-demographic patterns in a region. Large tracts even till date remain dominated by ethnic communities and multiple conflicts continue and flare up, now and then, on issues of ethnicity.



North Bengal remains perched on a distinct strategic corridor that remains vital as a communication link to the Himalayan state of Sikkim as well as the seven states of the Northeastern India. The myriad ethnic communities and traces present and residing without any significant conflict has been an ethno-demographic character of the region. However, the principal ethnic community that had played a dominant role all through is that of the Koch tribe, who claim to be the original *adivasi* or indigenous settlers of the region. Although terms such as *atavika* (Sanskrit for forest dwellers), *vanavasi* or *girijan* (hill people) are also used for the various tribes in India, *adivasi* carries the specific meaning of being the original autonomous inhabitants of the region and was specifically coined for that purpose. For that ethnic tribe and *adivasi* are not synonymous to each other as the former designates the entire community comprising of different ethnic groups whereas the latter designates a distinct ethnic community or group. The word *adivasi* has also developed for a connotation of the post autonomy which was disrupted during the British colonial period in India and has not been restored till date. Opposition to usage of the term is varied and it has been argued that the 'original inhabitant' contention is based on dubious claims and that the *adivasi* – non *adivasi* divide that has been created is more or less an artificial divide.

It is understandable that the name Cooch-Bihar is derived from the name of the Koch tribe that is indigenous to this area. The word "Bihar" is the Sanskrit word "bihar" (to travel) which means the land through which the "Koch" Kings used to travel or roam about. The name Cooch-Bihar is derived from the name of the Koch tribe (the Rajbongshi or Rajbanshi or Koch Rajbongshi) that is indigenous to this area. This tribe claims to be the original son of this land from the early centuries. They claim their historical supremacy on the legacy of the great Koch King that has ever rule in the Kingdom of Kamtapur is King Naranarayan, as well as his young brother Prince Chilaray. It has been claimed that the historical Kamtapur comprises of the total areas within the region of North Bengal, maximum parts of Assam, some parts of present Bangladesh and few parts of Bhutan, which remains close to the Indo-Bhutan borderlands.

In the olden days a greater part of the Kamrup made up the Koch state. The state of Kamrup was made up of four *Pithas*. Out of that Cooch Bihar was a part of Ratna Pitha. In the beginning of the 16th Century, this state emerged as a powerful



kingdom. In the beginning this state was known as Pragjyotish, Lohitya, Kamrup, Kamta, etc. In Bhaskar Verma's Tamralipi we found the name of 'Kamrup'. In the travel logs of Hiuen Tsang and Harischaritra we also discover the name of Kamrup. In 1586 British businessman Ralph Fich have stated the name 'Couch'. In Akbarnama we also found the name of 'Koch'. Stephen Casilla has stated the name 'Coch' and the capital as 'Biar'. In the 17th Century Von Dan Brooke's map there is a place mentioned as 'Ragiawerra Cosbhaar'. In one of the description by a Dutch Sailor we found the name 'Kosbia'. In the 'Bishwakosh' (Bengali for Encyclopedia) written by Nagendra Nath Bose, he stated that in the beginning the state of Cooch Behar was first stated as 'Bihar'. Later to distinguish between Mughal occupied province of Bihar the name of the state was changed to Koch Bihar, but this theory have some doubts as well. The kings of Koch dynasty such as Biswa Singha, Nara Narayan, Pran Narayan, etc. have their title of 'Kamteshwar'. The state of Cooch behar have been stated in various book, in different times as 'Bihar' or 'Behar' or 'Nijo Behar'. Even in the Cooch Behar Royal Government's letters, Notices, records, deeds, etc. we can see these names. But there are many theories or stories behind the naming of Cooch Behar.

History reveals that the ancient territory of Kamrup played a role in the development of the present region of Cooch Behar district in West Bengal. The Allahabad Pillar Inscription of the famous Gupta Emperor Samudragupta mentions about the existence of the Kamrup territory in the 4<sup>th</sup> century AD. During the 15<sup>th</sup> century AD, the western part of Kamrup came under the sway of the 'Khen' dynasty to usher a new kingdom there known as 'Kamta'. The present Cooch Behar owes its origin from this 'Kamta' land. The 'Khen' dynasty is noted for the kings of Niladhvaja, the founder of the dynasty, his son Chakradhvaja and grandson Nilambar (1473-98/99 AD). It is stated by some that the 'Koch' dynasty followed the lineage of Nilambar. But the most widely accepted view holds that king Maharaja Viswa Singha was responsible for establishment of an independent 'Koch' kingdom in 1510 AD or 1530 AD.

In the beginning, the capital of this kingdom was not static and became stable only when the same was shifted to Cooch Behar. The territory of Cooch Behar was known as 'Kamta' even during the period of Maharaja Viswa Singha and his son Maharaja Nara-Narayan. The Mughal forces grabbed certain portion of the 'Kamta'



kingdom in the middle of the 17<sup>th</sup> century AD. Later on the accounts of Badshahnama, Shah-Jaha-nama, Tarikh-I-Assam and the Alamgirnama ascribed this territory as Cooch Behar. It is, therefore, very much apparent that the 'Koch' kingdom was known as 'Kamta' even during the middle of the 17<sup>th</sup> century AD when the Koch kings like Maharaja Viswa Singh, Maharaja Nara Narayan and Maharaja Pran Narayan used the title 'Kamteswar' for themselves. The valor of the 'Koch' kings is known best by the prides of Maharaja Nara Narayan. He has issued his own coins.

Even though the presence of the Koch community has been prominent, but there also was the existence of myriad other tribes in the region. As for example, the history of the Bodo tribe and the Meches are a combination of many tribes and castes like the Rajbanshi of the east and the Rajputs of the west of India. The Astrics, the Aryans, the Mongols and the aborigines all appeared to have taken part in the formation of the Bodo tribe of today. According to O'Malley, Koch, Mech and Bodo or Bara, basically Tibeto-Burman, all connoted the same tribe and that there was free mixing of Aryans and aborigines. The Meches lived side by side with their other branches namely, the Garos, Rabhas, Koches and also the Rajbanshis for centuries but with very little cultural fusion. They were extremely conservatives and rarely went out of their forest habitations.

With the advent of independence of the country and the aftermath of the partition, there was a significant change in the ethno-demographic pattern of the region, where large number of educated and economically strong Hindu Bengali population moved into the region, in fear of persecution in the then East Pakistan. The indigenous communities had to move to the peripheries of the society, which forced them to breed a sense of segregation that they were forced into. It has been periodically observed that very members of the indigenous ethnic communities have been able to establish themselves as prominent personas in the society and they have been either systematically or unconsciously marginalized. The present visible uprisings amongst various ethnic groups for introduction of ethnic languages in education curricula, which even later moves on for a demand for a separate state, remains precursors to a brewing problem in the region.



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- <sup>3</sup> Hobsbawm and Ranger (1983), *The Invention of Tradition*, Sider 1993 *Lumbee Indian Histories* and Seidner,(1982), *Ethnicity, Language, and Power from a Psycholinguistic Perspective*, pp. 2-3



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## AN OVER-VIEW ANALYSIS OF RELIGIOUS FUNDAMENTALISM- ITS USE IN INDIA

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Purposefully, but briefly, this paper has been penned with an attempt to bring an attention of all to show that religious fundamentalism has neither been fully understood nor defined under the cover of middle-ground consensus among all. In this paper, in-short, we pursue to examine and quest some of the basic fundamentals of religious fundamentalism in India.

Fake religious fundamentalism is a very powerful force in world affairs today. It occupies a position not dissimilar to that occupied by Marxism in the twentieth century. Like Marxism, it is not only a belief system but also a plan of action to transform humanity. In addition, the plan in question sometimes involves the use of extreme violence, exercised not only within, but also cross state boundaries. In academia too, religious fundamentalism has become a subject of teaching and research. If to add it more, the truth is that, Religion, many of us would say, is by and large known as a path in search of spiritual truth but fake religious fundamentalism begins where spiritualism ends. In fact, the devout belief religious fundamentalism is exactly opposite to the non-devout belief religious fundamentalism. The former has been misused as a stereotype notion and the later acts as a fake religious fundamentalism. The devout belief fundamentalists mind their work for the benefit of the whole humanity, whereas, the non-devout belief fake fundamentalists mind their own business without minding the benefit of others. The devout belief religious fundamentalists do know about the fundamentals of any major religion; whereas, the non-devout fake religious fundamentalists hardly know the fundamentals of any major religion. The devout belief fundamentalists' understanding of any religion is accommodative and broad, the non-devout fake religious fundamentalists understanding of religion is neither accommodative nor broad, but is cheap and confined.

Fundamentalism, we may say, has become an evocative in our time. The problem of fundamentalism knows no borders and it is a common enemy of the whole



humanity. Unfortunately, there is no good way to measure the levels of discontent that prevailed in times past. Hence historical comparisons with today's occurrences become merely impressionistic. With this end in view, an attempt has been made to whistle that, it is high time we turn our attention to this growing fake religious fundamentalism and evolve a common platform for building mechanisms, Institutions, and movements to counteract this unwanted phenomenon.

### **Fundamentalists and Fundamentalism—Origin:**

The word fundamentalist is open to wide interpretation. The dictionary says, anyone who understands the basics of discipline is a fundamentalist. And yes, there can be a positive fundamentalist and a negative fundamentalist. A thief and/or robber who is an expert at the fundamentalist of robbing is bad; but a doctor who knows the fundamentals of healing is good.

The term fundamentalism has rapidly entered the vocabulary of social science in the past three decades as a general designation for revivalist conservative religious orthodoxy. In-fact, the word "fundamentalism" has been used mainly in the Christian context. But it cannot be denied that the word is also used to express similar beliefs and attitudes with reference to other religions of the world. For example, we do talk about "Islamic fundamentalism" and "Hindu fundamentalism". Therefore, in a broader sense, "fundamentalism" means belief in the literal truth of religious scriptures and fundamental religious beliefs of any religion. The Christian fundamentalist, as noted earlier, believes in the literal truth of the Bible. The Muslim fundamentalist, on the other hand, believes in the literal truth of the Qur'an, whereas the Hindu fundamentalist believes in the literal truth of the Vedas, etc. Thus, we may say, fundamentalism is the demand for a strict adherence to specific theological doctrines usually understood as a reaction against Modernist theology, primarily to promote continuity and accuracy. The term usually has a religious connotation indicating unwavering attachment to a set of irreducible beliefs.

The deeper comparative understanding of fundamentalism may forestall the frequent dismissive attitudes exhibited by groups sharing common beliefs toward each other. As Lionel Caplan, editor of a prominent collection of essays on the subject has noted: "an adequate understanding of fundamentalism requires us to acknowledge its potential in every movement or cause . . . we are all of us, to some degree and in some senses, fundamentalists." Fundamentalist movements can be both positive and negative



in their consequences for broader society. They can turn the downtrodden and disillusioned into productive, forward looking individuals and give them purpose in life. A fundamentalist revival movement can serve as a check against negative tendencies in society as a whole, and can eventually serve as a focus for beneficial directed social change. But, on other hand, fundamentalist movements in its negative sense can also be an important source of social retardation. It may obstruct the growth of knowledge and morality. Besides, it can turn into a source of conflict in society, and a threat to human rights, including freedom of expression and right to peaceful life.

### **Is Fundamentalism Synonym of Communalism?**

There is a recent tendency, quite wrong though, to equate non-devout belief religious fundamentalism with communalism or to treat one as the synonym of the other. In fact, the two are quite distinct and different though they can become correlated and have many ideological and political elements in common. We have used the term, 'non-devout belief fundamentalists' to show that, their narrow corrupt definition and understanding of religion is totally opposite to the broad definition and understanding of the devout belief fundamentalists. The non-devout belief fundamentalists' definition and understanding of religion is so tight and confined that they cannot be said they belong to any true religious fundamentalism.

The non-devout belief fundamentalists do not believe in the equality of all religions or even the grant of liberty to all religions to exist, for how can false religions be treated as equal to the true religion or be given the liberty to preach and practise falsehood? The same logic leads the non-devout belief fundamentalists to oppose the concept of the unity of all religions. In fact, most of them urge the prohibition and suppression of religions other than their own in countries where followers of their religion constitute the majority. The truth of the truths is that, the non-devout belief fundamentalists are also opposed to reason and rationalism, humanism and true fundamentalism. In general non-devout belief fundamentalists attack the basic ideas and values of enlightenment. In short, the non-devout belief fundamentalism is different from devout belief, or religiosity or religious orthodoxy, or belief in the fundamental beliefs and values of one's religion. For the religiously orthodox are not intolerant of others' religious beliefs. Take, for example, both the firmness of religious belief and the high degree of catholicity towards others' beliefs among the Sufis and Vaishnavites in our own country. In fact, both would be declared to be 'practitioners of error' by the



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non-devout belief fundamentalists of their religions.

The relationship of the non-devout fundamentalists and the communalists to religion is also only superficially similar. The former are deeply religious according to their narrow corrupt definition and understanding of religion. The communalists, on the other hand, have hardly much to do with true religion, except that they base their politics on religious identity and thus use religion for the purpose of struggle for political power. More, the targets of fundamentalism and communalism are also very different. The fundamentalists basically target fellow believers who do not agree with them, while the targets of the communalists most often are the other religious communities. The non-devout belief fundamentalists are dangerous to the broad understanding of devout belief fundamentalists and, communalists, both Hindus and Muslims are dangerous to the people of India.

### **Religion, Society and State relationship:**

Religion comes out of life and can never be divorced from it. The root meaning of religion is that which binds men together and which binds the loose ends of impulses, desires and various processes of each individual. Hence, it is an integrative experience of men collectively and individually. There are many forms of religion, but there is one underlying factor in all of them. They are all occupied with the task of living and adjustment to the various demands of life and society. The need for a successful adjustment requires an understanding of the world in which an individual lives. He lives in a physical and a social environment and the social environment consists of his fellowmen with their histories and prophecies that have evolved as a result of competitiveness and cooperative enterprise of numerous generations. Here the various strands of science, ethics, economics, history, traditions and myths are all intermingled and each has an important claim on the individual and the society. But, a general plan has to be drawn-up first in which each individual and his impulses may be assigned a rightful place. From the time immemorial, the master plan or the blue-print of religion includes society and state. Religion is not merely an unconscious reaction, but is rather a response and adjustment to the unconscious along with the adjustment to the world and society.

The father of nation, M.K Ghandi, has defined religion in its broadest sense as, “self-realisation or knowledge of self”. He said, it was many things those combined to inculcate in me toleration for all faiths. To it, he added that, morality is the basis of



all things and truth is the substance of all morality. If we to say, what William James has said, “anything short of God is not rational, anything more than God is not possible”. Then what should be the role of religion in the relationship of society and state. Let us elaborate this fundamental question in substantial words as: is it ever possible to find answers to all the haunting questions related to the prevailing and growing fundamentalisms and arrive at possible solutions so as to steer India in particular, South Asia in general, and even the world community clear of the frictions generated by fundamentalist movements? Where better to begin the search for solutions than in religion and the scriptures themselves?

Since religious bigotry and fanaticism are at the heart of many of the crises confronting us, perhaps the scriptures can provide a way out of the violence, clashes, and conflicts that are perpetrated in the name of religion. All scriptures agree on the fundamentals of the equality of people in the eyes of the Divine. The injunction to free, spirited inquiry and the cultivation of a high personal standard of conduct in one’s relationship with fellow humans and with society at large is a common feature of all religious tradition. A return to these fundamentals could be the bedrock of a true religious resurgence. The strongest fortress and protection that Hindu and Muslim societies and the nation states of South Asia have against the satanic fires raging within the belly of the Indian subcontinents the investigation, recognition, understanding, and application of the true fundamentals of Hinduism and Islam. Most people feel that religion should provide tranquillity and peace, not terror. The challenge today is to appreciate the diversity of religions, ascertain the reasons behind confrontations and conflicts, and react to specific events and situations with informed, reasoned responses rather than predetermined presumptions and reactions. As long as religion is used to batter people into political submission, the poor and uneducated masses will remain in their shackles. True religion cares for the poor and acts as the servant of a God who needs no defenders with guns in their hands and hatred in their minds.

