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STUDY OF EFFECTIVENESS OF TRADITIONAL AND COMPUTER AIDED TEADING TO HIGHER SCONDARY COMMERCE STUDENTS OF KUTCH

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1.1 INTRODUCTION

Education is the bedrock of societal advancement and the primary vehicle for individual empowerment. Historically, the transmission of knowledge was a linear process, heavily reliant on the physical presence and oratorical skills of the teacher. However, the dawn of the Information Age has ushered in a transformative era where the "what" and the "how" of learning are being redefined. In the contemporary global landscape, educational systems are increasingly pivoting toward student-centric models facilitated by technological integration.

Information and Communication Technology (ICT) has emerged not merely as a tool but as a revolutionary pedagogical force. It offers the potential to transcend traditional classroom boundaries, providing high-fidelity visual context and interactive experiences that were previously unimaginable. This shift is particularly critical in specialized streams like Commerce, where abstract financial concepts, complex statistical data, and dynamic market structures require more than rote memorization for mastery.

1.2 CONCEPT OF TRADITIONAL TEACHING METHOD (TLM)

The Traditional Learning Method, often characterized by the "Chalk and Talk" approach, has been the dominant pedagogical framework in India for decades. In this model, the teacher serves as the central authority and primary source of information. Knowledge is disseminated through lectures, textbook readings, and board-based demonstrations. While this method fosters a direct interpersonal connection and immediate

feedback loop, it often struggles to maintain high engagement levels among students who possess diverse learning styles (visual, auditory, or kinesthetic).

In the context of commerce education at the higher secondary level, traditional methods often fail to illustrate the real-time dynamics of business transactions. The static nature of a blackboard cannot fully capture the fluidity of an accounting ledger or the volatility of economic indicators, frequently leading to a mechanical understanding of the subject matter rather than a conceptual one.

1.3 CONCEPT OF COMPUTER-AIDED INSTRUCTION (CAI)

Computer-Aided Instruction (CAI) represents a modern pedagogical strategy where the computer is utilized as a primary medium of instruction. CAI is characterized by its interactive nature, allowing for self-paced learning and immediate reinforcement of concepts. Through the use of multimedia—incorporating text, graphics, animation, video, and audio—CAI appeals to multiple senses, thereby enhancing the retention and recall of information.

For commerce students, CAI offers significant advantages. Interactive spreadsheets allow students to witness how changing one variable affects an entire financial statement. Animations can demystify the flow of goods and services in a global supply chain. By providing a safe environment for experimentation and simulation, CAI encourages critical thinking and problem-solving skills that are essential in the modern corporate world.

1.4 NEED AND SIGNIFICANCE OF THE STUDY

The Kutch district of Gujarat is a region characterized by rapid industrial growth and unique geographical challenges. Despite this growth, the educational landscape in regional areas often lags behind metropolitan centers in terms of technological adoption in the classroom. This study is significant because it seeks to address this digital divide by providing empirical evidence of the benefits of ICT integration in a regional setting.

Furthermore, the commerce stream is a vital pipeline for the nation's economic workforce. Improving the quality of commerce education at the higher secondary level has long-term implications for the professional competence of future accountants, managers, and entrepreneurs. There is a profound need to identify teaching methodologies that not only improve academic achievement but also foster a genuine interest and motivation in the subject matter.

1.5 STATEMENT OF THE PROBLEM

The present research is an investigative effort to compare and contrast two distinct pedagogical approaches. The problem is formally stated as: **"A Study of Effectiveness of Traditional and Computer Aided Teaching to Higher Secondary Commerce Students of Kutch."** This study focuses on measuring the performance gap between students taught using traditional lectures and those taught using interactive computer-aided modules.

1.6 OBJECTIVES OF THE RESEARCH

To provide a structured approach to the investigation, the following objectives have been formulated:

- To evaluate the baseline academic achievement of higher secondary commerce students in the Kutch district.
- To design and implement a series of Computer-Aided Instruction (CAI) modules tailored for the commerce curriculum.
- To measure the effectiveness of the Traditional Learning Method (TLM) through standardized testing.
- To compare the post-intervention scores of the TLM and CAI groups to determine which method yields superior cognitive gains.
- To explore the qualitative impact of technology on student motivation and classroom participation.

1.7 HYPOTHESES

Based on the objectives, the following null hypotheses (H0) were formulated for statistical testing:

H01: There is no significant difference between the pre-test mean scores of the control group and the experimental group.

H02: There is no significant difference between the post-test mean scores of the students taught through Traditional Learning Methods and those taught through Computer-Aided Instruction.

H03: The use of CAI does not significantly influence the motivational levels of higher secondary commerce students.

1.8 SCOPE AND DELIMITATIONS

While the implications of this study are broad, the research is focused within specific parameters to ensure depth and accuracy. The scope of this study is restricted to:

- Higher secondary schools (Standard XI and XII) in the Kutch district of Gujarat.
- Students enrolled in the Commerce stream.
- Academic performance in core subjects such as Accountancy and Business Administration.

The study is delimited to a sample size of 275 students and does not account for socio-economic factors outside the classroom environment.

1.9 DEFINITIONS OF KEY TERMS

1.9.1 Effectiveness

In this study, effectiveness refers to the measurable gain in academic achievement as demonstrated through pre-test and post-test scores.

1.9.2 Computer-Aided Instruction (CAI)

An automated instructional technique in which a computer is used to present the instructional material and monitor the learning that takes place.

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