



Perception of B.Ed. Students towards the Blended Learning in Delhi NCR

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Abstract

Human beings can be molded and shaped by a power full tool called Education. It can be the root cause of any kind of changes that takes place in social, cultural, spiritual Political and economic aspects of human beings. A good education can change the life of a person so quality in education is the need of the hour. The quality of education is assessed through the quality of curriculum, students, teachers, and teaching Learning methods. Quality in education requires quality educators and how they cater the students to meet the demand of our society and in that teaching learning process play a vital role. In that area Blended learning is one of the most flexible, dynamic and creative formal education program which mix online learning and Face-to-Face (F2F) instruction using a variety of learning resources. Blended learning is not new concept, but the term 'Blended Learning' is new addition in dictionary of Education system. It can be said that Blended learning is a fundamental redesign that transforms the structure, approach and the context of teaching and learning process. Many approaches have been developed for this purpose including e-learning, distant learning and recently blended learning. Several universities adopted this approaches for teaching students of different courses during the Covid time. Therefore this research aims to examine the perception B.Ed. students in Delhi NCR region. For sample 100 B.Ed. Students were selected to complete questionnaire through Google sheet who have taken blended course that contains aspects of knowledge about the perception of blended learning. The results of the study indicated that blended learning is useful for the Students, and that most students fully understand the goals of e-learning through blended learning. In general the students have shown positive perception towered blended learning. . It also indicates that blended learning is much more effective than traditional way of teaching to build up and improve the knowledge and skills. The results also indicated that online resources provide through blended learning is an effective way that help students to get information and improve their skills, and it has magnificent effect on students life to take responsibility for their own learning process.

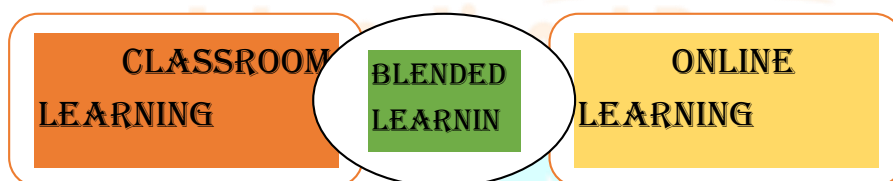
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1. Introduction

Education brings desirable changes in the life of humans. It act as a dynamic force in the life of an individuals and also influences his physical and ,mental, social, emotional ,ethical, creative and spiritual development .It helps students in undergoing appropriate needed experiences into meaning full life activity. Education is something that develops the inner potentialities of a child .In other words we can say that education is the art of creating and enhancing various physical mental and also moral power of a child .It is a continuous process that starts from the initial stage of childhood and went along with him till his last breath.

Education is considered as instrument of change. A good education can change the life of a person so quality in education is the need of the hour. The quality of education is assessed through the quality of curriculum, students, teachers, and teaching Learning methods. And in that blended learning is a new concept that helps the students in learning through online and face to face mode and learns the concept more effectively and for long time.

Blended learning is one of the most flexible, dynamic and creative formal education program which mix online learning and Face-to-Face (F2F) instruction using a variety of learning resources. Blended learning is not new concept, but the term ‘Blended Learning’ is new addition in dictionary of Education system. Blended learning is a flexible learning strategy which considers the blending of various innovative technological advances of online learning with the conventional classroom learning. It thereby, ensures thoughtful reflection, lively interaction and dynamic participation of students. Like many other advances in educational practices, Blended Learning is defined and implemented in numerous ways. There is no one universally acknowledged definition of Blended Learning.



