Student-teachers perceptions towards Blended Learning Approach in Critical Understanding of ICT in Education

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Abstract: Globalization and technology are continually altering our views of education and offering new opportunities for learning and engagement in life. Technology such as web conferencing, the Ultranet, blogs/wikis, virtual worlds and online gaming and mobile devices such as iPods, mobile phones, digital cameras and voice recorders are changing the way teachers teach and the way students learn. Technology enables learning to extend beyond the classroom walls and facilitates better access to learning resources. It also supports the creation of partnerships with the wider school community and equips learners with contemporary skills necessary for successful participation in life. Blended learning approaches have amplified the need for school leaders, teachers, students and the wider community to take advantage of learning opportunities afforded through improved personalization, collaboration, and communication enabled by learning technologies. Blended learning has many different forms and will continue to evolve as new technology and practices are introduced. It should not be viewed as a single model but as an approach that shares the ultimate goal of the provision of better educational experiences and outcomes. The main aim of the study is to find out the B.Ed. Student-teachers perceptions towards Blended Learning in Teaching and learning of Critical Understanding of ICT in Education. Survey method was employed for this study. The investigator has chosen 80 B.Ed. Student-teachers for this study. Finally the investigator inferred that more number of B.Ed. Student-teachers has moderate level of perception towards blended learning, there is no significant difference in perception towards blended learning among the B.Ed. Student-teachers with respect to their gender and there is no significant difference in perception towards blended learning among the B.Ed. Student-teachers with respect to their level of study in terms of e-learning, t-learning, online learning, b-learning and in total.

Key Words: Blended Learning Approach, Student-teachers, Perception and Critical Understanding of ICT in Education.

Introduction

With the advancement of technology, it is possible to revolutionize the way people learn and to present the information to them. Most of the traditional instruction, students learn from the instructor-led approach. Usually in a traditional classroom setting, students have access to the experts, involved in questions and discussion, exposed to social interaction and have the opportunity to learn from others. Some students prefer an individualized or less structured environment. In other words, they need self-paced learning material. At the same time, educators are now facing with the challenges of integrating traditional and emerging technology as to balance various students learning styles.

Students experience difficulties in studying ICT in Education since they have to understand it and memorize, rememorize and do it. In certain cases, they need to visualize the picture when applying. With the help of the technology, blended learning (BL) makes it easy for students to study and be able to change their attitude towards learning ICT in Education. So the investigator is selected the topic 'B.Ed. Student-teachers perceptions towards Blended Learning in Teaching and learning of Critical Understanding of ICT in Education.'

What is Blended Learning

Classroom teacher has used a range of learning activities and resources to assist learners to achieve learning objectives. Face-to-face presentations, visual material, paper-based assessments, online research and group activities have been the mainstay of classroom teaching for many decades. More recently mobile technologies and collaborative Web 2.0 tools have expanded opportunities for learning.

Blended learning is really no more than a combination of all of these approaches.

For some teachers, blended learning is describing what they have been doing successfully for years: that is, using a range of resources and activities to provide individualized, student-centered learning experiences for their students. The real difference today is the unparalleled access to the internet with its rich sources of information and services and more importantly, the connectivity it offers students and teachers, particularly the ability to create online communities and support networks. In addition, there is a growing use of mobile technologies such as flip cameras, voice recorders, mobile phones and GPS devices extending learning beyond the classroom walls.

For other teachers, blended learning represents a challenge. They are not comfortable with nor do they fully understand the technologies and media that their students use every day, or the potential that these can offer their learners.

Definitions of Blended Learning

Definitions of blended learning range from the very broad where practically any learning experience that integrates some use of ICTs qualifies, to others that focus on specific percentages of online curriculum and face-to-face instruction.

Most people agree that blended learning combines teaching and learning methods from face-to-face, mobile and online learning and that it includes elements of both synchronous and asynchronous online learning options.

The integration of new mobile technologies and online media is proving highly effective in helping schools meet the expectations of 21st century learners while addressing the challenges of limited resources and the special needs of many students.

The Benefits of a Blended Learning Approach

- Inclusion of more differentiated/personalized instruction
- Increased access to resources, experts and learning opportunities
- More authentic and student driven tasks being incorporated into the curriculum
- Higher student engagement
- Greater opportunities for collaboration (especially beyond the classroom and involving the wider school community)
- Exposure to a wide range of Web 2.0 technologies and acquisition of contemporary literacy skills
- Better access to infrastructure and, anytime, anywhere learning.

