



SOME PRACTICAL PROBLEMS IN ORGANIZING SCIENCE EDUCATION THROUGH DISTANCE MODE

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Introduction:

Distance Education Institutions (DEIs) in general offer courses in humanities and social sciences where the practical experiment component is almost not needed. Conducting and managing such courses are relatively easy with moderate infrastructure and manpower when compared to science courses. Usually, they admit students into courses and organize some contact classes for a period of two weeks and finally conduct the examinations. Even the contact classes are not compulsory and usually 10-12 percent of the admitted students attend such classes. But, they provide comprehensive study material to students for their self study and preparing for examinations. Because of such convenience, and ease in organizing, many DEIs have mushroomed in every nook and corner of the country. They became sources of funds for the Universities which organize them. Because of this, there is a heavy competition among the DEIs and it is alleged that some of them are resorting to unfair means to lure the students.

Need for Science Courses through Distance Mode:

The DEIs are also offering Science Courses in recent years. However, under the above circumstances, offering science courses through Distance Education is a hard task. DEIs need a lot of infrastructure like Practical Labs, Chemicals, Specimen and more practical orientation is necessary to conduct science courses. In spite of that, a necessity is being widely felt to offer science courses through distance mode. This has been due to the need for improving the quality of science education at high school level on the one hand and the present industrial setup requiring more qualified people with science and mathematics background on the other. Therefore, large number of students from high school level should be enrolled into science courses expecting a fair percentage of them will pursue higher level of science education. Moreover, there is a shortage of science teachers at all teaching levels. It may take a very long period to train and prepare such teachers through formal education. But, we need large number of science teachers at present. There is a shortage of qualified science teachers at high school level. There are many people working in schools with under-graduate qualifications with some teacher training. There is a world wide phenomenon that it is being preferred specialist subject teachers along with some



teacher training¹. A post-graduate degree is considered as a minimum qualification to be the subject specialist. Since, many of the teachers are employed; they may not be able to approach formal institutions to acquire such qualifications. Therefore, they should be provided alternative opportunities to acquire post-graduate degrees in the basic science courses like Botany, Zoology, Physics and Chemistry.

Hence, DEIs are ideal to provide them such opportunities in a shorter span before sufficient formally trained people are available in the long run. They should be provided opportunities to acquire post graduate degrees in basic science courses like Botany, Zoology, Physics and Chemistry. Therefore, DEIs are the only source for the in-service people to acquire the degrees in the above PG Courses.

The Experience of PG Science Courses through AU School of Distance Education:

The School of Distance Education (SDE), Andhra University is one of the few institutions that has been offering Science Course with this noble objective. It has been offering Post-graduate courses in Zoology, Botany, Physics and Organic Chemistry for the past eight years. So far four batches have completed and the candidates have obtained M.Sc. Degrees successfully. But conducting such courses is a cumbersome and expensive process. An attempt is made in this paper to discuss the problems encountered in comparison with other Universities offering such courses.

M.Sc. courses were started for the first time during the Academic Year 2004-05 through Distance mode in Andhra University. The basic problem that was encountered in the beginning, that for how many days the students would be able to attend both theory and practical classes at the Campus. In the orientation programme, which was organized for them, the students made it clear that they could not get leave not more than one month in a year and not able to get leave more than 15 days at a stretch. Hence, the SDE, AU is organizing contact classes for theory for 15 days in the months of December-January holidays and practical classes for 15 days in the months of April-May holidays. However, in case of Organic Chemistry, the practicals are being conducted for 24 days. At these programmes, most of the subjects and practicals will be covered comprehensively. Practical examinations usually are conducted immediately after Practical Training Classes. During summer holidays of June-July, theory examinations are to be conducted. Most of the students were School Teachers as it had been expected. Consequently, the programmes were so designed that they are convenient for the students to attend the programmes during holidays.