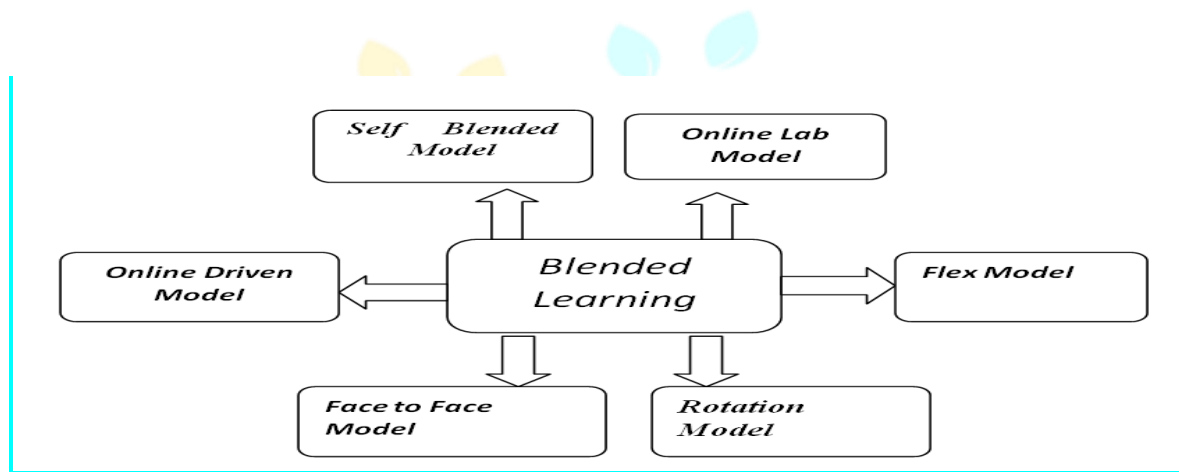
It can be said that Blended learning is a fundamental redesign that transforms the structure, approach and the context of teaching and learning process. Garrison and Vaughan (2008) have given some key assumptions of a blended learning design, which are as below:

- Thoughtful integration of face-to-face and online learning
- Fundamentally rethink the design to optimize student involvement
- Rescheduling and replacing traditional class contact hours.
- Blended learning strategy combines different types of internet-based technology to achieve educational goals.

Models of Blended Learning

There is no one universally applicable model of Blended Learning. Various researchers and educationists proposed variety of Blended learning models, which one could opt and adapt according to one's need and resources. In order to have a successful model of Blended learning one should blend the best of techniques, modes, methods and technological tools skillfully. So, Blended learning can be implemented by using a wide range of models.

Many educationists have suggested distinct models of Blended Learning. Among them Horn and Staker (2011) gave the widely accepted six models of Blended Learning. These models are discussed in detail as following:



1. **Face to Face driver Model:** This model is almost similar to a Traditional classroom supplemented by online learning. In this model, teacher covers most of the content through face-to-face teaching. Only few students get chance to supplement or enhance their learning by learning through online mode. Thus, students get chance to learn at their own pace by using technology in the classroom.
2. **Rotation Model:** In this model, students rotate between two modalities that may be two stations, labs, classrooms etc. Some part of content is covered through online learning, which takes place remotely or on-site and some part is covered through face-to-face class time with a teacher. Learning in all modalities is supervised by the teacher. This model is midway to traditional and online learning.
3. **Flex Model:** In this model, most of the instructional material is provided online through a digital platform. Although teacher is present throughout the teaching learning process but she acts as a consultant or facilitator to scaffold the learning. Thus the learning under this model is primarily self-guided, where students independently learn and practice new concepts in a digital environment. This model is mainly used for at risk or dropout students.

4. **Online-Lab Model:** In this model, the entire curriculum is covered through a digital platform but in a reliable physical location. Here the content is usually delivered by online teachers, and the lab is overseen by a paraprofessional. Students who take part in an online lab program often take traditional courses in addition. This model is extremely beneficial in the case of dearth of Introduction 19 resources like non availability of teacher. It assists the students to learn at their own pace and interest without affecting the learning environment of other students.

5. **Self-Blend Model:** This model is for those students, who want to supplement their traditional classroom learning with online course work. It helps students to attend and take benefit from those classes which are not offered in their class or school. Here students supplement their learning through traditional method with online courses offered remotely. Successful functioning of this model depends upon the motivation level of students. This model is beneficial for those students who want to take extra courses and has interest in those subject areas that are not covered in the traditional classroom.

6. **Online Driver Model:** This model is opposite version from face-to-face driver model. In this model maximum learning takes place through online, which is supplemented by face-to-face meetings on requirement or necessity basis. In this model, majority of content is covered by digital platform. Here, students work remotely, and may chat with teachers online to resolve their queries, if any. This model provides more flexibility and independence to the students in their daily schedules.

