

BLENDED LEARNING EFFECTIVENESS: PRE-SERVICE TEACHERS' COMPETENCY

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Abstract: Information and communication technology has been accepted as a necessary part of the educational system throughout the globe. Each learner required unique learning style; blended learning is better solution to students need. The purpose of this study was to find out the effectiveness of blended learning enhance teaching competency among student teachers. *Sample:* 30 science students from Alagappa University College of education, Karaikudi, Sivagangai district, Tamil Nadu. *Method:* pre test post test experimental method as adopted for this study. *Result:* There was the significant difference between pre test and post test scores of teaching competency. This result reveals that blended learning is more effective method of teaching.

Key words: Blended Learning, teaching competency, information and technology, effectiveness.

INTRODUCTION

Kothari commission has very rightly said, "The destiny of India is being shaped in its classrooms." As the population in India is growing very rapidly day by day the need of well qualified and professionally trained teachers will also increase in the coming years. So lots of efforts should be made to improve teacher education. Blended learning enhances the quality of teachers. Teacher competencies facilitate social and emotional development of the students. It shows that every teacher needs to update his/her potential in all possible innovative methods, so as to modify and improve his/her teaching competency in accordance with the changes envisaged in the educational system. The recent trends in school education such as common school system; non graded schooling, Activity oriented, experiential learning etc. call for changes in teacher education in the secondary level also.

BLENDED LEARNING

The term "blended learning" represents a wide spectrum of delivery options, tools, and pedagogies, but conceptually refers to instruction that is a mix or blending of traditional face-to-face (f2f) and online components.

TEACHING COMPETENCY

The term teaching competency refers to a set of knowledge, skills values, attitudes, capacities and beliefs people need for success in a profession. Teachers' professional competencies include various competencies in different areas such as pedagogical, cultural, communicational, personal, intellectual etc which are needed for effective teaching.

REVIEW OF RELATED LITERATURE

Cross et. al, (2014). An exploratory study was done on online learning v/s blended learning. In the online learning condition, students viewed the video on a personal computer, and also viewed a follow-up tutorial on the computer. In the blended learning, students observe the video in a classroom, and received the follow-up tutorial from a live lecturer. While significant learning gains after each session conducted was checked, no significant differences between the online and blended learning groups were observed.

Zhu, Chang; Wang, Di (2014) made a study on key Competencies and Characteristics for Innovative Teaching among Secondary School Teachers: A Mixed-Methods Research. The results show that the four-factor model of key competencies for innovative teaching was validated and the importance level of the perceived characteristics was also identified. This research has theoretical and practical significance with regard to the development of competence-based teacher education programs.

Alseweed (2013) studied students' achievement and attitudes toward using traditional learning, Blended Learning, and virtual classes learning in teaching and learning at the university level. Results indicate that there are significant differences among the

instructional approaches in the achievement test scores in favour of blended learning. In addition, the results show significant differences in students' attitudes in favour of blended learning.

M. Parimala Fathima et.al (2014) experimental study on Enhancing Teaching Competency of Graduate Teacher Trainees through Metacognitive Intervention Strategies .in experiment the investigator developed teaching competency on five dimensions namely induction, content, pedagogy, organization and Assessment. The findings revealed that there is a continuous improvement in all the dimensions of teaching competency.

NEED FOR THE STUDY

The teacher of tomorrow would design the teaching situation to develop the pupil's skills and competencies. Successful and effective teaching requires two basic things. The teacher should be competent to teach the subject allotted to him. At the same time he/she shall follow appropriate methodology and technology of teaching. Effective blended learning approach equips them in adopting teaching methods. In the classroom there are sample opportunities to adapt to blended learning approach equip enhance the teaching competency.

OBJECTIVES OF THE STUDY

- To assess the level of teaching competency in science among the student teachers.
- To identify the blended learning that would enhance the competency in teaching science among student teachers
- To develop and implement the blended learning to the student teachers to enhance the teaching competency in graduate teacher training students.

HYPOTHESES

- There will be no significant mean difference between the pre and post assessment scores of Science trainees in teaching competency.
- There will be no significant mean difference between physical science and biological science gain scores of student teachers.

SAMPLE

Purposive sampling approximately 30 students of both physical and biological science in Alagappa university college of education, Karaikudi, Sivaganagai District ,Tamil Nadu.

TOOLS

Standardized teaching competency scale A.S.ARUL LAWRENCE(teaching competency scale tool source)

METHODOLOGY

In the present study, the investigator has chosen single group experimental design. The Student teacher studying B.Ed in Alagappa university College of Education, Karaikudi, Sivaganagai (dist); A totally 30 samples were selected from biological science and physical science using purposive sampling technique. The investigator uploads messages on WhatsApp group positive members. Face-to-face instruction (lecture method, group discussion, cooperative method, peer tutoring) and online based instruction (pre-recorded video posted, PowerPoint, word document, PDF, you tubes, flipped classes) for experiment. This experiment was administered totally 12 days, after the treatment investigator conducted post test of experimental group.

ANALYSIS AND INTERPRETATION OF DATA

DATA ANALYSIS

The scores of students of group were categorized and tabulated statistical techniques were applied to identify the effectiveness of blended learning .

HYPOTHESIS -1

“There will be no significant mean difference between the pre and post assessment scores on teaching competency in Science trainees.”

Table-4.1

The table shows the mean, Standard deviation and 't' value of the pre and post assessment scores on teaching competency in Science trainees.

S.No	test	N	Mean value	S.D	't' Value	Level of significance
1	Pre test	30	152.97	16.09	4.63	significant
2	Post test	30	285.06	6.57		

Significant at 1% level

Table value = 2.462

Df = 30-1 = 29

Interpretation

Since the calculated 't' value (4.63) is greater than the table value (2.462), it is concluded that there is a significant difference between pre and post assessment scores on teaching competency in Science trainees. Therefore, the hypothesis framed by the investigator is rejected.

HYPOTHESIS -2

"There will be no significant difference between physical science and biological science the gain scores of the student teachers."

Table-4.2.

The table shows the mean, Standard deviation and 't' value of physical science and biological science the gain scores of the student teachers.

S.No	test	N	Mean value	S.D	't' Value	Level of significance
1	Physical science	21	287.63	7.33	0.023	not significant
2	Bio science	9	278	2.60		

Significant at 1% level

Table value = 2.462

Df = 30-1 = 29

Interpretation

Since the calculated 't' value (0.023) is lesser than the table value (2.462), it is concluded that there is no significant difference between physical science and biological science the gain scores of the student teachers. Therefore, the hypothesis framed by the investigator is accepted.

EDUCATIONAL IMPLICATION

The investigator suggests that the following recommendation of NCTE, NCERT and educational bodies to improve the teaching competency of graduate teacher training students. The practical inputs regarding Blended learning should be taken up through subject specific programmes such as lesson plan writing, classroom management, Blackboard management and practice teaching. The same can be tried at various levels and also in in-service teacher programmes and distance teacher education programme.

CONCLUSION OF THE STUDY

The investigator suggests that this experiment will definitely help the future teachers to take their roles confidently by enhancing their teaching competency in the classroom situation. There is an urgent need to steer our efforts towards the implementation of Blended learning to enhance teaching competency at all levels of Teacher Education.

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