To the religious person who seeks to understand the fundamentals of scriptures, it seems clear that the right to just treatment by the state, protection of cultures and diversities as expressions of the Divine, the right to worship freely, and the protection of intellectual inquiry are all sanctioned and safeguarded both by the Bhagawad Gita as well as the Holy Qur’an. In fact, both texts define in clear terms what *Dharma* (moral obligation) is, and when and how a battle may and should be joined as a *Dharmic*



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(morally correct) battle or *Jihad* (holy war) carried out in submission to the will of God. This is the true fundamentalism.

### **Democracy as an ideal power:**

The values of democracy, civil liberties, secularism, equality of all citizens irrespective of religion, caste, region or gender, which the Indian people had fought for in the course of their national liberation struggle against colonialism and had proudly nurtured for over half a century after independence, are today under severe threat – threatened by communal forces which are spreading their ideology of hate at the grass-root level, even among children including various state apparatuses such as the bureaucracy, police, media, the education system and the judiciary. It strangely does not occur to the Indian communalist how apt this above description is or what they have been up to in Gujarat, Pune and Ayodhya in recent years. In Pune the library of the Bhandarkar Institute was vandalized; in Gujarat mothers and sisters were humiliated, and in Ayodhya the Babri Masjid was demolished. The air of childhood which is fresh and clean should not be permitted to be sullied and fouled. Communalism of the majority community is equated with nationalism. Communalism is akin to racism. The very concept “nation” has no room for a particular religion or ethnic group. Modern citizenship transcends caste, creed, region, language and religion. Society is made up of communities and communal harmony and amity ensure their coexistence and mutual furtherance. Religion happens to be a personal matter and it is an accepted fact, both in modern state and citizenship. Modern India is inclusive. The Constitution is the Scripture of this country. Democracy, we may say, is an ideal. It is a way of saying no to inequality, injustice and coercion. Democracy upholds equality, justice and freedom. Hence, one can talk of social democracy and economic democracy. Social democracy exists when there is a levelling of status differences. Economic democracy exists where wealth is redistributed and equality of opportunities exists. Political democracy exists where each person irrespective of gender, religion, caste, creed, region and language has the same power; say voting power, one man one vote. In this sense democracy can be developed or advanced or be progressive where the ideal of democracy is advanced, where freedom is secure, justice is delivered and inequality is minimal. The need of the hour is to examine that, is the character of Indian people changing? Can they be still labelled as tolerant and why the conscience of conscious Indians is silent? Studies are needed from different social sciences to understand the



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changing face of all India.

### **Conclusion:**

Religion is by and large known as a path in search of spiritual truth but fake religious fundamentalism begins where spiritualism ends. Religion can be what we want it to be. The one who knows fundamentals of all major religions knows no confusion. There are instances of religion being used for peace and also those of spreading hate. There are many deeply religious people who devoted their lives for the cause of peace and harmony. Foremost among them in our own times is Gandhi and Martin Luther King Jr. from USA. Gandhi stood for non-violence and so interpreted his religious tradition as well as other traditions like Christianity and Islam as to establish peace. We often condemn those who use religion for killing others as fundamentalists but interestingly those who use religion for peace too make very hard use of religion and are, in that sense, no less 'fundamentalists'. Interestingly Mahatma Gandhi also rejected a complete public-private split, stating "I could not be leading a religious life unless I identified myself with the whole of mankind, and that I could, and that I could not do unless I took part in politics... You cannot divide social, economic and purely religious work into watertight compartments." Iqbal too, an Islamic thinker, and by no means narrow minded Islamist, also said that if religion is separated from politics, what is left is Changezi.

Thus religious peace makers also want to use what we can call 'hard religion (as against soft one) to establish peace. Another good example is of Quakers. They have longstanding tradition of rejecting compromises with secular institutions such as the government. They refused, for the sake of peace, conscription in military services. They denounced slavery and refused to own slaves and use goods produced by slave labour and actively obstructed use of slave labour for building underground railways. Thus religious convictions must be actively used in public affairs. Both those who use religion for peace and those who use it to perpetrate violence against the other are convinced of truth of their religion. They firmly believe their religion is based on 'divine truth'. It is the firm belief in 'divine truth' which motivates them to act. Then what is the truth of their 'Truth'? What is truth remains an important question. Those who stand for peace know that truth of religions is one. Divine Truth is manifested in different ways in different religious traditions. Truth of one religion cannot conflict with truth of another religion. Qur'an calls it *wahdat-Deen* i.e. unity of religion and



Maulana Abul Kalam Azad devoted one whole volume on the nature of wahdat-e-Deen. Dara Shikoh also deals with it in his well known work *Majma'ul Bahrayn* (Co-mingling of Two Oceans – Hinduism and Islam) and shows striking similarities between Islam and Hinduism. Nature of truth is very complex and it has to be understood more in action than in thought. Truth is more than mere empirical fact; it lies more in values. It may be combination of fact and value or at times only value, mainly spiritual value. It may be expressed either descriptively in human language or symbolically too. Those who hold strong conviction like Quakers express it more in action. Also it is more of quest than one time settled thing. Different cultures and different conditions can produce different forms of truth or it may be put differently in different languages or cultures as Dara Shikoh has shown in his above mentioned book. Qur'an also says Allah has created diversity and we must accept diversity as divine gift. The Norway killer was angry at multi-culturalism and many Europeans are not so enthusiastic about immigration and multi-culturalism. This creates narrowness and anger and explodes in violent form through some individuals or groups. The only remedy is to accept diversity and multi-culturalism as part of divine creation and as divine gift. Also let us change our idea of finality of truth, writes Ashgar Ali Engineer.

In the Indian democratic, secular system, there is only one real criterion that needs to be used to evaluate any type of movement. Does it infringe on the rights and liberties of other people within the democratic society? If it does, then it has transgressed beyond what a democracy should allow. By opting for democracy, we have accepted the fact that the people have a right to choose their way of life. But this freedom of action should not lend itself to creation of opposing fundamentalist movements and the likely conflicts between these movements. How can we prevent such communal confrontations? The answer lies in finding ways to evolve better communal relations. Despite conquests, domination, and various outside influences for centuries. India managed to retain her distinct identity during the pre-independence era and after electing to be a secular, democratic republic in 1947. It has remained on course toward progress and prosperity in spite of numerous challenges to her unity and sovereignty. The threat posed to stability in the region by religious fundamentalism is yet another challenge to be faced. It is a tragedy that our religious and cultural identities have assumed such violent forms. We must recognize that the causes for the rise of religious fundamentalism within the subcontinent are essentially internal. Our societies are far



larger, more complex, and more diverse than the small homogeneous tribal society that existed at the advent of Christ or the Prophet Muhammad. Our collective survival lies in recognizing that understanding the fundamentals of all major religions will make us to know the path of 'secular humanism', based on the principles of logic and reason. Our founding fathers gave us a nation founded on the principle that power belongs to the people and set us on the path of a secular democratic state that respects religious freedom and human dignity. This alone can offer us the hope of providing every citizen with the right to life, liberty, and the pursuit of excellence. Peace (*Shanti* in the Indian scriptures) is fundamental to the Hindu way and view of life. In Islam, beneficence and mercy (*Rahman* and *Rahim* in the Koran) are the main attributes of God. With such profound similarities in mind, all Indians—Hindus, Muslims, Sikhs, Christians, Buddhists, Jains, Parsis, and nonbelievers—must re-examine their past, which can give them valuable clues on how to realize a more peaceful and cooperative future. In our analysis of religious fundamentalism, we have reached to the conclusion that, true religious fundamentalism has been misunderstood and then equally misused as a stereotype notion for violent actions, more than it has been used for peaceful co-existence. People are confused, because of the misconceptions created in it. These misconceptions, if at all, can be removed by having proper understanding of the basic fundamentals of all religions.

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## ADVERTISING : STARDOM OF JEWELRY BUSINESS

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### Introduction :

As success of business depends upon fast sales and repeat order. Every businessmen therefore, tries to maximum their sales. They are spending money constantly trying to attract new customers. These days advertising play a very crucial role in creating demand for a product. Advertisement simply means to turn people's attention to a specific thing.

Is it possible to achieve a success, without spending another cent on advertising? How would you feel if you could build a one to one relationship with each and every customer to the point where they then become an promoter for your business?

It's amazing so many companies fail to take advantage of their most important asset, their customer list. Most small business owners are constantly searching for ways to attract new customers, when its been proven time and time again that you can make more money from your present clients than constantly looking for new business. Hence instead of finding new crowd to popularize your product you should inform your brand loyal customers to about your new schemes and ideas. As a advertisement made to increase loyalty of your present customer will spread his loyalty among others like plague.

Advertising is a way to make known, inform the public, call attention to oneself or business, praise the good qualities of a product, business, or service — all in order to promote sales. This is done through an advertisement, which is a public notice or announcement, as in a newspaper or magazine, over the radio, on television or through internet.



Here are advertising success strategies to try and pitfalls to avoid, from jewelry business entrepreneur



• Advertising through Magazine & News Paper

Jewelry articles and advertisements in fashion magazines has always been interesting for jewelry enthusiasts. These magazines advertised jewelry products more effectively that attract most jewelry lovers, including the wider readers who are not previously into jewelry stuff. They tend to be influenced by those jewelry advertisements. Advertisements in the media truly help manufacturers get their products to a much wider audience.

• Out -Door Advertising



Bill-board and message painted on the side of buildings are common forms of out-door advertising, which is often used when quick, simple, ideas are being promoted.

• Advertising through Television

TV advertisements are much more expensive, although it could be watched by millions of viewers, it could only win a small fraction who wants to buy to a nearest jewelry store or on-line. That is why jewelry and fashion magazines always go together. Like perfect couples on romantic days.





- **Advertising through Internet**

Now, the internet, we live in a world dominated by advertising. Your favorite sports team cannot exist without advertising. Look at one of the largest events in the world, the Super Bowl. The day after conversation is dominated by a discussion of the ads. there are large advertising agencies that will help promote large multinational companies,

- **Word of mouth advertisement**

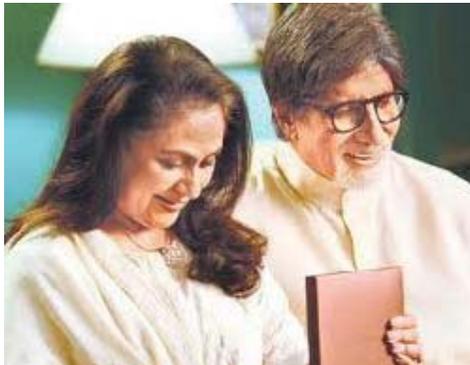
Most traditional jewelry businesses have made their Goodwill (monies) based on trust and personal relationships. For some reason, even though the jewelry business has become more corporate, the essential personal touch and faith remain key drivers in success. All customers, where local or not, would be thrilled to receive a token of appreciation from the store that they shop in.

- A lovely jewelry box or cloth pouch to store jewelry is a relevant gift to give. Remember that bulky boxes are not appreciated these days and small fancy storage ideas are considered a much better option. The uniqueness of the boxes will make the customers want to retain the boxes for posterity. And the customer will feel special too.

- An inexpensive line of jewelry like a small pendent or ring (from your own store) is a good idea for those who purchase high value items. The customer is most likely to wear them and then tell others about where they got it from. Flaunting free gifts is quite the 'in' thing since it positions the customer as a valued customer that is valued by the store. This word of mouth advertising is probably the best outcome of these small gifts and there is no way in which you will be able to beat this word of mouth advertisement.

- **Being Your Friends and customer to Model Your Jewelry**

Your friend can be your jewelry model. Friends not only works as model of your jewelry but also advertising your business as well as is useful to click beautiful jewelry photos. they will more than happy to pose for pictures You should send them these photos by facebook or email or Bluetooth. It works as good advertisement campaign. You can "Gift" them with a jewelry for their time and effort.



### • Advertisement by Celebrities

Although the audience is getting smarter and the modern day consumer getting immune to the exaggerated claims made in a majority of advertisement, there exist a section of advertisers that still bank upon celebrities and their popularity for advertising their products. Just like Salman & Kareena's advertising for Gitanjali-Sangini Jewelry Ad Pictures, Jacqueline Fernandez's promoting Colombo Jewelry Store Ads, Gorgeous Sonam Kapoor branding Anant Jewelry, Celina Jaitley's Ad for Diya Jewelry, Amrita Rao- The New Face Of Agni Jewelry, Katrina Kaif Endorses Jewelry Brand Nakshatra, Anushka Sharma brand ambassador of Gitanjali Jewelry, 'Dabangg' actress Sonakshi Sinha has been announced as the new face of a diamond...D'Damas diamond jewelry brand, Amitabh Bachchan is the Brand Ambassador for 'Tanishq .

Aishwarya Rai Nakshatra diamond jewelry brand ambassador, Nakshatra has got a good position in the market with Aishwarya Rai and all its designs Maharani Gayatri Devi was ensure an easy connect for Arisia with the royalty of diamonds. Thus Celebrity support always attracts the target group and makes your product more noticeable

In the continuing success of your business, advertising should be consider a form of investment. If people don't know about you, then you most likely won't make any sales. And like any investment, it will bring return in direct proportion to the care with which the money was invested.

In the short-term—advertising is an expense, but in the long-term— it's an



investment. While it must be treated as part of the cost of creating new sales, it is also an investment in future sales. The more people see your name and associate your name with your work the more confident they will be to purchase your products in the future.

➤ **Advertising and Jewelers :**

Advertising plays important role in jewelry business . Due to excessive specialization, mass production and cut throat competition. Advertising is growing as the back bone of modern domestic and international jewelry business.

Increase demand:

It creates regular demand by smoothing out seasonal and other function. It increases not only sales of all production by the method of mass presentation through advertising but also helps to introducing new collection to be launched .

Advertisement not only influences the consumer's buying behaviour in favour of that particular Jewelry but also creates Demand, Increases sales, Support dealers & Eliminate middlemen.

**Create goodwill:** .Adverising is an art of making yourself or your Jewelry known to the world in such a way that a desire for buying that Jewelry is created in the heart of people . Advertisement is essential for creating demand. It educates the customer or inform them about new collection to be lanchded.

The Titen concern have been able to sale a whole range of products ranging from watches to jewelry on the strength of their goodwill.

**Increase profitibiliy:** Effective advertising creates awareness and maintains a positive image of the store. While you may spend your millions on the media side of a promotion, the effectiveness of the campaign depends on the idea and the content. In fact, if the content or the idea behind the campaign is great, one probably needs to spend a lower amount of money on the media itself to get the desired outcome.

Advertisement increases demand that requires production on large scale. This in turn, result increasing profitability.

**Boost up morale:** Advertising gives the employees that the feeling of pride in their job and products which boost up their morale and more profitability more incentives. it can thus inspire executive or workers to improve their performance .



Advertising build a **fund of goodwill**, Building up **fix clientage** or **loyalty towards a jewellers**, because it helps to get more and more repeat order. For his existing products but also for the reason that the jewellers can introduce new products in the market with confidence.

➤ **Advertising and Manufacturer**

Manufacturer generally advertise their product by brand names to economies in cost of advertisement and to create goodwill for their products. It tends to create confidence amongst the buyer about he quality of he good advertise.

The business is also forced to maintain good quality to retains its good quality to retain its customers.

**Eliminates middleman:** Advertisement helps a manufacturer to establish direct link with consumer. It would be able to get better quality of goods at cheaper costs. Advertising can be directive and guide the buyers into certain behavioural outcomes, Use of toll free numbers, direct mail activities and reply cards and coupons.

Tupperware, Aqua Guard, tanisque are famous in Indian cities as a result of its personal selling efforts. It leads to increase in production and turnover . It brings about reduction in the selling price to the benefit of consumers.

**Provides Employment:** . Advertising provides direct employment to a large no. of people And also Support press, newspaper magazine radio and television earn big revenue from advertising. Advertising improves standard of living of people by promoting larger production by promoting larger production, increased consumption and grater employment. Advertising ensure better and happy living by offering larger Varity of goods of good quality.

