A Comparative Study of The Impact of Face To Face And Technology Assisted Learning on Students of the B. Ed Program

ABSTRACT

The two fundamental learning theories of behaviorism and constructivism are widely used and found to be the most applicable in day to day learning in formal and non-formal learning processes. These two learning theories have impacted the educationists and education advancements today. It is on the basis of these theories that the Face to Face mode and Technology Assisted Learning (TAL) mode are being used. In the Face to Face mode, a single teacher is found teaching a large number of learners irrespective of their learning styles, pace, capacity to learn and study habits. In TAL, it is the computer that plays a critical part in accomplishing pedagogical functions with graphics, pictures, animation and sound. A learning package is developed which allows the learners to learn at their own pace, capacity to absorb and in keeping with their learning style. The only necessity is that the student should be technology friendly and be able to learn from the package.

The aim of the present research was to compare the impact of these two modes of learning namely Face to Face (F to F) and Technology Assisted Learning (TAL) on B. Ed. Students. A theory based topic (TBT) namely 'Motivation' and a skill based topic (SBT) namely 'Unit Test Plan' was selected for developing the learning package. Both the topics 'Motivation and Unit Test Plan' are selected from the regular B. Ed. syllabus. The sample of the study included 378 students enrolled from six un-aided B. Ed colleges in Thane district of Maharashtra.

Review of Literature:

The review of literature undertaken showed that, using the traditional face to face mode of learning, students are not able to get adequate clarification of abstract concepts in various subjects. It revealed that the TAL is an important medium to make abstract concepts easy to understand. It also revealed that there
are few studies on the need, impact and utility of TAL packages. Hence, the present research is conducted to compare the impact of F to F and TAL mode.

**Specific Objectives of the Study:**

- To develop a Technology Assisted Learning Package (TALP) to learn a theory based topic namely 'Motivation',
- To develop a Technology Assisted Learning Package (TALP) to learn a skill based topic namely 'Unit Test Plan',
- To explore the relationship between
  a. social background and learning retention while using F to F or TAL mode
  b. medium of instruction and learning retention while using F to F or TAL mode
  c. geographical locations (urban / rural) and learning retention while using F to F or TAL mode
  d. gender and learning retention while using F to F or TAL mode
- To determine the extent of learning retention while learning the topic of 'Motivation' through F to F and TAL mode,
- To determine the extent of learning retention while learning the topic of 'Unit Test Plan' through F to F and TAL mode,
- To compare whether student's satisfaction is higher or lower with F to F mode or TAL mode.
- To make suggestions for curriculum planners of B. Ed. program on how to adopt either mode in the most beneficial manner.

**Methodology:**

The experimental method of research was used to achieve the specific objectives. The researcher prepared two similar groups of students on the basis of their CET scores. A pre-test for both the groups with the same test paper was conducted. One group was taught the theory based topic namely 'Motivation' with F to F mode whereas another group learnt the same topic by TAL mode. Finally a
post-test was conducted for both the groups with same test paper. The marks obtained by the students were considered as test scores. The difference between pre-test and post-test scores were considered as Gain scores which were used for further analysis and conclusion after applying \*$t*$ test and ANOVA. Same method was followed for the skill based topic namely 'Unit Test Plan'.

**Tools for data collection**

The four tools developed for data collection include:

1. Personal data sheet,
2. Technology Assisted Learning Package (TALP) developed for theory and skill based topic
3. Test prepared by the researcher to measure learning retention for both the topics
4. Questionnaire for students on satisfaction regarding mode of learning.

**Techniques of data analysis**

The descriptive methods used for present study includes Measures of Central Tendency including Mean, Median and Mode, Measures of Variability including Standard Deviation, Skewness and Kurtosis and graphical representation of data including bar diagrams and pie chart. The inferential methods used for testing of hypothesis for the present study were \*$t*$-test and ANOVA. The researcher analyzed the Gain scores to study whether learning with F to F mode or TAL mode is better for theory based topic or skill based topic. The researcher compared the gain scores between the groups to find out whether overall students had better learning retention in F to F mode or TAL mode on the basis of medium of instruction, gender, locality and social category.

Conclusions of the study

1. Overall, ii was found that the students who were administered TAL mode for learning performed better than those who were taught in the F to F mode.
However, when compared between TBT and SBT, it was found that students performed better for theory based topic than the skill based topic.

2. Understood by social category, the finding is that SC, ST, OBC, Minority and Open category; all students had higher learning retention scores for both TBT and SBT in the TAL mode.

3. When compared between the categories, it was found that SC, ST and Minority students had higher learning retention in the TAL mode than in F to F mode for both TBT as well as SBT.

4. It was found that Students of Marathi medium had higher learning retention when taught TBT through TAL mode whereas Hindi and English Medium students performed better in SBT when taught through TAL.

5. It was found that Urban students and rural students performed similarly in F to F mode whereas Urban students performed better than rural students in TAL mode of learning for both the topics. Rural students preferred F to F mode for learning.

6. When compared within the topics, overall students performed better in learning TBT than SBT. In comparison between the two modes of learning, students performed better in learning with TAL mode than F to F mode.

7. When compared between the gender, Male students performed better than Female students in both the modes learning.

8. It was found that student's satisfaction of learning the specific contents is higher with TAL mode than F to F mode.