2. **Literature Review**

There are many researchers who have studied the effectiveness of blended learning. In particular, it has been found that learning and teaching through blended mode basically responds to educational needs of the students, gives them fulfilment, shaping and perfecting the skills as well as developing positive attitude and critical thinking skills also.

Myers and Dyer (2002) in this study it is found that student learning styles, patterns of learning, and characteristics did not have an effect on achievement measured by class grade in the web-based courses. Additionally, field-independent students did not differ significantly from field-dependent students in their use of learning strategies and patterns of learning 37 and he concluded that students with different learning styles and backgrounds learned equally well in the web-based courses. No significant interactions were found in posttest scores between the learning styles and the instructional modes. But the result is contrary to the results obtained in a study conducted by Ross (2002) who investigated the effects of learning styles on the achievement of 7th grade African-American students when instructed through co-operative learning. The results indicated that African-American students are social in their learning habits and are field dependent learners and therefore it creates a conflict when using co-operative learning as an instructional method with low socio-economic class African students.

Tuckman (2002) evaluated effectiveness of a hybrid instructional model, namely, ADAPT, combining web based and classroom components and found that those students who were taught through the ADAPT method achieved the highest GPA relative to past presentation; those not trained study skills at all achieved the lowest and those taught through traditional methods fell in between this method is beneficial for the students of any courses.

Valiathan (2002) argued for three models of blended learning: Skill driven learning, Attitude driven learning and Competency driven learning. Skill driven learning combines self-paced learning with instructor/facilitator support to develop requisite knowledge and skills. In the attitude driven learning various events and delivery of media is blended so as to develop specific behaviours. Competency-driven learning is one which blends performance support tools with knowledge management resources in order to develop workplace competencies. Further various key features related to each model, situations in which these models can be adopted and various blended learning techniques which can be adopted to enhance learning are also discussed in detail.

Olson (2003) The majority of students favoured hybrid classes over conventional face-to-face sessions, according to research on how hybrid classes are perceived at a small university. The independence that comes with hybrid classes, extra time for other activities, not having to physically meet all the time, improved engagement with others, and the students' ability to finish schoolwork at their convenience were the most important factors. Responses from students were positive with hybrid courses and their educational opportunities. The increased quantity and promptness of student and instructor feedback throughout the hybrid course model improved the learning experiences for the students.

Riffell and Sibley (2003) studied student perception of a hybrid learning format and the result indicated that students experienced more student-instructor interaction in the hybrid environment in a Biology course.

Singh (2003) A thorough overview of blended learning and covered its potential components and aspects. The dimensions include 'offline and online learning', self-paced, live and collaborative learning, structured and unstructured learning, custom content with off-the-shelf material', and 'learning, practise and performance assistance. By ensuring that each component contributes to a valuable learning experience both individually and collectively, the researcher offered a model for how to mix the right ingredients.

Utts, Sommer, Acredolo, Mahar and Matthews (2003) It was discovered that student performances in the hybrid format were comparable to those in the conventional format, but students in the hybrid format gave the course a somewhat less favourable subjective score and thought it required more work—some even thought it was excessive. In addition to the previous study, Schweizer, Paechter, and Weidenmann (2003) investigated the collaboration of groups of 41 learners in blended learning and e-learning settings. The study's findings suggested that a group's success is not exclusively dependent on the style of communication employed in the class.

The study conducted by **O'Toole and Absalom (2003)** also reported that blended learning has positive impact on student outcomes. The study's goal was to determine whether offering course materials through

online had a favourable impact on students' academic performance. They discovered that students who attended lectures and read information from the web performed better than those who have not.

Osguthorpe and Graham (2003) in the research article “Blended learning environment, definitions and directions” discussed the background and definition of the term “Blended Learning” as well as the goals of this approach that educators should espouse when designing blended environment. It introduced various blended learning designs used in case studies that also appear in the same volume of this journal.

Lai (2003) analyzed the sense of community in computer mediated learning environments from the perspectives of learners. Analysis of the data showed that learners felt connected and supported, felt valuable, comfortable and relaxed, felt close to each other, felt they shared intellectually, felt happy, excited and invested in the process and had a strong sense of honesty and trust. All participants claimed that these experiences increased their learning quality and most of them had a very high level of satisfaction with those courses in which they had this experience.