Advertising Motivates people for hard work. Earlier generation lived and work mainly for bare necessities of life, but today men work hard and earn more to buy new products, which are brought to their notice by advertisement

➤ **Advertising and consumers:**

Advertising informs or guides consumers. It makes purchasing easier for consumer. It provides necessary information to the consumer about your jewelry consumer or the new collection or new uses or modifications of existing jewelry,

**Awareness :** It provides knowledge about place of availability , price, reliability, standard



of quality, relative virtues and special promotion schemes.

**Establish a sense of conviction.**: The next step is to establish a sense of conviction. By creating interest and preference, buyers are moved to a position where they are convinced that a particular product in the class should be tried at the next opportunity. To do this, audience's beliefs about the product have to be moulded and this is often done through messages that demonstrate the product's superiority over a rival or by talking about the rewards as a result of using the product.

➤ **Advertising Works for all:**

Advertising works for small companies, as well as large. It works in business to business situations, as well as, direct to the consumer. The question should no longer be, do I advertise but how and where I advertise. Not being able to advertise will inhibit your long term viability as a business entity. So, a strategic issue in determining to be a business, is the ability? Capital to advertise. A huge percentage of new businesses fail during the first five years and it is because they are undercapitalized and thus lack the ability to communicate.

➤ **Limitations**

People consider advertising as **waste and injurious to the society** but these criticisms are more imaginary than real. Advertisement is **very costly** that's why **its increases price of product**.

Large scale advertising encouraging **Growth of monopolies** and prevent competitions due to this small businesses are closed down and consumer interest are also sacrifice. Just for the sake of higher prices and profits gain through advisement .

Competitive advertisement is consider as big social waster and increase growth of monopolies. Instead of creating new demand it helps in Changelings preferences of consumer from product to product without increasing demand causes wastage.

Advertisement make false claims about virtues of product and destroy public confidence. It is also use **to defraud buyers** by selling them doubtful goods. Unethical vulgar advertisements offends public deficiencies and increase growth of material in society.

Nowadays celebrity endorsing multiple products and multi brands in a category, resorting to different celebrities, the consumer gets confused.



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## SWARM BEHAVIOUR – AN INTELLIGENT TOOL IN TACKLING CHALLENGES

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### **Introduction:**

**“The emergent collective intelligence of groups of simple agents.”**

(Bonabeau et al, 1999).

An individual may be worthless, inexpensive, and worthless but with local interactions change can be amazingly dynamic and intelligent behavior towards any task. Swarm behavior is a distributed system of interacting autonomous agents that can achieve goals, performance optimization and robustness through self-organized control, cooperation (decentralized) and division of labour through distributed task allocation and indirect interactions. SI is inspired by nature like colonies of ants, swarm of bees, school of fishes and flocks of geese to understand how they work together and distribute complex problem into smaller solutions. This is what as Managers we need to understand that the complex problems can only be solved by swarm behavior and responding to challenges in a more coordinated way.

### **Swarm Intelligence in Animal Behavior**

SI is inspired by group work like colonies of ant, flock of geese, school of fishes to know the practical way of adapting to solve nature's problems. Social Intelligence helps to solve complex problems in a better and easier way. It refers to a kind of problem-solving ability that emerges in the interactions of simple information-processing units. It is a process of solving problem collectively which is impossible to be solved by individual units. The role of SI is to inquire about a assortment of options, encourage free antagonism and use effective system to tapered the preference. The ants can converse with each other by the odor of their body. The ants find the undeviating path with a simple behavior by laying and following a pathway of pheromones.

### ***Swarm Intelligence in Bees***

- Colony cooperation



- Regulate hive temperature
- Efficiency via Specialization: division of labour in the colony
- Communication: Food sources are exploited according to quality and distance from the hive

#### ***Swarm Intelligence in Wasps***

- Pulp foragers, water foragers & builders
- Complex nests
- Horizontal columns
- Protective covering
- Central entrance hole

#### ***Swarm Intelligence in Ants***

- Organizing highways to and from their foraging sites by leaving pheromone trail
- Form chains from their own bodies to create a bridge to pull and hold leafs together with silk
- Division of labour between major and minor ants

#### ***Swarm Intelligence in Insects***

- Flexible
- Robust
- Decentralized
- Self-Organized

The complexity and sophistication of Self-Organization is carried out with no clear leader. What we learn about social insects can be applied to the field of Intelligent System Design. The modeling of social insects by means of Self-Organization can help design artificial distributed problem solving devices. This is also known as Swarm Intelligent Systems.

### Adapting to Environment Changes

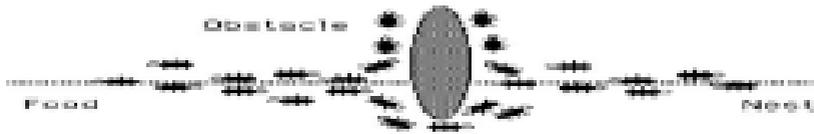


Figure 1 Swarm Intelligence in Ants

With a change in the environment, swarm intelligent systems will adapt to this change and find the new optimal solution.

### Why Swarm Intelligence behavior needed in organization?

When it became evident that effective leaders did not seem to have a particular set of distinguishing traits, researchers tried to isolate the behavior characteristic of effective leadership style. Swarm Intelligence is such a exhibition of collective intelligent behavior in solving complex problems. The more the members are integrally intelligent the more energized and active they are in the integral intelligence.

Characteristics of Swarm behavior helpful in organization

1. Distributed and no central control.
2. Delegation of work.
3. No explicit model of environment.
4. Ability to sense the environment
5. Readiness to change the strategy as and when required.

### Why swarm Intelligence is need of an hour?

Swarm intelligent teams manage themselves without any formal supervision. These teams usually have following traits:

- The team has responsibility for a “relatively whole task”
- Team members each possess a variety of task related skills.
- The team has the power to determine such things as work methods, scheduling and assignment of members of different tasks.
- The performance of the group as a whole is basis for compensation and feedback.



The presence of Swarm Intelligence in industry means individual strategies for completing tasks are replaced by group method for job accomplishment. The more cohesive the group-the more strongly members feel about belonging to it-the greater its influence. If members of a group feel strongly to it, they are likely to work as one single unit. The teams projecting swarm intelligence have less tension and hostility and fewer misunderstandings than less cohesive groups do. Additionally, studies have found that swarm intelligent group tends to produce more uniform output than other groups, which often have problems with communication and cooperation.

When cooperation is especially vital-for instance, in meeting strategic goals-Leaders have four ways to improve swarm intelligence:

- 1. Increase interpersonal interaction:** People tend to join teams whose members they identify with or admire. Thus an organization may want to begin by trying to attract employees who share certain key values.. Swarm Intelligence can be implemented by training, seminars and policies fostering pride in meeting to the common organizational goal of providing outstanding services.
- 2. Increase Interaction:** Although it is not often possible for people to like everyone they work with, increased interaction can improve camaraderie and communication. Corporations such as Tandem Computers and Genetech, a biotechnology firm, hold regular informal parties to which all employees are invited.
- 3. Create common goals and common fates:** Swarm intelligence is a function of three variables: task independence, potency and outcome independence. Task interdependence is the extent to which a group's work requires its members to interact with one another. A high level of task interdependence increases the group's sense of potency, which is the shared belief of a group that it can be effective. Outcome interdependence is the degree to which the consequences of the group's work are felt by all the group's members.

### **Swarm Intelligence in tackling Challenges**

“Nothing is inevitable than change” The Purpose of environmental scanning is to identify the existing and emerging threats and opportunities to help formulate appropriate strategies. It's good to be individually brilliant and to have strong core



competencies; but unless you're able to work in a team and harness each other's core competencies, you'll always perform below par because there will always be situations at which you'll do poorly and someone else does well.

Teamwork is mainly about situational leadership, letting the person with the relevant core competency for a situation take leadership.

### ***Case Coke v/s Pepsi***

When Roberto Goizueta took over as CEO of Coca-Cola in the 1980s, he was faced with intense competition from Pepsi that was eating into Coke's growth. His executives were Pepsi-focused and intent on increasing market share 0.1 per cent a time. Roberto decided to stop competing against Pepsi and instead compete against the situation of 0.1 per cent growth. He asked his executives what was the average fluid intake of an American per day? The answer was 14 ounces. What was Coke's share of that? Two ounces. Roberto said Coke needed a larger share of that market. The competition wasn't Pepsi. It was the water, tea, coffee, milk and fruit juices that went into the remaining 12 ounces. The public should reach for a Coke whenever they felt like drinking something. To this end, Coke put up vending machines at every street corner. Sales took a quantum jump and Pepsi has never quite caught up since. ***Pooling resources and working as a team will always beat individual performers.***

"None of us is as smart as all of us". It is not matter of putting individual efforts but the swarm approach of tackling problems is that changed the dimension from centralized power to distributed power. It is a distributed action with multiplication of efforts into specialization to solve complex problems and achieving goals of the organization. Distributed sensing, sharing information and collective decision making should be today's management outlook known as

### ***SWARM INTELLIGENCE.***

With Swarm Intelligence we can unite employees around a common goal and generate greater output. Without it, we limit the total output which can be produced together. Swarm Intelligence is an ongoing process that helps a work group evolves into a cohesive unit. The team members not only share expectations for accomplishing group tasks, but trust and support one another and respect one another's individual differences. Role as a team builder is to lead the team toward cohesiveness and



productivity. A team takes on a life of its own and swarm intelligence in leaders will regularly nurture and maintain it, just as leaders do for individual employees. Managing diversity well can enhance team-building and achieve common goal using swarm intelligence.

### **Guiding Principles for building SI in the organization**

1. Excellent communications with participants as team members and individuals.
2. Higher levels of job satisfaction and commitment.
3. Enhanced levels of trust and support in the team.
4. Better operating policies and procedures.
5. A organization climate of cooperation and collaborative problem-solving.
6. Team members motivated to achieve group goals
7. Increased division of productivity and creativity.
8. Diverse co-workers working well together.
9. Self managed teams.
10. Clear work objectives

### **Steps to Building an SI climate in the organization**

The first rule of SI is an obvious one: to lead a team effectively, foremost establish swarm leadership. Remember that the most effective SI leaders build their relationships of trust and loyalty, rather than fear or the power of their positions.

**Believe each employee's thoughts as priceless.** Remember that there is no such thing as a stupid idea.

**Be receptive of employees' silent feelings.** Set an example to team members by being open with employees and sensitive to their moods and feelings.

**Act as a balancing influence.** Look for chances to arbitrate and resolve minor disputes; point continually toward the team's higher goals.

**Be unambiguous when communicating.** Be careful to clarify information.

**Encourage feeling of swarm among employees in your team.** Remember that the relationships team members establish among themselves are every bit as important as those you establish with them. As the team begins to take shape, pay close interest



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to the ways in which team member's effort together and take steps to progress communication, cooperation, trust, and respect in those relationships.

**Clarity of goal:** Know what your standards for success are going to be; that you have established clear time frames; and that team members understand their responsibilities.

**Use consensus.** Set objectives, solve problems, and plan for action. While it takes much longer to establish consensus, this method ultimately provides better decisions and greater productivity because it secures every employee's commitment to all phases of the work.

**Set ground rules for the team.** These are the norms that you and the SI team establish to ensure efficiency and success. They can be simple directives (Team members are to be punctual for meetings) or general guidelines (Every team member has the right to offer ideas and suggestions), but you should make sure that the team creates these ground rules by consensus and commits to them, both as a group and as individuals.

**Establish a method for arriving at a consensus.** To conduct open debate about the pros and cons of proposals, or establish research committees to investigate issues and deliver reports.

**Encourage transparency in information sharing.** put emphasis on the magnitude of each team member's contribution and express how all of their jobs operate together to move the entire team closer to its goal.

**Delegation of work.** Let the team work on creative solutions together.

**Facilitate communication.** Remember that communication is the single most important factor in successful teamwork. Facilitating communication does not mean holding meetings all the time. Instead it means setting an example by remaining open to suggestions and concerns, by asking questions and offering help, and by doing everything you can to avoid confusion in your own communication.

**Establish team values and goals; evaluate team performance.** Be sure to talk with members about the progress they are making toward established goals so that employees get a sense both of their success and of the challenges that lie ahead. Address teamwork in performance standards.

**Encourage listening and brainstorming.** As supervisor, your first priority in creating consensus is to stimulate debate. Remember that employees are often afraid to disagree



with one another and that this fear can lead your team to make mediocre decisions. When you encourage debate you inspire creativity and that's how you'll spur your team on to better results.

**Establish the parameters of consensus-building sessions.** Be sensitive to the frustration that can mount when the team is not achieving consensus. At the outset of your meeting, establish time limits, and work with the team to achieve consensus within those parameters. Watch out for false consensus; if an agreement is struck too quickly, be careful to probe individual team members to discover their real feelings about the proposed solution.

### **Issue that can be tackled through SI**

Decreased efficiency.

Conflicts or antagonism among staff members

Mystification about assignments, missed signals, and unclear relationships.

Ineffective staff meetings, low participation, minimally effective decisions.

Negative reactions to the manager.

Complaints about quality of service.

Decisions misunderstood or not carried through properly. Indifference and lack of involvement.

Lack of initiation, thoughts, novelty; routine actions taken for solving complex problems. Complaints of discrimination or favoritism.

### **Conclusion**

SI will increase productivity and resolve problems with collective efforts. The SI concept will soon be the need for all the organization if they want to have competitive advantage in the market. The idea of collective intelligence is the key to tackle complex problems with common vision, shared goals and collective strategy to achieve it. The SI leaders need to inspire and motivate the teams to achieve collective goals and enhance co worker relationship. Trust among teams with focused goals can create swarm intelligent culture.



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## COMPREHENSIVE STEPS OF STRATEGIC E-COMMERCE IN EMERGING ECONOMICS

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### **INTRODUCTION**

Comprehensive strategies became more easy during business transactions due to Electronic Commerce (e-commerce) is the result of the developments and innovations in the areas of computer hardware, computer software, internet and communications technology. Electronic Commerce has the potential to be one of the major economic revolutions of the 21<sup>st</sup> Century. E-Commerce, new communication technologies and resultant exchange of information and knowledge underlie the new way of doing business which will provide opportunities to improve the quality of life and economic well being of the people and has the potential to spur the growth and employment in all the countries of the world. E-Commerce is a subset of e-business. It is a commerce or conducting transactions using network of computers and telecommunication i.e. internet. It is an exchange of goods/services and the financial consideration for all stake holders. Business includes a whole set of transactions that must be completed before the goods/services change hands for the financial consideration. E-Business links employees and internal business processes through intranets, the business relations with suppliers, customers through extranets and finally exchanging goods/services for a value. Goods/services can be directly delivered on the net or by conventional mode and similarly payment can be effected through electronic means. The change in the business functions will lead to new business models and create new set of facts and circumstances that can materially change the incidence of taxation.

E-commerce (electronic commerce or EC) is the buying and selling of goods and services on the Internet, especially the World Wide Web. In practice, this term and a newer term, e-business, are often used interchangeably. For online retail selling,



the term **e-tailing** is sometimes used.

E-commerce can be divided into:

- E-tailing or “virtual storefronts” on Web sites with online catalogs, sometimes gathered into a “virtual mall”
- The gathering and use of demographic data through Web contacts
- Electronic Data Interchange (EDI), the business-to-business exchange of data
- **E-mail** and **fax** and their use as media for reaching prospects and established customers (for example, with newsletters)
- Business-to-business buying and selling.

The following are the major or key players in the e-commerce transaction.