The Advantages of Blended Learning

- From a pedagogical perspective, blended learning aims to incorporate the best aspects of face-to-face classroom learning experiences with the best of mobile and online learning experiences.
- An increase in learning outcome measures and lowering of attrition rates compared to fully online courses.
- An opportunity for students to practice technology skills in navigating online course materials and creating their own digital content for assessment

- An increase in student-teacher and student-student interaction through the use of communication tools like discussion forums, blogs and shared web content on the electronic whiteboard
- The ability to reserve face-to-face time for interactive activities, such as higher-level discussions, small group work, debates, demonstrations, or lab activities.

For Students, the Appeal of Blended Learning Includes:

- Flexibility and the freedom to learn anytime, anywhere
- Some level of control over the pacing of their learning. Difficult concepts can be reviewed as often as necessary
- More engaging content that they can create and use their own initiative, and networks to shape
- The opportunity to engage and draw on expertise that would otherwise not be available to them without costly travel, such as virtual conferencing with zoo/museum/galley staff or virtual excursions to overseas historical or culturally significant landmarks.

Challenges in Implementing Blended Learning Strategies

It has a number of challenges for teachers and students to implementing blended learning strategies:

- Developing blended pedagogy
- Teacher support and professional development
- Technological challenges
- Student preparation/support and transition
- Assessment considerations
- Culture and innovation.

Objectives of the Study

1. To know the level of perception towards blended learning in teaching and learning Critical Understanding of ICT in Education among the B.Ed. Student-teachers.
2. To find out there is any significant difference in the mean scores of perception towards blended learning among the B.Ed. Student-teachers with respect to their Gender.
3. To find out there is any significant difference in the mean scores of perception towards blended learning among the B.Ed. Student-teachers with respect to their level of study.

Hypotheses of the Study

1. B.Ed. Student-teachers have favorable perception towards blended learning.
2. There is no significant difference in perception towards blended learning among the B.Ed. Student-teachers with respect to their gender.
3. There is no significant difference in perception towards blended learning among the B.Ed. Student-teachers with respect to their level of study.

Methodology

In the present study, the investigator has employed the survey method. Survey method is a method for collecting and analyzing data, obtained from a respondents representing a specific population collected through highly structured and detailed questionnaire or other techniques. This method is useful for developmental studies where the current problems are described, as at present.

Selection and Construction of the Tool

In order to achieve the objectives of the study, the investigator used a self-prepared questionnaire. The investigator referred various journals and Internet to have clarity of concept and in addition to their information he has consulted some subject experts about the content for the development of the tool.

As the first step, the preparation of the b-learning perception scale, the investigator has gone through many computer science books, magazines, research journals and discussion with computer science teachers of colleges and computer science teacher educators for collecting statements for the b-learning perception scale. The investigator has got some statement related to b-learning perception. Finally the investigator has decided and selected only four importance dimensions likes electronic learning (e-learning) attitude, traditional learning (t-learning) methods, online learning, blended learning (b-learning) attitude. Under the four dimensions, there were 40 items in the b-learning perception. Some items were boring complex and the investigator wanted to simplify the language and content. So the investigator has given the items to the experts. Through their guidance and advices, the investigator has modified certain items and finalized the scale, based on the expert's opinions. Finally the investigator has decided to select only 20 statements for questionnaire.

The final draft of the tool consisted of 20 items. There choices were given for each item in the form such as, strongly agree, agree, neutral, disagree, and strongly disagree, in five columns.

Reliability and Validity of the Tool

To find out the reliability of the tool, test and retest method was used. The reliability of the test has been calculated by using person's product-moment correlation coefficient formula. The value obtained was 0.78.

Validity is the most critical criterion and it indicated the degree to which an instrument measures what it is supposed to be measure. In this investigation the tool were submitted to the panel of experts. They scrutinized the developed tools and their suggestions were incorporated. Thus the validity of the tools is established.

Population and Sample of the Study

In this study, all the Student-teachers studying in B.Ed. at various colleges irrespective of the nature of management and other criteria but located in Vijayapur (Karnataka) city have been taken as the population for the study. A good sample must be representative of the entire population for this study, 80 samples has been selected using random sampling technique.

Statistical Techniques Used

Statistical techniques serve the fundamental purpose of the description and inferential analysis. The following statistical techniques were used in the study are Mean, Standard Deviation, and't' test.

Testing Hypotheses
Hypothesis-1: B.Ed. Student-teachers have favorable perception towards blended learning.

Table-1: Level of perception towards blended learning of B.Ed. Student-teachers in total.