Girelli (2004) performed a qualitative investigation on teachers' impressions of a hybrid in-service delivery model and found that teachers began the programme preferring informal on-site workshop teaching to all other technological training alternatives. This preference held true throughout the programme. Although they felt synchronous video was not beneficial, teachers said web-based learning was tough and irritating despite thinking there are plenty of instructional materials on the internet. Members of the cohort as a whole indicated satisfaction with the course, largely attributing it to their involvement in project work.

Robinson (2004) Brigham Young University conducted a study to understand faculty experience in designing and teaching blended learning courses. The study identified faculty perceptions of three major benefits from the blended learning experiences, including greater ability to meet the needs of individual learners and more efficient use of classroom time. The quantitative phase showed a link between the success of blended learning and administrative assistance from the university.

Song (2004) College students' perceptions of the educational value of online courses provided using Web CT (Web Course Tool) have been researched. The study's findings revealed a generally favourable opinion of the instructional value of online courses provided through Web CT. The website content that was visually appealing obtained the highest grade. The outcome was highly connected with what students had to say about the crucial components of online course instructional quality.

Scribner (2004) studied the impact of teaching strategies and learning preferences and discovered no statistically significant correlation between spatial ability score and fundamental drafting teaching strategies. However, a statistically significant link between spatial aptitude and learning style was discovered. The difference in the individuals' perceptual modality learning style between the pretest and posttest was shown to be statistically significant.

Cox (2004) studied the use of technology in higher education and adult education classes, as well as student attitudes towards it. Data about attitudes towards technology use revealed that when employed in the

classroom by the professor, one-to-one communication (email), multimedia (PowerPoint), the course website, and the internet were seen as more positively aiding course objectives. The usage of DVDs and music CDs was considered a diversion from the goals of the training. The results also revealed that individuals with 'converging' learning styles had the highest mean attitude scores, while those with 'diverging' learning styles had the lowest. The results show that there is no connection between learning method and attitude towards using technology.

Dziuban, Hartman and Moskal (2004) discovered that for all ethnicities, blended learning is more effective than face-to-face instruction and made the claim that it improves student learning outcomes. In a study that supplements the one mentioned above, Dowling, Godfry, and Gyles (2003) discovered that the hybrid flexible delivery model is more positively associated with accounting students' final grades and improved learning outcomes, whereas Clark and Patrick (2005) conducted a study using the blended learning approach to deliver science courses and discovered that the overall impact on student learning through blended learning was neutral. However, our analysis demonstrates that it is feasible to conduct beginning science courses using online resources and to increase the courses' flexibility without lowering the learning gains.

Researchers such as **Wang (2004) and Allert (2005)** studied the influence of learning style on variables like achievement among online students. Wang (2004) examined how learning style preferences in online and traditional higher education student are related to academic success. Among the four KOLB learning styles and between the two teaching modalities, the study's findings showed no discernible variations in academic performance.

Allert (2005) conducted a research on learning style as a correlate of success in introductory computer science education. As a part of this study, learning style profiles of students in each class were constructed; the visual, verbal scale was skewed to the right in each instance. The study identified that active reflective scale is significantly related to performance in computer programming classes

McCann (2005) investigated the connection between extension staff members' learning preferences and performance in face-to-face meetings, a multimedia-rich, highly interactive online environment, and a minimally interactive online environment. The findings showed that post-test scores were significantly higher for participants in a conventional and multimedia-rich, highly interactive online environment than for individuals in a minimally interactive online environment. Furthermore, it was determined that neither, the participants' learning styles nor the three instructional techniques had any statistically significant interactions that would have predicted the participants' final post-test results.

Balarabe (2006) investigated how students' attitudes towards maths and technology were affected by mixed e-learning. The sample for this study consisted of 70 students chosen at random from the preparatory year programme at King Fahd University of Petroleum and Minerals (KFUPM), Dhahran. The findings show that the participants' attitudes towards computers and mathematics are favourable. With the exception of the computer confidence and fear subscale, analysis of variance reveals no statistically significant change in students' attitudes towards mathematics and computers.