1. **Network Provider**
2. **Internet Service Provider (ISP)**
3. **User**
4. **Web site (Internet Shop)**
5. **Payment Providers**
6. **Payment System Provider**
7. **Software Architect**
8. **Advertiser**
9. **Content Provider**
10. **Back End System**

The internet service provider (i.e. MTNL, Satyam Online) purchases a set amount of bandwidth from a network provider (i.e. VSNL) and provides access to the internet user. Web sites are computer programs residing on computers (known as servers) which are connected to internet. The web site can be remotely programmed or its location can be easily changed. Again a web site. The Internet has created a new economic ecosystem, the e-commerce marketplace, and it has become the virtual main street of the world. Providing a quick and convenient way of exchanging goods and services both regionally and globally, e-commerce has boomed. Today, e-commerce has grown into a huge industry of online retail generating in revenues, with consumer-



driven (B2C) online transactions, impacting industries from travel services to consumer electronics, from books and media distribution to sports & fitness. With more than 17% of Indians are using the Internet on a daily basis for private and/or business use and the rest of the world also beginning to catch on, e-commerce's global growth curve is not likely to taper off anytime soon. However, the US recession has taken its toll on online sales. Although early 2008 estimates by Forrester Research were very strong with 2008 revenues upwards of a 17% growth rate. In the last decade, many startup e-commerce companies have rapidly stolen market share from traditional retailers and service providers, pressuring these established traditional players to deploy their own commerce websites or to alter company strategy in retaliation. This effect is most pronounced in travel services and consumer electronics. Consumer electronics, which includes the purchase of digital cameras, mobile phones, and home PC's, accounted for nearly \$26B of worldwide e-commerce sales occurring in 2006, according to the NPD Group. As traditional brick and mortar firms continue to lose market share to e-commerce players, they will likely see continued declines in their revenues, operating margins, and profits. It is important to note that most e-commerce players are at a competitive advantage to retailers. They have lower operating expenses and better inventory management due to operating in a virtual commerce environment. E-commerce vendors will have the most to gain if they successfully disrupt retail customer acquisition, disinter-mediate distributors/resellers, and under-price retail establishments. As a consequence of e-commerce vendor gains, financial transaction processors and parcel shipping companies are among ancillary vendors who will gain. Global Internet penetration rates have an enormous impact on e-commerce growth rates. Currently, more than 30.2% of the world has access to the internet, and hence, e-commerce. Reduced Internet surfing charges, Internet technology development covering expanded bandwidth, and increased speeds & reliability could make e-commerce available to a large pool of emerging market consumers. In India, only about 17.6 % of a total population currently has access to the internet. In China, the internet penetration rate is now at 29% as of June 2010. The companies that are able to gain significant traction first in emerging markets will be at great advantage to competitors.

## **OBJECTIVES**

- 1) Access of modified and technologically advanced E-governance system implementation.



- 2) Adoption of strict amended rules and regulations for E-commerce in regional boundary.
- 3) Identifying the co-ordinations of intra-state, inter-state and intra-national, international governance system.

## **DIFFERENT E-COMMERCE SERVICES**

### **Online Travel Services**

Expedia (EXPE) and Hotels.com are among many successful online travel service providers who stand to gain the most from recent growth trends. These players focus on travel-related transactions for airline seats, hotel rooms, car rentals, cruises, tours, and a host of other services.

### **Online Retail**

Overstock.com (OSTK), Walmart.com, Bestbuy.com, Target.com, Dell. Com and Amazon.com (AMZN), two of the more successful online retailers, should continue to do well because of their consumer electronics focus.

### **Consumer Electronics**

Sony (SNE) and Philips Electronics are among the leading consumer electronics manufacturers benefiting from an increase in e-commerce consumer electronics sales. For these companies, internet presence increases the visibility, easy availability and volume sales of their consumer electronics products.

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### **Financial Transaction Services**

EBS , EBay/PayPal and Authorize.net are examples of two leading financial transaction processors that get a cut every time you make a online purchase using their processing platform. More than 175 thousand merchants use Authorize.net (ANET) to help consumers accept credit cards and electronic check payments online.

### **Travel Industry**

Travel service companies, such as airlines, hotels, cruise ships, and rental car companies, also benefit from e-commerce intermediaries selling their products more



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quickly and easily than was previously possible and to a wider consumer base.

### **Shipping**

FedEx (FDX) and United Parcel Service (UPS), two of the major shipping company players, are responsible for shipping the majority of products that are purchased online by consumers. As consumers continue to buy more online, these companies will see demand for their shipping services rise.

### **E-Commerce Software**

Many companies interested in selling products and services through the Internet choose to contract the construction and operation of their e-commerce platforms to third-party vendors. Some of these companies, such as Volusion E-Commerce, GSI Commerce (GSIC), Web Cube and Digital River (DRIV) offer comprehensive, integrated packages that include software, web-hosting, order fulfillment and distribution and online marketing. Other firms offer more limited services such as Ariba (ARBA) and Akamai Technologies (AKAM). These two companies are e-commerce software vendors that make money selling software for e-commerce applications. All of these e-commerce service providers stand to gain as e-commerce traffic accelerates.

### **User Interface**

E-commerce software are in the early phases of carving our core feature areas, either integrated within the software or via partnership with third parties. Such features as marketing (SEO), fulfillment (shipping) and as mentioned earlier web-hosting are becoming as much as part of the software as its ability to simply provide order management. Additionally, firms such as attendant are focusing on interface design to deliver a more robust e-commerce experience. Emerging technologies includes natural language instruction.

### **Web Analytics**

One interesting niche of e-commerce services is the area of “web-analytics”. These tools provide the management of online shops and all kind of e-commerce platforms a great inside of what happens on their websites. In particular they allow them to run real-time experiments with their advertising and marketing, to allow them to rapidly optimize their sales pipeline. Not only can they tell when sales improve, but they can also see which adverts brought those sales, and the routes the customers took through the e-commerce site to get there.



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## **Traditional Travel Agencies**

American Express Company (AXP) is an example of a major travel agency that has seen demand for their travel-related services decrease as more consumers and businesses rely on online travel portals.

## **Direct Retail Marketing**

CDW (CDWC) and Systemax (SYX) are direct marketers of consumer electronics. Both will see business decline if the revenue distribution of consumer electronics sales continues to shift to online vendors. As more businesses buy from online intermediaries, the direct marketers' services are increasingly being bypassed.

## **AMENDMENTS AND REGULATORY FRAMEWORK OF E-COMMERCE**

The advent of e-commerce will require amendment to various regulatory and legal frameworks. In India, Information Technology Bill 1999 has already been presented in the parliament. The bill gives legal recognition to electronics records and digital signatures. Documents, records or information may be furnished, retained and preserved in electronic form if certain conditions are satisfied. The bill provides for rules and regulations for attribution of electronic records, the acknowledgement, the receipt of the record, time and place of dispatch and receipt of electronic record. The bill also provides for the condition when the electronic records and digital signature are treated as secured. It provides for appointment of certifying authorities and regulation for controlling and supervising them. It provides for computer crimes and penalties and compensation for the same. The bill proposes that if the computer crime involves a computer, computer system or computer network located in India, the law shall also apply to any contravention and offenses committed outside India by any person irrespective of his nationality. There are consequential amendment proposed in the Indian Evidence Act 1872, The Indian Penal Code 1860, The Banker's Book Evidence Act 1891 and The Reserve Bank of India Act 1934.

The Information technology Act 2000 has been substantially amended through the Information Technology Amendment Act 2008 which was passed by the two houses of the Indian Parliament on December 23, and 24, 2008. It got the Presidential assent on February 5, 2009 and was notified for effectiveness on October 27, 2009. A complete history of how the current version of the Information Technology Act -2008 version evolved over a period of time between 1998 to 2009 is available at the reference



link given under external links below.’ Information technology Act 2000 consisted of 94 sections segregated into 13 chapters. Four schedules form part of the Act. In the 2008 version of the Act, there are 124 sections (excluding 5 sections that have been omitted from the earlier version) and 14 chapters. Schedule I and II have been replaced. Schedules III and IV are deleted.

Information Technology Act 2000 addressed the following issues:

1. Legal Recognition of Electronic Documents
2. Legal Recognition of Digital Signatures
3. Offenses and Contraventions
4. Justice Dispensation Systems for Cybercrimes

ITAA 2008 (Information Technology Amendment Act 2008) as the new version of Information Technology Act 2000 is often referred has provided additional focus on Information Security. It has added several new sections on offences including Cyber Terrorism and Data Protection. With the advent of Computers as a basic tool of Communication, Information Processing, Information Storage, Physical Devices Control, etc., a whole new Cyber Society has come into existence. This Cyber society operates on a virtual world created by Technology and it is the Cyber Space Engineering that drives this world. In maintaining harmony and co-existence of people in this Cyber Space, there is a need for a legal regime which is what we recognize as Cyber laws. Cyber Laws are the basic laws of a Society and hence have implications on every aspect of the Cyber Society such as Governance, Business, Crimes, Entertainment, and Information Delivery Education Etc.

## **CONCLUSION**

Looking the dense population status of the nation, we all should aware of the alarming rate of disappearance of resources. The application of E-commerce in all transactions makes huge amount of surplus time for the sake of research and innovation. New creativity should be initiated through the Electronic commerce for enhancement of economical stability and sustainability of the nation. Needless to say, without the initiation of all stakeholders around the globe are essential so as to strengthen the economical stability.



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## LIBRARY INFORMATION- CRUCIAL AS 'OXYGEN' TO QUALITY LEGAL EDUCATION

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The legal education discovers the ways and means to explain to us the working of a legal system and finds out the way it functions and affects society, it denotes professional knowledge constantly growing in response to human conditions and animated by the visions of future.

Thus Legal Education is a broad and comprehensive concept. It includes not merely the profession which is practiced in courts, but also covers law teaching, law research, administration in different branches where law plays a role and, in fact, commercial and industrial employments and all other activities which postulate. It requires the use of legal knowledge and skill (Gajendragadkar Committee 1964)<sup>1</sup>.

In the present context Legal Education is centered round lay the law libraries than the class center. The law library stands as a function lead of legal Information in the form of books, journals, reference Books, statutes, Reports, followed by general books.

Law libraries differ greatly in size and content according to the differing needs of their users. Any library is likely to have been an academic library with Reports statutes academic periodicals, historical and philosophical works etc. The legal profession needs a different form of legal literature text books, which covered more details on law and the periodicals are highly specialized on legal practice. Nearly looking at the shelves, and perhaps flicking through books taken down and at random, will not be much for the legal profession.

The law library is designed to assist law students, teachers, scholars and managers of administration of the parent academic institution. Therefore, the law library of an academic institution is established to meet the information needed for different user groups for the fulfillment of their various Academic activities.

The quality of legal education is institutional in a achieving the ambitions and dreams of the makers of Indian Constitution<sup>2</sup>. The legal education and its quality are



reflected in the caliber of lawyers and judges. To support the legal system in meeting its goals and objectives in the era of globalization, legal profession requires crucial research inputs from the law schools. Besides imparting quality legal education they are bestowed with the responsibility of providing quality legal information through law libraries to update the research on the emerging and existing issues, to serve valuable inputs for policy makers. Legal education has been developed around the law library as the centre of the students' legal study<sup>3</sup>. The existing law library standards laid down by Bar Council of India (BCI) should be strictly taken into consideration while granting the recognition to the institutions imparting legal education.

The development of law libraries and Legal Information centre in India has been at a speed so much so that hardly any significant development appears to have taken place in this area. Very few law libraries can claim the caliber of being a live, active and aggressive institution

Law library planning has only played a minor role, however, and the adverse effects of this are clearly visible. In large parts of the world, legal materials are still badly surveyed and often inaccessible for lack of basic organization and trained manpower. In other areas, adequately identified and well-serviced resources are beginning to be drained by insufficient funds, while in other places the absence of coordination and common policy has led to an irresponsible wasteful overlap of material. This state of affairs is more disturbing since legal education, legal research and the practice of law literally depend upon the availability of the written word (Satish Chander and Jain, H.C. 1984-85)<sup>4</sup>.

*Justice. Gita Mittal , a keynote speaker, put the spotlight on the dynamic nature of legal education system. Mittal J. observed that legal education system was rapidly changing and the legal information system was also not too far behind either. Therefore, the onus from the teachers in the educational system has been shifted to the law librarians who need to keep up with the pace of both and strive to provide better services. (Report on international conference on access to legal information and research in digital age at National Law University –Delhi.(29-02-2012 to 02-03-2012).*

*The conference was inaugurated and Prof. Ranbir Singh, Vice Chancellor, NLU-D, addressed the hall and spoke at length about the significance of law librarians towards building a ideal legal institution. He was of the opinion*



*that a law librarian with good skills, could contribute in a big manner, in developing rapport with the students, teachers and other members of the legal fraternity. Further, he stressed the sharing of ideas through collecting information from different kinds of sources (primary, secondary and databases), would accelerate the academic endeavors of interested parties.*

The conference was further enlightened about the views of Mr. Hemant Batra, Secretary General, and SAARCLAW. He said that 'Information' is as crucial as 'oxygen'; therefore, law librarians are at a vital position to regulate flow of information and its services. A keynote address delivered by Justice Sikri, touched upon the quotation of the famous astronaut, Neil Armstrong, "Research is the pathway to knowledge" and that law librarian's skills are of utmost relevance to growth of knowledge in the legal fraternity.

The flashpoint of the session was when Mr. Jeroen Vervliet, Director, Peace Palace Library, The Hague, Netherlands, gave an interesting talk about the rise of relevancy between knowledge and technology. Mr. Vervliet, noted the paradigm shift in the approach of the students and teachers towards technical education and the urge that drives students to research into hitherto unexplored areas. Information Communication Technology (ICT), its importance and the inclusion of Wifi, virtual classroom, web cast, video conferencing and e-sources into the curriculum of the modern day law students and research scholars have raised the benchmark of quality legal education. In conclusion, Mr. Vervliet, urged the law librarians to master all these techniques to survive and excel in the profession.

Hon'ble Mr. Justice Manmohan Singh, in his keynote address tackled the fundamental issues surrounding knowledge sharing. One of the contemporary skills that a librarian must acquire is the constructive discrimination of information and its dissemination to users.

*The Valedictory function marked the culmination of the three day long event and was the perfect icing on the cake. The Guest of Honor, Mr. Justice Tshering, Judge, Supreme Court, Bhutan, explained the requirements of legal education. The primary task is to understand the Constitution, rule of law, democratic governance. He also emphasized the need for discussions on the various aspects of strategic creation of quality in legal management and its implementation. (Report on international conference on access to legal information*



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and research in digital age at National Law University (29-02-2012 to 02-03-2012)<sup>5</sup>.

As the legal education enters the twenty first century the academic law libraries are facing challenges from the impact of technology and globalization. In response to these challenges, Academic libraries have started building stronger collection, covering not only national laws but also International, non- law materials. Further they have taken the efforts to provide access to electronic and digital information online. Most of these libraries started thinking about the changing role of law librarians and new skills and knowledge required for them.

The role of law librarians and access to legal information are influenced by two key forces viz. internet, leading to digital revolution and the globalization. Both these forces are intrinsically interwoven into the work of law librarians and access to legal information. The legal research environment today is accompanied with an explosion of information on one hand, inflation of legal issues on other hand, as for the societal needs, new areas of regulations and new substantive law areas. Globalization combined with technology lead to vastly expanded flows of information and other commodities. The career of law librarians has been influenced by many changes in the legal information environment. There is a shift from print sources to electronic and digital information in law. There is a need for the law librarians to evolve as the world of legal information has started to change.

Like any other library a law library is a trinity of men, material and building. It has been aptly remarked about a law library that “the law library is truly a vital factor in the administration of justice, an institution of extraordinary social significance in a free society<sup>6</sup>.

In this rapidly evolving technological environment, the law librarians are expected to play a proactive role in providing guidance and reaching out the users. They must evaluate the quality of print and electronic information, teach legal research methodology and be seen as core participants in the mission of their institutions. To perform a new role effectively, law librarians must keep pace with the breakneck speed of emerging technologies and adjust to the new research needs and behaviors of users of legal education and profession.

As the law library contains highly specialized resources, and this requires special skills to serve legal fraternity. The law librarian, like the lawyer, is much



concerned with recent developments and the present state of law, legislation and law reports so one would expect the law librarian in keeping abreast of the ever changing legal arena. New editions of text books, cumulative supplements and publication are a loose leaf format which provides alternative way of coping with this problem<sup>7</sup>.

To manage the mass of legal information provided, an Internet user can start with reputable web sites. For example, for legal information pertaining to United States they can access some of the popular Commercial sites that are also free like Indlaw and Lexis one, Lawcom, LLRX and the like.