Variable	N	Mean	SD	Low		Moderate		High	
				No.	%	No.	%	No.	%
Perceptions towards Blended Learning	80	164.65	14.32	20	25.00	32	40.00	28	35.00

From the above table-1, it is inferred that 25% of B.Ed. Student-teachers have low level, 40 % of average level and 35% of them have high level of perception towards blended learning. The mean of

the perception towards blended learning is 164.54 and standard deviation is 14.32. It is inferred that more number of B.Ed. Student-teachers has moderate level of perception towards blended learning followed by high and low of perception towards blended learning.

Hypothesis-2: There is no significant difference in perception towards blended learning among the B.Ed. Student-teachers with respect to their gender.

Table-2: Mean scores of perception of B.Ed. Student-teachers with respect to their gender towards blended learning.

Dimensions	Male (N = 40)		Female (N = 40)		't' value	Remarks at 5% level
	Mean	SD	Mean	SD		
e-learning	42.53	5.54	42.47	5.77	0.56	NS
Traditional learning	42.39	5.82	41.98	5.41	0.82	NS
Online learning	43.77	4.65	36.82	5.74	1.24	NS
Blended learning	41.52	5.36	37.83	4.77	1.46	NS
Total	170.21	14.68	159.10	15.72	0.18	NS

(At 5% level of significance, the table value of 't' is 1.99)

From the above table-2, it is inferred that there is no significant difference in perception towards blended learning among the B.Ed. Student-teachers with respect to their gender in terms of e-learning, t-learning, online learning, b-learning and in total.

Hypothesis-3: There is no significant difference in perception towards blended learning among the B.Ed. Student-teachers with respect to their level of study.

Table-3: Mean scores of perception of B.Ed. Student-teachers with respect to level of study.

Dimensions	UG (N = 40)		PG (N = 40)		't' value	Remarks at 5% level
	Mean	SD	Mean	SD		
e-learning	43.13	5.56	41.54	5.51	0.84	NS
Traditional learning	42.32	5.22	40.14	5.37	0.87	NS
Online learning	41.52	4.65	42.82	5.42	0.24	NS
Blended learning	42.42	5.36	43.65	4.53	0.62	NS
Total	169.39	14.43	168.15	14.72	0.84	NS

(At 5% level of significance, the table value of 't' is 1.99) From the above table-3, it is inferred that there is no significant difference in perception towards blended learning among the B.Ed. Student-teachers with respect to their level of study in terms of e-learning, t-learning, online learning, b-learning and in total.

Findings of the Study

- The 't' test result shows that, there is no significant difference in perception towards blended learning among the B.Ed. Student-teachers with respect to their gender in terms of e-learning attitude, t-learning method, online learning, b-learning attitude and in total. This may be due their curiosity to know the innovative and new things and their environments and also their keen watch about the update & day-to-day information of new fashion of both male and female B.Ed. Student-teachers.
- The 't' test result shows that, there is no significant difference in perception towards blended learning among the B.Ed. Student-teachers with respect to their level of study in terms of t-learning method, online learning, blended learning and in total. This may be due the fact, that all are willing to know the current scenario of the world like technological development, e-learning, m-learning etc. Age and qualification can not affect their growth. Undergraduate students having a greater e-learning attitude than the post graduate students because of their curiosity and interest.

Educational Implications of the Study

It is important to democratize educational opportunities by offering more flexible delivery options and providing more controls to students. However, there has been a lack of qualitative research studies as to how students perceive different learning approaches. The importance of this study is that it focused on students' voices regarding their experiences and perceptions of blended learning.

Findings in this research provide useful insights to those who are interested in implementing blended learning and other types of learning.

Particular attention should be paid to mixed mode courses in which a portion of the classroom time is replaced with virtual learning activities. In addition to expanding access, there are a number of research studies that indicate blended mode learning can lead to higher outcomes than either traditional or online learning alone. The ability of blended learning to better address varied learning styles is one proposed reason for these types of outcomes. The general benefits of Web-based learning when combined with traditional learning include all those shared by other types of technology-based training. These benefits are that the training is usually self paced, highly interactive, and results in increased retention rates.

Conclusion

Teaching and learning is one of the areas in education which has been influenced by the rapid rate of innovation in technology. It describes a blended learning approach in teaching application of integration. The Blended learning approach used consists of face to face instruction, exercises from textbooks and developed courseware which was used in the tutorial class and also made available on the e-learning. Results obtained from the study involving the Blended Learning (BL) approach have shown that students demonstrate positive perceptions towards learning. Therefore, with the help of technology, Blended Learning can be used as an alternative approach in teaching and learning Critical understanding of ICT in education in order to motivate students. It is recommended that the courseware to be made available online and to carry out further study on a larger scale to confirm the positive results.

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