Problems Encountered:

But, the actual problems were started when these programmes were made compulsory. According to regulations of the University, eighty per cent of attendance at these programmes was a must and those students who could not make it, would not be permitted to appear for annual theory examinations. However, those students who



had attended first spell of theory classes would be permitted to attend second spell of practical classes. When they obtained eighty per cent of attendance at both these programmes, they would be permitted to write practical examinations followed by theory examinations. As the attendance is compulsory, collecting attendance daily and maintaining the attendance registers has been a time consuming process. However, elaborate arrangements are made for collecting attendance and proper certification from concerned teachers. Irregular students would be filtered out in the first spell programme itself. The students who are absent initially will be permitted to attend subsequent programmes for a period of six years from the date of their admission as per their convenience and accordingly they will be permitted to write examinations.

With these regulatory mechanisms of the organization some practical problems are emerged as the irregular students have begun to make all sorts of attempts like recommendations from people who have some importance. This posed a real challenge to its ability to conduct the programmes as planned. This is an unpleasant task that has to be taken care of and the organization resists such pressures to the maximum possible extent, otherwise, the courses will lose credibility. Unfortunately, it has been felt by some students that there is a price for anything. They think that they can buy it out. This ethical laxity in the wider context making things more complicated. Under such circumstances, conducting MSc courses is becoming more difficult year after year. As a result, the objective of providing quality science education to prospective teachers is in jeopardy.

Funding Problems of DEIs:

As observed earlier, the DEIs became sources of funds to many organizing Universities which suffer cuts in public funding for their normal activities. As a matter of fact nearly 40 per cent of total students pursuing higher education are studying through Distance Mode. The government may not spare funds for distance education activities of DEIs in spite of its beneficial role in the society. The organizing universities have started DEIs initially with good intentions of serving the additional educational needs of the society in general. When they have started facing the paucity of public funding, they are depending more and more on DEIs earning capacities. Some of them further diluted the quality standards capitalizing on their capacity of degree awarding ability. Such practices are to be curtailed and the quality of distance education should be protected. The Government should enhance the funding of Universities making them less dependent on DEIs and thereby eliminating the root cause of paucity of funds to them. Otherwise, even the genuine DEIs will lose credibility in the long run.

Since the introduction of economic reforms in 1991, the Government of India treated higher education as non-merit good² as per the International Monetary Fund conditionalities agreed by it. As a result, the budget allocation for higher education has never exceeded 1.0 per cent of Indian Gross Domestic Product (GDP). The



Government of India has been promising to increase the budget allocation for education by 6 per cent of its GDP but never has it been fulfilled³. The education subject is in the Concurrent List and most of the burden falls on State Governments⁴. They in turn, due to populist compulsions for electoral advantages, are starving the State Universities with budget cuts. Moreover, the government has been advocating to the universities to generate financial resources internally to the tune of 20 per cent of their budgets⁵. As a result, most of the State Universities felt it was convenient to establish DEIs to self finance their activities. But, out of their eagerness to earn some thing, without creating proper infrastructure for distance education, they are depending on study centres to run their distance education activities. This has led to competitive dilution of standards making the distance education as a laughing stock in general.

Unethical Practices:

As a result, some of the Universities in Andhra Pradesh as well as in other states adopted a novel method of revenue sharing with Study Centres. These study centres are the under-graduate degree colleges situated at District and Taluq Headquarters. These centres assume responsibility in conducting both practical and theory classes systematically. But it has become a rare phenomenon in practice due to commercial attitude of some of the managements of such centres. As a result, the quality of such programmes appears to be diluted.

Moreover, there are certain institutions hosting DEI study centres, adopt unethical and questionable practices just to lure more number of learners with commercial outlook. There are instances that some of them are hosting five or six DEIs programmes of different universities, even from outside the state. To attract more students into these programmes some of the study centres resort to all sorts of unfair means causing dilution of standards of distance education in general. It appears that the concerned universities have never bothered about standards beyond their income. Fortunately, the SDE, AU has avoided the practice of revenue sharing by delegating its responsibility to the study centres for the sake of just earning income. It conducts all its programmes under its personal supervision even though some of those programmes cost it dearly.