Some of the most popular documents with world wide scope of great legal researchers, students and faculty are: Law Library of Congress guide to law online, Global Legal Information Network (GLIN) and EISIL, the research section the American Society of International law web site. For legal information related to India the users can approach popular and authoritative judicial websites like Case Status, JUDIS and Indian Courts. All are developed and maintained by National Informatics Center (NIC), India.

The impact of electronic information revolution can be seen in many places of the world. The western countries, due to the effects of legal institutions and commercial enterprises, legal information system were designed and developed and made accessible to wider clientele using state of art technologies. Even in India, the information has been provided by commercial publishers like publishers of Supreme Court Cases (SCC). Moreover, because of the country's liberalized economic policies, international leading publishers like M/S Butterworth have started publishing Indian Legal Commentaries.

When it comes to print vs. non-print sources of information in law, earlier mostly print sources were available for reference. At present beside print sources, number of free and commercial online databases, CD-Rom databases and legal bulletin board and online reference services are made accessible to find information on law. Though most of us are pleased with the diversity of access, these products provide the real problem and issues lie in the ability of the law librarians and the users in exploiting the advantages of these developments. In order to help the users to make choices, the law librarians need to learn enough about these new sources. They need to judge the quality differences among the information products available.

Further the changes taking place at work in the law are making the law more complex phenomenon. The sources of the law have also grown more complex. The

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law, now-a-days, is more related to issues that are non-legal. As a result, the law has become more interdisciplinary. The people involved in legal education and research must also know how to find business, economic, statistical, medical, social sciences, technical and humanities information. Law can not be studied or interpreted in isolation, instead it has to be understood and applied in tune with other factors in the society. These developments and changes also need to be considered while designing the education and training programmes for law librarianship. To maintain a good status in the profession, appropriate and adequate professional training is fundamental. Education and training that is relevant to the roles and tasks performed by law librarian is instrumental in securing the status of the profession. This issue has to be taken care of both by Library Information Services (LIS) schools and law library professionals. The professional association in India should also address the educational challenges facing the law librarianship just like American Association of Law libraries (AALC), USA. Further while designing courses for law librarianship, it is essential to examine various programmes offered in United Kingdom, United States and Canada in the form of dual degree programmes, courses offered as part of LIS curriculum, containing legal education, and professional courses.

Imparting information literacy training to law librarians is also another important aspect of education training for law librarianship. Given that law librarians are often assigned the roles of instructor, teachers, and expert in legal research strategies, this area of library training requires more emphasis.

The most important issue connected with collection development is cost. The related issue is multiple versions of legal documents that law libraries receive on each with its own unique characteristics. The law librarian therefore must consistently compare the costs of hard copy with online materials in light of such concerns as the rapidly evolving nature of online database and the continuing availability and accessibility of online materials.

Regarding preservation, the law librarians must weigh the benefit of maintaining documents in multiple formats each with unique futures against the cost associated with other aspects like shelving growth and technological requirements.

The impact of computerization is significant in the area of legal reference work of a law librarian with the commercial data base providers are providing access to number of legal database like Lexis-Nexis, Westlaw etc., these databases are



challenging the traditional reference service function of law libraries. They are offering accesses to vast amount of legal research information faster than manual legal research methods. The ever increasing use of technology and user friendly programmes to access legal information is not only challenging the professional capabilities of librarian but also the relevance and significance of the law library.

Development of standards for measuring the quality of academic law libraries is also another important aspect of concern in helping the law librarian. The existing standards laid down by Bar Council of India are not adequate to evaluate the facilities and performances of law libraries in India. Therefore, the responsibility lies with the professional association, academic institutions and bar council to develop appropriate standards required for the evaluation of quality and performance of law libraries.

In conclusion, it may be stated that legal information is available in large quantities in variety of forms and formats from different sources. There is a dire need to provide effective legal information services in support of legal education and legal research. The changing role of academic law libraries in developing professional skills among the legal professionals has become more enhanced. Providing advance legal reference services is critical to the success of a law librarian in the contemporary competitive environment. Information and communication technology is taken advantage by majority of law librarians in developed countries to offer more value added services to their users. However, it is clearly evident that there exists lot of disparity between the developed countries like USA and UK and developing countries like India in terms of various aspects of law librarianship like the philosophy, status, development, infrastructure facilities and information services. In order to reach their level of standards in providing quality services, sincere and solid efforts are required from library and legal profession, academic managements, government and non governmental organizations, concerned with legal education and profession.

In addition, many academic law librarians have taken leadership roles for general technology development and implementation within their law academics information reliability, authenticity, precision, relevance, accuracy, version control. The challenges posed by digital libraries are many.

Rapidly changing information and communication technologies on information literacy is very high and the importance of handling Internet hardware and software is well recognized through which information on business, education, recreation, etc.,



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can easily be downloaded. Therefore, for legal professional development, proper organizational backing and financial support are necessary.

In light of these similar questions, it will be essential for law librarians to think hard about core values and the services that they along the law library provide. Is the law library a place only for the storage of books for students to study and perform research, or does the law school library provide an important (or perhaps the only) shared space in the law school for students to work and learn collaboratively with each other and with faculty, and to work with librarians to develop skills in information literacy skills? It is likely that the future of the academic law library will be shaped in large part by law librarians' answers to questions like these, as well as the library's ability to reshape its role in a new information environment.

The legal reference services provided by these highly skilled and specialized professionals are unique in that they can actually affect the property and liberty rights of their patrons. They must develop and practice extraordinary reference skills to serve their patrons while avoiding the pitfalls of potential misinterpretation and misuse of legal information. The specifications of Bar Council of India (BCI) to provide proper and adequate library facilities with computers and internet connectivity have to be followed and implemented strictly.

To manage the changing situation, the professionals should develop the skills of Information Technology. I suggest that sufficient funds should be made available for all activities of library automation including training of the library staff. Another suggestion would be the training of library professionals to acquire skills in collection development, information consideration and re-packaging, data presentation, technical processing, information services, database management, etc. I conclude that, the Library and Information Science professionals should master the skills that are necessary to create, collect, communicate and consolidate information on behalf of users<sup>8</sup>.

The changing role of academic law libraries in developing professional skills among the legal professional has been emphasized in the literature. Providing advance legal reference services is critical to the success of a law librarian in the contemporary environment. Information and communication technology are being exploited by majority of law in developed countries librarians to offer more value added services to their users.



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## STATUS OF WOMEN IN H.P. RALTED TO HEALTH EDUCATION AND SEX

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In a society like that of India having thousand year of culture traditions, the social status of women is resultant of an enormous variety of social conditions and multiplicity of factors since long, women not only in India but all over the world, have been a subject of suppression, neglect and demoralization lot in the society India society is a male- dominated society in which women are treated as a matter they have been exploited and denied equal place as men in the society her right places has been considered to be the home where she should attend the kitchen work and considered fit for only producing and rearing up children. However, with the advent of independence, a change in their role and status has been accelerated the women got opportunities to raise- their voice against exploitation and discrimination on the basis of sex which hindred their program and automatically social status.

In ancient India, women enjoyed a very high status in the society 'Rig Veda' and 'Upanishad accorded highest social status to the women of those days. They had full freedom, equal social, political and religious rights and regularly participated in religions ceremonies. No Yaina could be performed by a husband without the participation of his wife. Manu says "where women are honoured, the god are pleased, but where they are not honoured, no sacred rite yields any reward.

In recent times, educational political, economic and social changes in her role which was hitherto restricted to that of a house wife, have infused a new sense of confidence. New a days, there is no job to which they cannot aspire. More and more educated women are taking up new occupational roles the constitution of independent India prohibits any discrimination against any citizen n grounds of , face, caste, colour and sex Not only that, by the directive Principles of the constitution the state is required to endeavour to secure for citizens a uniform civil code throughout the territory of India. To remedy this inequality, four Acts- the Special Marriage Bill (1872), the Hindu Marriage Bilil (1955)j, the Hindi succession Bill (1956) and the Adoption and Maintenance Bill (1956) have been paned by the parliament the education and



economic independence added to the political consciousness changes the recognition of the rights of equality, new socio-economic epoch, education and ideological of women, there factors encouraged women to play a increasingly effective role in public affairs.

In spite of our government policy declaration for the program of women towards equality the government has failed to implement it. An analysis of the statistical data shows Indian Social Situation to the distressing trends to the dark old days as for as the living conditions and the plight of large masses of Indian women and concerned in many fields such as education, health, sex ration and political participation women for behind men

## **WOMEN AND EDUCATION**

Education is a source of enlightenment and a means to achieve the goal of fasters social development. Even after more than 50 years of Indian independence, gender disparity in literacy continues and the situation various from state to state and even within a state from District to District and from one community to other external prejudices, government apathy, lack of political and community will, illiteracy and negative attitude of the parents towards the education of the girls child, cost of education, etc are some of factors which have deprived girls and women of their right to education.

Himachal Pradesh has made construable progress in the matter of universalization of primary education and has successfully raised the level of literacy. Today Himachal Pradesh is second only to Kerla in-terms of school participation and literacy rate in the younger age groups. The government of Himachal Pradesh has taken a number of steps in order to raise the educational status of women in the state, some of their are formation of village education committee with one third women members, and making them responsible for Universal enrollment and retention of children in school, a girl child scheme was launched involving a gift amount decides a scholarship at the age of six mother-teacher association has been formed, exemption of tuitions fee, free text books to girls and girls attendance scholarships.



#### FEMALE LITERACY RATE 1971-2011

State	1971	1981	1991	2001	2011
Himachal Pradesh	20.23	37.72	52.00	68.00	--
Kerla	54.31	75.65	86.20	88.00	-
India	18.69	29.76	39.24	54.35	-

The rate of growth of female literacy in Himachal Pradesh has been the highest as compared to Kerla and the national average. The higher the higher the level of woman's education, the better will be their understanding of and participation in the development process in the society and the nation. Therefore, the level in education women in general, vocational and technical education in particular need to be raised in the State

#### WOMEN AND HEALTH

Health care of women is of paramount importance for the promotion of health care of the children and the family, the health status of women in Himachal Pradesh has not been sufficient upgraded any 30% women in the State level received three antenatal check-ups, tow does of tetanus injections and IFA tablets, during their pregnancies this is more than 50% lower than that of Kerla. Deliveries conducted in the health institutions are 29% and only 21% of the women who delivered received post-natal check-up the status empowerment of women is health centres, decisions making, the inaccessibility of health centres, because of the topography, poor infrastructure facilities, and frequent transfer of grass root health workers may be the reasons for lower maternal health status of women. Another gloomy picture of the reproductive health in Himachal Pradesh is declining sex ration, the overall decline being from 976 to 970 during 1991 to 2001. What is the Major Concern is the very heavy decline in sex ration of children 0-6.

According to 1981 census, the expectation of life at birth estimated 54.1 years for males and 54.7 for females based on 1980 SRS mortality rates the female life expectancy would continue to improve faster than that of male 1986 to 1991 projected values of expectations of life at birth for males as 58.1 while for females 59.1. birth and death rate and infant mortality rate are all lower in Himachal Pradesh compared to all India level. There has been marked important in the female mortality rate this indicates that the women of Himachal Pradesh are more education



and health and maternity facilities.

## **SEX RATIO**

The average sex ratio in India has been generally adverse to women. The number of women per 1000 has been declining over the decades. According to the census of 1991, the national average sex ratio is 229 which has declined by five points from 1981. However, the ratio sex in Himachal Pradesh shows a constantly increasing trend from 1941 onwards. In Himachal Pradesh the sex ratio have been above the national average, 976 according to 1991 census, 968 in 2001 and 974 according to 2011 census. The District wise variations in sex ratio in Himachal Pradesh in very high ranging from 1102 in Hamirpur, 1027 in Kangra, 1014 in Mandi, 997 in Una and 992 in Bilaspur.

As compared to the figure of the 1981 census, the literacy rate has increasable from 37.92 (1981) to 52.13 (1991) 67.4 (2001) 74.60%, while the national average of females were 29.75 (1981) to 39.42 (1991) or (54.16)% in 2001 and 2011

## **CONCLUSION**

Himachal Pradesh is ranked third in the women empowerment index, calculated by using following forty variable i.e. (1) Female Literacy (2) Girls enrolment rate (3) Girl dropout rate (4) antenatal care (5) Postnatal care (6) Institutional deliveries (7) Nutritional Anemia (8) Women Life Expectancy (9) Crime against women (10) female child labour (11) women member in Rajya Sabha (12) Female work participation rate (13) Usual and subsidiary status (14) Effective wage rate for all wage work for females

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## AN INTRODUCTION TO THE PURCHASING BEHAVIOUR OF ADOLESCENT GIRLS

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*“A Customer is the most important visitor in our premises.  
He is not dependent on us. We are dependent on him.  
He is not an interruption of our work. He is the purpose of it.  
He is not an outsider to our business. He is part of it.  
We are not doing him a favour by serving him.  
He is doing us a favour by giving us the opportunity to do so”.*

These words are spoken by, **Mahatma Gandhi, the greatest consumer activist of all times.**

### **Introduction**

Consumers play a very important role in the economy. They are the largest economic group in any country. All our present day activities are carried on because of consumers only. They are the pillars of the economy. The philosophy of marketing is based on consumers. They are not only the heart of marketing but also the controllers of marketing functions. But in today's marketing system, consumer sovereignty is a myth, due to a variety of problems in the process of production and distribution.

Persistent infringement of consumer rights led them to unite together to defend their interest and as a result unscrupulous business firms become the target of these consumer interest groups. The rise of the consumer groups has been the most remarkable development in the recent history of mankind. This phenomenon of group awakening ushered in a social movement to fight injustice and seek a fair deal in the exchange process. Thus, the organised movement of consumers known as 'Consumerism' emerged as a counter veiling defensive force to safeguard the interest of consumers from the abuses of economically powerful sellers. Trying to define consumer is really a hard task, because everyone is a consumer. Even a news paper reader is a consumer as he chooses what to read and what not to read.



According to Devadas (2001) consumers are users of goods and services for the production of their wants. They want to know where to buy, when to buy, how much to buy, how to pay, how to recognize and they also compare qualities of products. They are the keystone and play an important part of our economic structure. Production and marketing exist only for consumers. Nair (1999) refers a consumer as one who buys goods and services for his own consumption, and not for sale. He is the sovereign of the market (Nair and Paul, 1999). He may be an individual, a household unit, an organization, or a government agency that uses goods and services. Thus it is apparent that everyone is a consumer whether he/she is young or old, rich or poor, male or female, employed or unemployed.

Rajalakshami (2000) defines consumer as a person who enjoys life by using up certain goods and services to meet his various needs. He is the focal point of all economic and social activities. In fact, he is the very basis who supports the society. His interests, therefore, should receive the first priority. Consumer Behaviour is the study of how individuals make decisions to spend their available resources (money, time and effort) on consumption related items. It includes the study of what they buy, when they buy, how they buy, where they buy and how often they buy any particular product or service.

Based on extensive literature review, Moschis (1986) proposes a number of ways in which family communication imparts the economic socialization of young people. Family is the most important group that shapes a buyer's behavior. The influence of parents would be more when the factors of age, marital status and presence of child in the family can together play a major role in shaping the individual and joint purchase behavior (Gordon and Ronald, 1997).

Influence of parents declines as children get older. Family links adolescents with a wider society and it is through this they learn the values, roles, norms, skills, knowledge and practices that are appropriate to their adult life. These young targets of purchasers rely on more information sources and peer groups become increasingly influential in purchase decisions (Mitra, 1995). They provide potential information as required by the potential buyers (Naik, et al., 1999). Fashion is one of the most influencing factors for adolescents' purchase behavior. It repeats itself and comes a full circle. Adolescents want to look different every time. They change their fashion every time in dressing and in buying accessories, cosmetics, etc.

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Children have important impact on household decision-making by attempting to influence their parent's acquisition, usage and disposition of products. The most common stereotype is that children nag their parents until they finally give in. Although children often make these attempts, their success depends on the type of product, characteristics of the parents, age of the child and stage of the decision process. Working parents are more likely to give in because they are more time pressed – Sadhu and Depali (1998).

Nair (1999) considers that apart from interpersonal communication, mass media such as television, radio, newspapers, magazines and films play a considerable part in aiding directly or indirectly in the purchase of commodities like cosmetics, clothing, etc. They set out to appeal much more to the emotions than to the reason, more to the deeper laid sources of motivation than to the intellect, Sontakki (1996). Advertisement enables the consumers to know which type of products are available and when and where to buy them (Nair and Paul, 1999). Knowledge and care in shopping helps to select the best items at reasonable prices.

Effective buying can find ways of reaching the objective regardless of the limitations of our resources. The emphasis on present day purchasing is on decision making which is a mental process. Young consumers sometimes make decisions based on emotional factors that are the result of their innate desires or fantasies. An adolescent may buy a chudidhar because she feels that the dress may enhance her self-image, rather than looking for durability. When the product is purchased for its symbolic significance rather than utilization value, then it is known as symbolic buying behavior. 'The product is purchased not for what it is but for what it means' – Tamber (1981). Adolescents are crazy for jeans just to identify themselves with the 20<sup>th</sup> century fashion and not for anything else. An adolescent cares much for her self-image and so she may look for a dress to enhance her appearance, rather than its quality.

Mayer (1999) defines consumer problems as conditions that cause dissatisfaction in the process of selection, using or dispersing of goods and services. Indian consumers are faced with a number of problems such as shortage of essential goods, rise in price, inferior ingredients, poor quality of products coupled with adulteration, misleading advertisement, improper labeling, poor packing, wrong weights and measures, etc. The most common problem of the day is the rise in price of goods. At times, the consumers are provided with products that are unsafe and hence endanger their health

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and welfare.

Right from the moment of birth, each individual is a consumer. All human beings are consumers so long as they live and hence consumer problems are human problems. Consumer protection from the exploitation of the producers is essential on various grounds. They need protection, advice and information to avoid victimization. There has been an increase in consumer needs and consumer transactions in quality, quantity and complexity; hence they need information to enable them to make the right decision and evaluation. A better educated citizen in terms of consumer information and issues can greatly help all consumers live a better quality of life. Consumers must be educated to understand market conditions that can affect them negatively and for effective buying.

The various types of malpractices and the consequent exploitation of consumer interest on a large scale, certainly indicate the pressing and urgent need for consumer protection and consumer guidance in India. The Government of India has passed various laws from time to time for protecting the consumer in respect of price, quality, weights and measures, etc. Prevention of Food Adulteration Act, Monopolistic Restrictive Trade Practice Act (MRTP) and the Consumer Protection Act, 1986 are enforced against fraud, extortion and profiteering of businessmen. But due to inadequate enforcement of these laws, the protection provided to the consumer has been largely unsatisfactory.

A majority of the consumers in India are not aware of the protective measures undertaken by the Government to safeguard themselves against the prevailing malpractices in the Indian market. They have to play a major role in protecting themselves from the clutches of the business men. First of all, they must know their rights as consumers. Secondly, they should not hesitate to exercise their rights. Thirdly, they must indicate the spirit of co-operation and self-help.

In addition to protective legislation, consumers need information and education to enable them to make wise buying decisions. Increasingly, Government policy-makers and consumer advocates recognize that they cannot protect consumers against every possible marketing abuse, and that the consumer's best defense is the knowledge of the product. Today, many states and local agencies offer consumer education programmes and disseminate consumer information – Nair (1999).



One proposal to advance consumer education involves the development of computerized data banks containing product information (eg. Local prices, availability, and product test results) and general educational information (eg. the meaning of nutritional information). Consumers could tap such information banks by means of home computers or cable television.

Consumer advocates recommend that consumer education programmes should be made mandatory in the public school system. At present, only a few states have such programmes, and the content varies widely. Several companies selling valuable goods that children and teenagers buy every year have stepped into the breach by providing booklets and other materials to schools, with very clear commercial intention.

Consumer behavior researchers could make a substantive contribution to the field of consumer education by designing appropriate curricula for such programmes. Because parents play an essential role in the consumer socialization of children, it is specially important that parents acquire as much product information as possible.

According to Sharadha (1999) adolescence is a period of physical, psychological and social maturing from childhood to adulthood. As per the joint statements issued by World Health Organisation and United Nations International Children's Emergency Fund (1999) young girls are the most crucial segments of global population from the point of view of the quality of future consumption who are on the threshold of marriage and motherhood. It is the period of development during which a young person must internalize a personal value system and prepare for adult roles.

During adolescence, the young girl prepares herself by deciding on various aspects. Her physical, emotional and intellectual abilities determine the quality of decisions she makes. Hence, it is important that girls particularly in their adolescence are given the necessary education for their role especially as consumers. Gopalan (1990) has advocated 'consumer education for better living and decision making training for adolescent girls'. The adolescents' interests are influenced by factors such as physical and mental ability, emotional attitudes and environmental or social status (Grow and Grow, 1986). The specific activities and interests of adolescents depend on a number of factors including sex, intelligence, resources and opportunities, prestige value among peers and personal abilities (Reynolds and Wells, 1997).

As population grows, adolescent consumers become a very attractive market. They are better-off financially in the modern era. They have been the target of the

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marketers of cosmetics, health care products, fashionable clothing, etc. This young attractive target cannot be taken for granted and hence all efforts are tailored to meet their needs. Identifying this target's needs and directing all marketing efforts at delivering customers value is the motto of most of the companies (Forbes, 1987). Around two decades ago, it was urged that Economics was marketing "Mothers' discipline but today it is the daughters' discipline". This is because consumer purchase decisions are governed by factors like pride, possessions, variety, etc which creates desires and wants in the minds of the young consumers.

It is scarcely unique for one to observe the various discrepancies that exist between certain sentiments and predisposition of young people and those of elders. Within recent years, it has become increasingly common to hear of adolescent tastes as constituting a discrete culture which has been alternatively referred to as 'the adolescent society', 'the teenage peer culture' or 'the adolescent subculture'.

The serious threat of the day is that the adolescent girls become more and more beauty conscious and want to prove themselves as trend setters. They are given more freedom these days, their feelings are considered important by parents and they are allowed to purchase products of their choice. As family income increases, the amount of money given to adolescents also increases. They are good shoppers demanding value for their money opines Nair (1999).

Adolescents are innovators in buying products. They have great social mobility, more favorable attitudes towards risk, greater social participation than other consumers. They try new products and learn the benefits of the products (Peter and Olean, 1986). Adolescent buyers exhibit a number of styles like own-expert style, want-the-best style, look- beauty-style, and appearance –charm style, remarks Sharadha (1999). By the time they are in teens, the girls spend heavily on beauty care products, grooming aids and the like. Beauty consciousness and beauty culture have come to stay as a daily aspect in the lives of adolescents. Regardless of socio-economic class, they consider using cosmetics as most important (Schiffman and Kanuk, 1998).

Clothing like cosmetics becomes highly important to adolescents as they seek to present themselves in the best possible way. Clothing is a means used by them to signify status and their sophistication. Western wear, mainly jeans and shirts are also very much accepted as normal dress code and not looked upon as fashion but saris are worn only on special occasions. The adolescent girl at this stage senses a need for



adding a finishing touch to her and hence seeks accessories. They range from a tiny bindi to decorative anklets depending on the individual's need. The use of accessories gives them a sense of belongingness with their peers and provides identity to them.

An analysis of the Indian consumers will not be complete without the mention of the urban teenagers and youth market. They are modern, care less for tradition and religion. They have inclination towards the western culture and are quick to seek novelties and new fashion. Rather than saving money for the future, they believe in spending it for pleasure. These categories of consumers get easily motivated by 'modern' products. This segment comprising teenagers and youth is fast emerging as a distinct market.

Good buying habits can raise the standard of living. They reflect the personality, way of thinking and living of the buyer. Wise purchase offers a solution towards increasing the family's real income, which is the flow of goods and services available for any given period of time. Therefore it is important that adolescents should be brought up in an environment which is stimulating and sufficiently challenging for them to explore their potentialities and build up a satisfying future. If purchasing is done effectively, it will enable them to secure the best goods for the particular purchase for which they are needed with the minimum economy of time, energy and money.

Hence, the study was undertaken with the following objectives: To

- *Study the socio-economic profile of the families of selected adolescent girls.*
- *Assess the involvement of family members in general purchase.*
- *Identify the various sources of information regarding the availability of cosmetics, clothing and accessories for the adolescent girls.*
- *Find out the factors that influence their decisions in buying the selected products.*
- *Study the purchasing behavior of the selected sample and*
- *Analyze the impact of variables such as number of daughters in the family, mother's employment and family income on the purchasing behavior of the selected adolescent girls.*



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## Hypothesis

The study was carried out based on the main hypothesis- *The purchasing behaviour of adolescent girls is influenced by factors like employment status of mothers, number of daughters in the family and the family income.*

The sub hypothesis of the study are listed below:

1. *The number of daughters in the family influences the frequency of purchase of cosmetics.*
2. *The number of daughters in the family has a direct impact on money spent on cosmetics.*
3. *The employment status of mothers influences the expenditure on clothing.*
4. *The employment status of mothers has a direct impact on the place of purchase of clothing.*
5. *The frequency of purchase of clothing is dependent upon the family income.*
6. *Employment status of mothers influences the mode of purchase of clothing.*
7. *Employment status of mothers is associated with the occasions of purchase of clothing.*
8. *The family income has a direct impact on the mode of purchase of accessories.*

## Scope of the Study:

The study holds good for adolescents, parents, marketers and scholars of human behavior.

1. At the individual level, it is hoped that this study would be helpful for adolescents to benefit from insights into their own consumption related decisions: What they buy, why they buy, how they buy and the promotional influence that persuade them to buy. Thus the study will enable the adolescents to become better and wiser consumers.
2. At the family level, this study would help parents to bridge the gap between the purchase that they like to do for their daughters and the purchases the daughters wish to make themselves.



3. At the market level, it is important to understand adolescents's behavior so as to predict how consumers are likely to react to various informational and environmental cues and devise marketing strategies accordingly. This will help to earn a competitive advantage at the market place.
4. As scholars of human behavior, we are interested in consumer behavior, so as to gain insight into why individuals act in certain consumption related ways and also in learning about the influences which impel the consumers to act as they do.

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## ADOLESCENTS' PARTICIPATION AND SOURCES OF INFORMATION FOR THEIR PURCHASES

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### **Introduction**

Consumers are the users of goods and services for the satisfaction of their wants. They want to know where to buy, when to buy, how much to buy, how to pay, how to recognize and they also compare qualities of products. They are the keystone and play an important part of our economic structure.

As population grows, adolescent consumers become a very attractive market. They are better- off financially in the modern era. They have been the target of the marketers of cosmetics, health care products, fashionable clothing, etc. This young attractive target cannot be taken for granted and hence all efforts are tailored to meet their needs. Identifying this target's needs and directing all marketing efforts at delivering customers value is the motto of most of the companies (Forbes, 1987).

Adolescents are innovators in buying products. They have great social mobility, more favorable attitudes towards risk, greater social participation than other consumers. They try new products and learn the benefits of the products. By the time they are in teens, the girls spend heavily on beauty care products, grooming aids and the like. Beauty consciousness and beauty culture have come to stay as a daily aspect in the lives of adolescents.

Clothing like cosmetics becomes highly important to adolescents as they seek to present themselves in the best possible way. Clothing is a means used by them to signify status and their sophistication. Western wear, mainly jeans and shirts are also very much accepted as normal dress code and not looked upon as fashion but saris are worn only on special occasions. The adolescent girl at this stage senses a need for adding a finishing touch to her and hence seeks accessories. They range from a tiny bindi to decorative anklets depending on the individual's need. The use of accessories



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gives them a sense of belongingness with their peers and provides identity to them.

### **Limitations of the study:**

1. The samples selected for this study were residents of Chennai only and hence the results cannot be much generalized.
2. The investigator was interested to study the purchasing behavior of selected college going adolescent girls, since they are the major users of aesthetic products.
3. Due to time limitation, the investigator selected only three main aesthetic items like cosmetics, clothing and accessories.
4. The tool used for data collection is interview schedule. Care has been taken to minimize the errors that might arise due to the limitations of this tool.
5. The study is limited to only 400 sample since it is difficult to cover the entire area.

### **Results and Discussion**

Consumer is the key to rapid economic growth of a country. A country with wise consumers will always grow faster on the path of development. In this study, an attempt is made to find out the purchasing pattern of four hundred college-going adolescent girls form 18-21 years in Chennai city. The results pertaining to the study is discussed under the following headings:

- A. General Family Background
- B. Reasons given by Adolescents towards Family Purchase
- C. Sources of Information regarding Availability of Products

#### ***A. General Family Background***

Occupational status of the selected parents of the sample is given in Table I



TABLE I  
 Occupational Status of the Selected Parents

S. No	Particulars	N	%
1.	Fathers:		
	i. Business	143	36
	ii. Semi-skilled	130	32
	iii. Skilled	71	18
	iv. Professionals	56	14
2.	Mothers:		
	i. Full-time Home makers	305	76
	ii. Employed Home makers	95	24
	+Full-time job	86	91
	Skilled	43	50
	Semi-skilled	30	35
	Professionals	13	15
+Part time job	9	9	

(N=400)

The information on the family background of the selected adolescent girls showed that most of the selected adolescents (75 percent) belonged to nuclear families and the rest 25 belonged to joint families, 60 percent of them comprised of medium sized having 4-6 members and 38 percent were from small families. Only 2 percent adolescents' belonged to large families, majority of them were from families with one daughter along with siblings who were sons against 24 percent having two or more daughters apart from male children. A vast majority of them (90 percent) were Hindus while only 9 percent were Christians. 40 percent of the fathers and 18 percent of the mothers were graduates while 36 percent fathers and 48 percent mothers studied upto higher secondary level. Only 14 percent fathers and 15 percent mothers were qualified professionals. 36 percent of the fathers were in business, 32 percent of them were in semi-skilled jobs and only 14 percent of them were working as doctors, engineers and advocates. Majority of the mothers were fully engaged in household activities instead of going to jobs outside. Of the employed homemakers, 50 percent were engaged in skilled jobs and only 15 percent were professionals.

### ***B. Reasons given by Adolescents towards Purchase***

Table 2 shows the reasons stated by adolescents for their participation in family purchase.

TABLE II  
 Reasons Given by Adolescents for Family Purchase\*

S. No	Reasons	N	%
1.	To break the monotony	140	35
2.	To gain confidence	262	66
3.	To make one feel important in the family	171	43
4.	To know the availability of products	195	49
5.	To become a wise consumer	220	55

\* Multiple response (N=400)



A greater percentage of adolescents (66 percent) helped in family purchase to gain confidence in buying quality goods while 55 percent expressed that they wanted to get experience of becoming wise consumers. Around 49 percent were interested to know the availability of the latest brands in the market. A study conducted by Summer (1997) with 298 adolescent girls in New York city to assess their involvement in purchasing goods revealed that purchasing of consumer goods offered a solution towards increasing the family income by curtailing unnecessary expenditure.

**C. Sources of Information regarding the Availability of Products**

The information received by the adolescent sample regarding the availability of consumer products in the market is discussed under the following headings:

1. Sources of information about consumer products
2. Adolescents’ views towards inter-personal communication
3. Adolescents’ views towards mass media

**1. Sources of information about consumer products**

Inter-personal and mass media communication compete with each other in persuading adolescents’ purchasing behavior. The communication activities are frequently inter-woven with adolescents purchasing behavior and they account for much of the transmission of information about products, opines Cox (1980).

Inter-personal sources of information about products is shown in Table III

TABLE III  
 Inter- personal Sources of Information about Products\*

S no	Sources of Information	Cosmetics		Clothing		Accessories	
		N	%	N	%	N	%
1.	Parents	285	71	321	80	241	60
2.	Siblings	296	74	302	76	311	78
3.	Friends	362	91	359	90	361	90
4.	Relatives	59	15	81	20	103	26
5.	Sales personnel	110	28	134	34	177	44

\*Multiple response

(N=400)



Table III clearly shows that majority (90-91 percentage) of the adolescent sample received information about products like cosmetics, clothing and accessories through their friends. Around 74-78 percent considered siblings as a good source for the selected three items. Parents were considered important by 80 percent of the sample for clothing. Compared to relatives, sales personnel provided more information about the products to adolescents.