The Advantages of Dual Mode of the School of Distance Education, Andhra University:

The SDE, AU operates under dual mode system of the University. Under this dual mode system both formal mode and distance mode patterns of education co-exist in the organizing University concerned. In general, DEIs may not have their own infrastructure facilities due to cost constraints. They depend on formal education institutions for faculty, classrooms, laboratories, etc. The idea behind the distance education concept is to utilize the idle capacity of formal mode to make distance mode more efficient and uncompromising in quality. When both modes exist under one



supervision, as in the case of SDE, AU, the distance education becomes more efficient and qualitative. In general, the DEIs face problems in preparing quality study material for their students. Since, the SDE, AU is a part of the University, the faculty is coming forward to prepare study material in-time and with quality. As a matter of fact, when the SDE, AU introduced MSc courses, the science faculty of Andhra University came forward with dedication and commitment and completed writing 100 books including practical manuals within one year. Further, they extended their unstinted support to the SDE, AU Science Programmes by forgoing the comfort of holidays.

But the widely prevailing competitive revenue sharing syndrome is also impacting our MSc courses. Some other universities of Andhra Pradesh have also introduced MSc courses through their DEIs. Some of them even have gone to the extent of giving MSc Organic Chemistry study centre to Colleges where there are no chemistry departments even at undergraduate level. It puzzles that where they will conduct chemistry practicals when there are no chemistry laboratories and no science teachers who are supposed to teach science theory classes. Thus, it is self evident that how fictitious the programmes they claim to be conducted. Under the influence of such tell-tale stories, the science students generally expect a lenient attitude from SDE, AU. This builds pressure on it to convince them of the seriousness of its programmes.

As a matter of fact the SDE, AU has offered no study centres for its MSc courses. All students are directed to attend all programmes at the University headquarters in respective campus departments. Because of this, the SDE, AU is able to conduct its programmes with ease and effectively.

Conclusion:

Finally, the need of the hour has arrived to regulate DEIs properly. Distance Education must be given due recognition as it is a widespread and well accepted medium of spreading educational opportunities to many disadvantaged people particularly poor and the needy sections who could not afford formal institutions for various reasons. Unfair means of revenue sharing and other malpractices should be curtailed. Study centres patronizing many DEIs should be restricted to make their programmes more effective by extending the need based support services. The Government should also identify reputed DEIs and even fund their activities. Budget allocation and allotment for education must be enhanced. The pending promise of enhancing the budget share of education to six percent of Indian GDP should be fulfilled. The under funded State Universities must be revitalized with more funds and eradicate the root cause of their increasing dependency on DEIs.

References:

¹ Jonathan Rochkind, Amber Ott, John Immerwahr, John Doble and Jean Johnson (2007), 'Lessons Learned: New Teacher Talk About Their Jobs, Challenges and Long-Range Plans', A Report from the National Comprehensive Centre for Teacher Quality and



Public Agenda; This Report is also available at www.publicagenda.org

² **Jandhyala BG Tilak** (2004), Public Subsidies in Education in India, (Special Article) **Economic and Political Weekly**, Vol.39 No.:04, January 24-30. According to the author, the level of subsidies in education in India is not particularly high, nor is the rate of cost recovery particularly low, in comparison with other developed and developing countries. It has also been found that some of the specific subsidies in education are fairly progressively distributed. Also see **Jandhyala BG Tilak** (2004), Absence of Policy and Perspective in Higher Education, (Special Article) **Economic and Political Weekly**, Vol.39 No.:21, May 22-28 and **Jandhyala BG Tilak** (2005), Higher Education in 'Trishanku', (Perspectives) **Economic and Political Weekly**, Vol.40 No.:37, September 10-16.

³ **Jandhyala BG Tilak** (2006), On Allocating 6 Per Cent of GDP to Education, (Perspectives) **Economic and Political Weekly**, Vol.41 No.:07, February 18-24. According to the author, the goal of allocating resources equivalent to 6 percent of the gross domestic product of India for education is realizable if there is a political will.

⁴ P M Bakshi (1996), The Constitution of India with Selective Comments, Universal Law Publishing Co. P. Ltd., New Delhi.

⁵ Sam Pitroda (2007), Report of the National Knowledge Commission, Government of India, New Delhi.