Mass media sources of information about cosmetics, clothing and accessories to adolescents is given in Table IV.

**TABLE IV**

*Mass media Sources of Information about Products\**

S no	Sources of Information	Cosmetics		Clothing		Accessories	
		N	%	N	%	N	%
1.	Television	375	94	359	90	366	92
2.	Radio	290	72	251	63	288	72
3.	Films	124	31	262	66	163	41
4.	Newspaper	135	34	265	66	197	49
5.	Magazines	310	78	302	76	305	76

\*Multiple response (N=400)

Table IV clearly shows that television was a major source of information for more than 90 percent of the sample on cosmetics, clothing and accessories. Around 76-78 percent sample considered magazines as the second best source for information. Radio provided information on cosmetics and accessories to 72 percent of the respondents. Films and newspapers gave more information on clothing (66 percent) than on cosmetics and accessories. The findings of this study are in accordance with the view of Nichles (1990) and Rajalakshmi and Kalpana (2000) where Television served as the most effective and efficient media for reaching the audience.



## 2. Adolescents' views towards inter-personal communication

Communication by word of mouth is the key in transmitting information within groups. Adolescents' views towards inter-personal communication is shown in Table V.

TABLE V  
Adolescents' Views towards Inter-personal Communication\*

Sno	Particulars	N	%
1.	Conveys reliable information	376	94
2.	Informs about the place of purchase	300	75
3.	Gives details about the price of the product	324	81
4.	Influence of salesmen	284	71
5.	Saves time, energy and money	316	79
6.	Assures about the quality of the product	360	90

\* Multiple response (N=400)

About 94 percent of the respondents considered inter-personal communication to convey reliable information. Nearly 81 percent of the respondents believed that inter-personal communication gives details about the price of the products. Only 71 percent were influenced by salesmen. These facts agree with the study of Latif (1993) and Rajalakshmi and Vijayarani (2001) that reliable information from the users of the product helped them simplify the buying process.

## 3. Adolescents' views towards mass media

The selected adolescent girls were asked to express their opinion about several features of mass media which are shown in Table VI.

TABLE VI  
Adolescents' Views towards Mass Media\*

Sno	Particulars	N	%
1.	Conveys up to date information	376	94
2.	Informs the various brands available	300	75
3.	Motivates to buy the product	324	81
4.	Informs about gift offers	284	71
5.	Makes use of attractive and appealing words	316	79
6.	Saves time, energy and money	360	90

\* Multiple response (N=400)



Ninety two percentage respondents (92 percent) considered that mass media were useful in conveying the latest information about the products. Ninety percent of them considered that mass media motivated them to buy cosmetic items. Seventy five percent adolescents obtained information about gift offers. This finding coincides with the view of Chunawalla, et al., (2000) on their study about the nature of mass media with 211 adolescents.

The adolescents were asked to express the benefits of mass media towards wise purchase which is reflected in Table VII.

**TABLE VII**  
**Influence of Mass Media during Purchasing\***

S No	Types of Influence	N	%
1.	Induces to buy at once	324	81
2.	Motivates to buy new products	344	86
3.	Informs the availability of various products	320	80
4.	Drives to buy more products	372	93

\* Multiple response (N=400)

Among the selected sample, 93 percent felt that mass media like television and magazines helped them to buy more products than they had planned earlier. Around 86 percent were motivated to buy new products. Eighty one percent of the sample felt that media like television and magazines drove them to buy the products immediately without any hesitation.

## **Conclusion**

The power of adolescents as consumers has increased in recent decades. In many homes, adolescents influence both the major and day to day purchases in part because they take upon themselves to do a large amount of family's shopping. This situation needs them to be intelligent and knowledgeable to understand the modern consumption patter in order to overcome numerous problems in the market.



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## ROLE OF ICT ON EMPOWERMENT OF RURAL WOMEN

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### Introduction

**Education is one of the most important means of empowering women with the knowledge, skills and self-confidence necessary to participate fully in the development process.”**

**—ICPD Programme of Action, paragraph 4.2**

The impact of information and communication technology on society has not been uniformly beneficial, and the technological divide is being increasingly felt, especially in the developing countries. Serious obstacles still continue in achieving gender equality. Women are great human resource in all countries and the role of women in society is critical for development. Arguably, to empower women is to increase their control over the decisions that affect their lives both within and outside the household. Cultural attitudes and gender stereotyping are impediments to education leading to more men than women in scientific and technical careers and in decision-making positions, thus increasing gender inequity. The empowerment of women has been recognized as a vital element in national development efforts.

This is equally true in building the information society in our country where wide technical and economic disparities exist between men and women. Therefore the developments that shape the formation society should pursue goals of gender equality and women's advancement as well as social, political and economic justice and sustainable human development. The information society should be grounded on a human rights approach as a means to ensure the rights to all, including the rights to non-discrimination and the right communicates. ICT provides knowledge and resources that hold potential for women's empowerment. Access to technology is not only the availability of hardware, but a training approach that facilitates computer adoption. This paper speaks that Information and Communication Technology is a major tool for women empowerment.



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## **The significance of women empowerment**

The empowerment of women has been recognized as a vital element in national development efforts. This is equally true in building the information society in our country where wide technical and economic disparities exist between men and women. Therefore the developments that shape the formation society should pursue goals of gender equality and women's advancement as well as social, political and economic justice and sustainable human development. The information society should be grounded on a human rights approach as a means to ensure the rights to all, including the rights to non-discrimination and the right communicate. Communication is a basic human need, indispensable for the organization of societies and should be the foundation for building the information society.

## **Importance of Women Empowerment through ICT**

Women can explore the knowledge by sitting at home through internet. Present and future environment is all around ICT. It is an advantage and need for women to equip, where many ICT industries and BPOS give more opposite for Women's partipicle. The scarp of Equal Remunerative for women is available in the IT field. In rural areas, SHG's concentrate on Women empowerment through ICTs empowerment demaking concept among women. ICT as an interdisciplinary domain which enable women to develop new thinking and learning skills that produce creative and innovative insights develop more productive ways of working and solving problems individually and collaboratively create information products that demonstrate their understanding of concepts, issues, relationship and processes. Express themselves in contemporary and socially relevant ways communicate locally and globally to solve problems and to share knowledge understand the implications of the use of ICT and their social and ethical responsibilities as users of ICT.

## **Present status of women in India**

In the past, women were treated as they were slaves. In the past, it was believed that as they belong to the weaker sex (a very false belief) they should always follow men's orders and should always remain under the thumbs of men. They were denied from freedom. Women's condition was really not good. In those times, no one felt happy in the home at the birth of a female child. And the things were that much worse that an only girl child in a family was supposed to be a curse for the family. The current picture is entirely different when we look on the urban areas of India, but in



majority of rural areas, the status of women is still same as mentioned above. The changes which took place in the urban areas are very good and beneficial which came gradually. India is changing politically, economically and socially, at a swift speed. The condition and status of women in India is slowly changing and rising. They have begun to take due place in free India. Men and Women are just like the two wheels of a chariot. They are equal in importance and they should work together in life. The one is not superior or inferior to other. Unlike ancient times, though currently in majority of rural areas of India women are treated well, but with the orthodoxy they are cut off from the main stream of social life. The rural society did not respect them and give them the due position. They have to suffer and work inside the houses. Thus they are completely depended on men.

### **Women in Rural India**

In rural India, the Indian population is 48.1% women and 51.9% men and female illiteracy is 62% whereas the male illiteracy rate is 34%. The labour force participation rate of women is 22.7%, less than half of the men's rate of 51.6%. In rural India, agriculture and allied industrial sectors employ as much as 89.5% of the total female labour. Women have extensive workloads with dual responsibility for farm and household production. Women's work is getting harder and more time-consuming due to ecological degradation and changing agricultural technologies and practices. Women have an active role and extensive involvement in livestock production, forest resource use and fishery processing. Women spend up to six hours day bringing water from distant sources to their homes. Women contribute considerably to household income through farm and nonfarm activities as well as through work as landless agricultural labourers. Women's work as family labour is underestimated. There are high degrees of inter-state and intra-state variations in gender roles in agriculture, environment and rural production.

Indian women are extensively involved in agricultural activities. The mode of female participation in agricultural production varies with the land-owning status of farm households. In overall farm production, women's average contribution is estimated at 55% to 66% of the total labour. Rural Indian women's interface with the forests is varying - gathering, wage employment, production in farm forestry and management of afforested areas in the community plantation. Nature and extent of women's participation in fishery varies across the states. Fish drying/curing, marketing and



hand braiding and net-mending are the main areas of women's involvement in Tamil Nadu, Andhra Pradesh and Orissa. In rural areas, women make basket, broom, rope making, tasar silk cocoon rearing, lac cultivation, oil extraction, and bamboo works, etc. Women constitute 51% of the total employed in forest-based small-scale enterprises.

### **Problems in cultivating ICT among Rural Women**

1. Lack of clear National policy for promoting ICT for women's development
2. Inadequate OCT infrastructure
3. Poor literacy among women
4. Unaffordable cost of technology
5. Lack of awareness

### **Seven policy tips to ensure rural women equal access to ICTs**

- Improve and expand rural infrastructure by focusing on public shared access facilities, with special focus on wireless technologies and required electrical power sources. Policy efforts should include the development and implementation of universal access funds to promote and support the deployment of wireless technologies and infrastructure in rural and remote areas, in coordination with electricity providers.
- Invest in and promote community shared access for rural areas. Community-based access makes sense from an economic as well as social perspective. It provides affordable access without the expenses of ownership and it creates the community setting for needed training programmes and support services, including many focused on the needs of women and girls in rural communities. Evidence also shows that telecentre - type projects in rural areas help keep youth in the region.
- Develop and implement an education campaign focused on gender equality and women's rights within the context of ICT for development. It is critical to ensure that ICTs do not become a reason for gender-based conflict and violence. There is a need for continuing public education around women's rights and gender equality.
- Promote and support the development of local content in local languages. Local and meaningful content is critical to ensure demand and a market for



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ICT services and applications. It can serve as an opportunity to build local capacity and/or support local businesses interested in content development, for their communities, and delivered via ICT networks, including radio.

- Support adult literacy programs in rural areas. ICT policy and institutions should promote and support the ongoing efforts to educate the population, particularly women in rural areas.
- Promote and facilitate the establishment of public-private partnerships in the implementation of rural projects, both for financing purposes as well as implementation and operational support. These partnerships may include local or national businesses, including those providing technical support, rural cooperatives, including women's cooperatives, as well as other local businesses with the ability to reach out to users.
- Develop a programme where parliamentarians and government institutions sponsor rural ICT projects to promote their successes and gain political support. ICT and infrastructure projects have become quite visible in governmental development efforts and provide a great opportunity for visibility as well as guaranteed support for project success

### **Economic Empowerment through ICT**

It is universally accepted that Information Communication Technologies (ICT) offer immense opportunities for the comprehensive social and economic development of the people all over the world. Without its adoption, there is little chance for countries or regions to develop. However, the potential of ICT as a technology for promoting micro-enterprises by poor women is still unused in many countries. ICT can effectively be used as a technology for micro-enterprises, which are promoted by poor women under self-employment scheme.

### **Impact of ICT on Women Empowerment**

Information Technology (IT) has been promoted as an important tool in ensuring that marginalized groups, particularly women, are included in the development of the global information society. The importance of gender mainstreaming in national and organizational Information and Communication Technology (ICT) policies and strategies cannot be overstated. While IT alone cannot end gender inequality, it can go a long way in catalyzing social change and empowerment. IT helps in poverty reduction and



for the economic empowerment of poor women.

Because of its unique benefits, ICT has been recognized as a tool for empowering women. ICT are indispensable tools used by all to deal with the limitations of time, cost and distance problems and create new opportunities. One wonders if the ICT profession is a male affair. ICT is meant for all (women and men) because we live in the age where quality access to information and knowledge is key to survival and performance. Individual, organizations and government all need and use ICT to be faster, more cost effective and efficient. ICT makes it possible for information to travel faster and cheaper and size of information and distance are no longer barriers.

### **Conclusion**

ICT is a major tool in the economic and social development of women. This issue touches all facet of society. Information and communication technologies could give a major boost to the political and social empowerment of women, and the promotion of gender equality. Women must be active ICT participants - users, professionals, creators, producers and entrepreneurs. To make a difference, women must engage in productive ICT and ICT-driven activities – usage and production.

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## DOES GANDHIAN NOTION OF SELF LEAD TO MORAL FANATICISM?

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### **Introduction**

In this proposed paper I would attempt to investigate the Gandhian idea of self by comparing and contrasting it with the idea of self in medieval western philosophy. In order to understand the nature of self the concept of equality and individual freedom will be invoked. This idea of equality and freedom in shaping the nature of human being in both Gandhi's and Medieval philosophy bring so many problems. I would attempt to critically understand the Gandhian notion of self in comparison with Medieval philosophy in relation with the concept of equality and to the related issues. For my purpose I will take help from Kant and Putnam to problematize Gandhian notion of self which seems to create heteronomous selves and invite moral fanaticism.

### **Self in Medieval Period**

The whole of the western philosophy of man is anthropocentric in the sense of placing man in the centre of the universe. Although this anthropocentric attitude is shared by early Greek philosophers, the Sophists, Plato and Aristotle, they do not have any notion of universal human equality. The idea of equality appears in the Jewish Bible as the idea that all human beings are created in the image of God. Putnam says that this is connected with some features of the Jewish legal code, for example, the fact that the life of one Israelite is worth as much as the life of any other Israelite, the eye of one Israelite is worth as much as the eye of any other Israelite, and so on. The equality of all human beings can be seen under the godhead in medieval period. Perhaps the following two principles, vague as they are, may capture the minimal content that the idea of equality which western culture carves out from



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the Bible seems to involve:

- i) Equality of all human beings is established by making appeal to God irrespective to how unequal they are in social contribution, talents and achievements.
- ii) Everyone is worthy of respect despite least contribution to society or talent or achievements.
- iii) Everyone's happiness and suffering is of equal moral importance.<sup>1</sup>

The above first two principles say that we should respect each other without giving importance to their achievements and talents. The third principle which developed in the course of centuries as the notion of 'happiness' emerged out to play a more central role in ethical thinking. All these three principles work as a religious whole to the notion of human equality, although it becomes severely problematic when seen from the Kantian perspective. Kant invokes the concept of freedom to conceptualize the notion of human equality vis a vis morality. Traditional notion of self under the religious framework in medieval period does not have much to do with equality. I will discuss this Kantian critique later, now I discuss Gandhian notion of self connecting with certain notion of morality.

### **Gandhian Notion of Self**

Under the influence of Hindu philosophical tradition Gandhi distinguished between the self and the *atman*. Every man has a distinct self, that is, peculiar constitution of psychological and spiritual elements tends to manifest distinctive disposition, propensities, tendencies and temperament inherited by birth. It is earned product of his actions and service in his early lives but does not predetermine his subsequent development. Unlike the body and the *atman* which have no history, the self is constituted by history. Every man is responsible for what he has been, and has to work out his ultimate spiritual destiny himself.

Gandhi in influence with vedantic philosophy believed that man is also *atman*, which is nothing but the Brahman or cosmic spirit manifested in him in all its totality. For Gandhi, the *atman* constituted the ultimate reality and defined the character and



content of the ultimate goal of life. This goal is embedded in the process of self realization. Following tradition Gandhi called it moksha, liberation from samsara or the unending cycle of rebirths. Since man was Brahman the pursuit of moksha consists not in becoming something he is but not in being what he really is. Gandhi, under the great religious influence believed in schism between self and atman, that becomes the real tension in his moral understanding – a man and his beingness. If it is pursued on the secular line nobody will believe in the dichotomy of self and atman rather the one empirical and historical self. And this historical self enables us to see the contingency of the human self and rejects the underlying human essence. Such an idea puts an end to the struggle for the attainment of real being or to plunge into its nature.

On the basis of the above description of Gandhian self, one can easily draw the sameness between medieval self and Gandhian self. Gandhi like medieval religious influence on the conception of self conceives the notion of self in conformity with Hindu tradition or vedantic philosophy, which permits individual to see themselves in the image of God. For Gandhi man is essentially a Brahman and his purpose of life lies in the attainment of spirituality or moksha – salvation from the samsara. In the light of human essence or the human nature, Gandhian notion of self seems to create heteronomous selves. If all individual human beings have the same nature and the same ultimate goal of their life, they seem to follow the same and monotonous way of life. Now I would like to discuss the concept of morality in the discourse of Gandhian philosophy of man. For the possibility of morality the concept of freedom becomes necessity, for which Gandhian understanding of self becomes problematic and invites critical assessment. How does one can think of morality without individual freedom – intellectual freedom – to think for themselves? If on the one hand universal human essence or nature and universal goal of life is anticipated or predetermined and on the other hand to talk of individual freedom seems vacuous. That is where Gandhi has a real tension, the difficulty to make room for the individual freedom while knowing universal human nature and goal. Gandhi tried to do it by forging into schism of self and atman – the ontology of man. As Bhikhu Parekh put it,



The goal was the same for all men; the path varied. The atman defined the destination, the self the path. Since the self was the basis of individuality, it was also the basis of freedom. For Gandhi man needed freedom to live and act as he liked.<sup>2</sup>

Although Gandhi tried to explain the dual aspect of human being, one transcendental and another immanent to history, but miserably failed as he could not explicate how both aspects, seemingly contrary, can coexist in human being at a time. Gandhi's attempt to retain individual freedom for the scope of morality cannot go hand in hand with revealed universal human nature and goal. It is Gandhi's wrong conception of self which leads him into danger of losing freedom and thereby threatens the possibility of morality.

### **A Critique of Gandhian Self**

Kant invokes the notion of freedom in the notion of equality of individual selves which he believes traditional formulations, theistic and secular alike, does not have much to with it. Kant's understand equality brings in certain kind of scepticism, scepticism about what is most taken for granted in moral theory prior to Kant. It is here important to see Kant's distinction between autonomy and heteronomy. What exactly is that distinction? By heteronomy Kant means that one who is simply following one way of life or moral system in consonance with their social practice or because his parents are following that moral system or one is simply coerced to follow that moral system. Or one who is living unreflected life. In Kant's point of view, what the church tried to produce in the middle ages, and what modern totalitarians try to produce, is heteronomous people. Of course autonomy is contradictory of heteronomy.

Now what is meant by autonomy, what is its positive characterization? Kant also uses a phrase 'self-legislation' in the moral sphere. By self legislating person Kant means that person who uses free will and reason. But he also cautions us that free will is not a free choice in the sense of arbitrary choice. Kant believes in certain kind of reason in the ethical domain. Kant says that an autonomous person asks 'how should I live'? and he uses his reason in trying to figure out the answer. Kant



emphasises that the way an autonomous person uses his reason is not the way a medieval person uses his reason in trying to figure out the answer for the same question. Further Kant says it is very difficult to understand how to use free will and reason in making ethical principles is different from the medieval person uses. Kant's notion of autonomy is quite different from the medieval notion of freedom plus rationality. It is only by seeing the difference between the two notions that we can appreciate the respects in which Kantian notion of autonomy is fundamentally radical.

According to the Medievals and Gandhians, human beings have the capacity to know the human essence and their ultimate purpose or goal. It might also be expressed that we know what the happiness is, not just sensual indulgence or gratification or mere psychological feelings rather Eudaemonia in the Aristotlian sense as the 'inclusive human end'. Kant explicitly says that one cannot build the ethic upon the notion of Happiness, because too many different things can be made out to be the content of that notion. This Kantian scepticism is what makes him different from Medievals and as of Gandhians. Kant says that reason and free will which we use in a given situation is in a certain respect very dark and diffident. The situation is dark because reason is not capable of determining the 'universal human goal' or 'inclusive human end'. This dark and diffident side of reason and free will is something which Kant celebrates instead of regretting it.

## **Conclusion**

According to Kant it would be bad if we have universal human nature and the nature of Happiness revealed. Why it would be bad? It would be bad because we do not want to be heteronomous people, and the medieval and Gandhian picture of the self is one that tries to produce a heteronomous people. Kant in his essay titled 'Religion within the Bounds of Reason alone' repulses against the idea of objective inclusive human end. Kant maintains that it would be bad if the truths of religion can be deduced by reason, because that would produce fanaticism. Kant in his sharp psychological insight expresses that what makes the fanatic a fanatic is not that his beliefs are wrong or his arguments are incorrect. It is highly possible that one may have true beliefs vindicated by correct arguments, and still to be what Kant



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calls a 'fanatic'; it is possible to have the kind of undesirable intolerance, hostility and violence towards other.

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## AESTHETIC LOVE: A CRITIQUE OF SARTRE AND FREUD

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Do I need somebody to be in love with? In this paper I would explore this question discussing Sartre and Freud bringing in an aesthetic sense to look up at their understanding of love. I would like to show that love as they understand is bound to be understood as such due to their metaphysical starting points. As such, I think they do not go to the deeper understanding love as a notion invites us to feel. Had it been the case, society could have enjoyed a better harmonious treatment.

We all know that the influence of Sartre and Freud is immeasurable in the West. Jean-Paul Sartre started his philosophizing confronting an existential crisis during the post war-II era. Therefore, freedom had to be the most important issue in the human ontological structure. On the other hand, Sigmund Freud discovered an unconscious domain in our so-called conscious being as a matter of confronting some patients thought to be having mental disorders. To a great extent this unconscious was created in the human mind due to a pathological neuro-psychic crisis induced by the so-called Victorian society. Later, Freud went further to claim that every of our conscious thought is, in fact, written by the unconscious. Hence, we have no freedom at all. Anyway, both of their theories have been enjoying great response positive or negative as they could address to many of our day-to-day problems.

Now, coming back to love – love needs an object of love to occur. That object is usually conferred with an extreme positive value and thus imbibing a great attraction. Both Sartre and Freud have accepted it. But their explanations, why it is so, are different from each other.

There are two modes of existence, Sartre says, human beings in general have – being In-itself and For-itself. In-itself is the thing which is full and which does not have the consciousness of itself. On the other hand, For-itself is no-thing having a consciousness of itself and therefore not full in itself. It has a consciousness of nothingness for which it always strives for being fulfilled.



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But, in being conscious of oneself human being has to confront with others. Sartre says, in fact, to recognize myself as I am “I need the Other in order to realize fully all structures of my being.”<sup>1</sup> Thus, I recognize what I am as others see me. Thus, I bring in an existential consciousness of For-others. My freedom lies in the fact of my being able to be conscious of others as I could become conscious of my ability to choose a flight from my being In-itself negating the facticity I was bestowed upon.

Then, in such a situation love occurs. Now, let us see the fertile conditions necessary for love in Sartrean way.

- (1) A being For-itself is taking a flight from itself exercising freedom with a projection of an In-itself which has a fullness.
- (2) This being with a freedom understands that his/her freedom and consciousness lie in the fact of the flight itself and hence the aim to attain the status of In-itself has to remain as an ideal for retaining the existential status.
- (3) Therefore, a being For-itself has to find an alternative way if possible.
- (4) This means, finding out an alternative way of embracing an objectness what the being For-itself will enjoy.

These conditions show that being For-itself has a requirement for being in love and an object is a must for this purpose. These also show that this object has to possess a consciousness in turn which can have the power to objectify the For-itself.

So, thus, a being For-itself falls in love with somebody. It confers a high esteem toward that person. Otherwise, it finds out somebody whose love in return would almost seem to be impossible to get. Both of these things have only one reason – the being For-itself’s inherent tendency to be objectified.

A being For-itself knows that the other can catch it in its facticity, as it is, in In-itself. Then, it becomes able to satisfy its temporal hunger to be objectified. But how is it to draw the attraction of others? For this, it has to ‘look’ and objectify the other first. In fact, this is the very structure to be in relationship with others – the ‘look’, as Sartre mentions it – discover the other and being discovered<sup>2</sup>. But it is also conflicting as both the person and the other for that person inherently retain freedom for their being conscious of each other and themselves. Being discovered by each other through



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a 'look' means being objectified. That means, losing freedom at all. So, how it could be managed?

Sartre has left the description there – that the base of love has to be a conflict as such – and thus bringing in explanations for sadism and masochism. He explains that masochism is the excessive tendency to be objectified by the other and sadism, the opposite i.e. the excessive elated desire to objectify the other. And what love is, is an equal response from the both sides. It will occur then, as a person the first lover objectifies (i.e. loves) the other person, then that other objectifies him/her in return, and then again the first has to objectify the second, and it will lead to a vicious circle.

The fact is that Sartre does not overtly mention that being For-itself keeps the tendency to be objectified in its very basic structure and thus tries to accommodate a temporal phenomena whose base is a conflict. But, it seems clear, the phenomena of love, in his parlance, could have been explained in simpler ways had he done this otherwise. Thus also clear is the fact that he overtly accepts the being For-itself's enduring agony to be the being In-itself.

“The for-itself as the nihilation of the in-itself temporalizes itself as a flight toward. Actually it surpasses its facticity (i.e. given or past or body) toward the in-itself which it would be if it were able to be its own foundation”<sup>3</sup>.

Then, what could have been more presentable than this that every person wants to love somebody, to be loved by somebody when he bestows a high regard upon that person who he loves so that he can easily be objectified and get an attraction etc. is a concern for Sartre.

Anyway, we may like to see Sartre's explanation economically and politically on a metaphysical platform. First, we see, to be an ideal love possible persons in the bond have to be economical, that every person has to know how much he should objectify and be objectified as he/she is every now and then is to be expected to respond. Otherwise it takes the form of sadism or masochism that in turn may not be granted by the other. Second, it appeals invariably to the political concern. One has to be diplomatic if he/she understands that the other is not to grant his position. So, he/she has to be very very rationalistic, critical in thought and judgment.

The fact, Sartre got popularity is in that, perhaps, thus, he could give a rationalistic account to those so-called problems, why a person breaks up with another



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person after a period of time eventually.

Sigmund Freud's explanation is different to that of Sartre. He says, desire is at the root of love. A neonate after birth keeps only some instinctual desires to survive. Those instinctual desires later on take the form of drives in the process of development of a psyche. Freud calls it the formation of 'ego' from 'id'. Ego at times, get matured acquiring the power of thinking and imagining<sup>4</sup>. Thus it also develops a technique of fantasizing ( phantasizing ). In this process it learns first how to introject things and later how to project<sup>5</sup>. Introjection is the fantasy by which a person takes on emotions, character traits or other qualities of the people in the external world and takes them into him – or herself, whereas a projection can be defined as a fantasy of removing something from inside the psyche and placing it onto or into a person or object in the external world.

Freud says, through all these acts a person gets some pleasure. At first, Freud thought them to be of the kind of sexual satisfaction which is libidinal or instinctual. But later he improves his position extending the concept of libido to that of 'eros' which is of the kind of Plato's 'eros' and thus extending the concept of sexuality completely<sup>6</sup>.

Anyway, this 'eros' explains the phenomena of love. As is already mentioned, Freud too is of the opinion of having an object to be in love with. This object would be the object of 'eros' thus. It can basically satisfy one's desires. Then, the question that how Freud explains the phenomena of high esteem one bestows upon the object of love would be treated in the way that it becomes possible through a kind of projection. This projection may occur through a process by which even the energy of sexual drive can be re-directed onto non-sexual aims. Freud calls it sublimation. According to Freud, all forms of human creativity – artistic, scientific, philosophical – are the outcome of sublimation.

Sartre told us that we have to be in a vicious circle of struggling in love. It happens due to freedom we inherit as our ontological condition of being. But, we see, we have love-bond between family members also. Need not it be so that love occurs only between so-called lover and beloved. A mother loves a child naturally. Does the mother struggle for a metaphysical freedom here? Sartre might say 'yes', because the child tries to capture mother's attention. Then it is only an effort to capture an attention or imprison attraction. However for Sartre, this is love since love is only a



relationship.

A better answer comes, in fact, from Freud. Freud talks of an Oedipus complex due to a primal eros. Who will love whom in a future life is determined in an early stage of life, Freud argues. The object is the same for a baby girl and boy at first when they start confronting the world. They introject this object and create a subjectivity of their own. Definitely this subjective notion at the time of introjection was enlarged, bigger. Later, as a result of various bodily processes they become capable of severing themselves from this object curtaining their subjectivity. But they retain a tendency of attraction toward this first object who could comfort and help them survive in their existing crisis. Thus, a mother, who is the first object for an infant, Freud argues, becomes an object of love forever.

Anyway thanks to processes like projection and sublimation, a person becomes able to love other persons also and in that his/her original love gets repressed forever. In Freudian parlance, repression can be taken as a unconscious process of suppression and it plays an important role in one's subjectivity. Since this repression occurs, according to Freud, for an infinite point of time the psyche eventually carries a tendency to be united with somebody by losing the subjectivity it owns. It happens due to projection and sublimation.

Freud could explain, thus, all the types of love that occur in a relationship better than Sartre as he could delineate delicate reasons for the longing to be united in love, whereas Sartre seems to long for the segregation seeking freedom all the time in a relationship. Freud's problem is that the lover in love has no freedom at all as he/she is destined to do so by some unknown processes that occur in an early period of struggle to survive. The fact of losing subjectivity by the lover just simply guarantees it.

Now coming back to the issue, whether we need an object to be in love with – definitely we need an object to start – a concrete object. But it is not necessary to continue with that concrete object. A point of time comes, when we transcend the object. At that time, the love itself becomes important. We can call it an abstract kind of love. Any kind of high quality art is the example of this. Many times this love turns to be a love of an activity of the love as such. For example, when we start saying 'I love to sing the song' instead of 'I love the song to sing'. Often it is taken that an object of love contains some attributes to attract the lover. From concrete to abstract

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these qualities are carried as if at first the love is done with the object (with the attributes) and then with the attributes (with the object). It may be so. Nevertheless the phenomena of love cannot be explained so reductively, for any kind of such understanding is actually based on a belief of dualism of subject and object which is itself a metaphysical trap that has a tendency to marginalize the ontology of human subjectivity. It is, because love done with the object eventually aims at love done away with the object. At some point of time or the other, we all feel that existential crisis to get rid of that type of a metaphysics. Freud looks for the reasons why an object or the attributes of love becomes important for somebody. Thus he does not want to give a separate status to love. No matter the object is somebody or something or some qualities, our choice is always particular and this particularity is fixed for us. But this facticity cannot be entertained.

Freedom is a problem for Sartre whereas unfreedom is for Freud. For Sartre, to fall in love is an urge 'for' our being whereas it is a destined condition for Freud. Thus a compulsion to love is given in our ontological structure. Then how can we get rid of this situation?

In fact, the problem lies in the object-orientation in love. We lose our freedom as we have to love an object, concrete or abstract. Thus we inherit an obsession toward the object. Then obsession is the real problem. Then why do we not try to give up this obsessive quality?

The fact is we can do it and this is the call of the ethical indeed. We can do it by turning our attention from love of object to love itself. At that stage love becomes unique with its own fragrance. This is the aesthetic element of love. Love will occur, then, for the love's sake. That does not mean that there will be no object in love. But the object will not be important as such as love itself becomes the object. The feeling of love will overpower the lover and the loved then. The more it happens the more the love becomes encompassing. The lover does not feel that he has to lose his freedom by the object or by the pre-destined condition. The example we get of this kind of love is a true devotional or philanthropic love.

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  - <sup>2</sup> Ibid, p.277
  - <sup>3</sup> Ibid, p.384
  - <sup>4</sup> Freud, Sigmund, *Historical and Expository Works on Psychoanalysis, Book 15* ( Shrijee's Book International, New Delhi, 2003), p.435
  - <sup>5</sup> Lear, Jonathan, *Freud* (Routledge, New York and London, 2005), pp. 178-179
  - <sup>6</sup> Ibid, pp.85-87
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