Delialioğlu and Yilderum (2007) performed research on the opinions of the students in a hybrid computer networks and communication course on the aspects of interactive learning that they felt were most beneficial in a blended setting. The results demonstrated the necessity for individualised learning, collaborative learning, authentic learning activities, and meta cognitive assistance. The study also showed that students' ability to access the internet was crucial to their success in the hybrid course.

While most of the previous research tackles the overall perception of learners towards blended course as a whole, the present study targets about the perception of B. Ed. Students towards the blended learning over traditional way of learning.

3. Methodology

Any research project or thesis should have a methodology section. It aids the researcher with providing guidance for data collecting and a course of action for project implementation. This chapter covers the study's objectives, variables, design, phases, population, samples, tools, reliability and validity of the instruments, scoring processes for the tools, and relevant statistical techniques. Students enrolled in the B.Ed. programme at Jagannath University for the academic years 2020–2022 participated in the study. 100 students were chosen purposively, with ages ranging from 18 to 35. B.Ed. students are the dependent variables, while blended learning method is the independent variable. The study is mixed-method, using both quantitative and qualitative data.

4. Data Collection and Analysis Method

Data was gathered through the use of a Google form online survey. 15 students participated in a pilot research to test the questionnaire as part of the process of modifying, fixing, and ensuring its reliability. The B.Ed. students responded to 100 surveys. Students enrolled in blended learning courses filled out surveys at university computer labs during class time. Students who filled out the questionnaires received clarifications on how to complete them. For the purpose of the end result and conclusions, the questionnaire results were examined using the SPSS programme. In order to lower the non-response rate, the researchers have to be present at the time of the survey.

5. Results and its Discussion

Reliability The reliability of the developed tool was estimated using Cronbach's Alpha. Cronbach's Alpha coefficient was found to be 0.802 and hence the perception scale was found to be excellent measures of reliability. Finally, the perception scale consists of items is presented. Based on the Cronbach's Alpha Coefficient value the quality of item is described and presented in the table below.

Cronbach Alpha coefficient and its quality of item

Cronbach Alpha Coefficient	Quality
Greater than or equal to 0.9	Excellent

Greater than or equal to 0.8	Good
Greater than or equal to 0.7	Acceptable
Greater than or equal to 0.6	Questionable
Greater than or equal to 0.5	Poor
Less than or equal to 0.5	Unacceptable

Perception Result Pre Test

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Strongly Disagree	10	15.00	36.00	23.5000	6.51920	.797	.687	-.162	1.334
Disagree	10	53.00	76.00	65.7000	6.91295	-.416	.687	-.302	1.334
Neutral	10	.00	15.00	6.4000	3.97772	.888	.687	2.083	1.334
Agree	10	.00	6.00	2.5000	1.95789	.444	.687	-.290	1.334
Strongly Agree	10	1.00	5.00	1.9000	1.28668	1.792	.687	3.393	1.334
Valid N	10								

Figure 5.1 Pre test result of Perception in experimental group

Perception Result Post Test

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Strongly Disagree	10	1.00	3.00	1.6000	.69921	.780	.687	-.146	1.334
Disagree	10	.00	3.00	1.2000	1.22927	.431	.687	-1.461	1.334
Neutral	10	4.00	15.00	7.0000	3.29983	1.879	.687	3.594	1.334
Agree	10	60.00	76.00	67.4000	4.99333	.018	.687	-.456	1.334
Strongly Agree	10	15.00	36.00	23.8000	6.40833	.686	.687	-.112	1.334
Valid N	10								

Figure 5.2 Post test result of perception in experimental group

In this research study participants were divided into experimental group and their responses to a Pre test and Post test were measured using a likert scale with five responses options: Strongly agree, Disagree, Neutral, and Agree and Strongly agree.

From the pre test result (figure 5.1) investigators found that the mean value of the responses categorized as disagree was highest (65.7) while the mean value of responses categorized as agree was the lowest (2.5).

In the post test result (figure 5.2) it appears that the mean value of the responses categorized as agree increased, while the mean value of responses categorised as strongly disagree decreased, compared to the pre

test score. It is difficult to draw further conclusions without knowing more about the study design, research question, and statically analyses used to interpret the data.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Pretest	100	1.8900	1.10000	.11000
Posttest	100	6.9100	1.16424	.11642

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pre-test	17.182	99	.000	1.89000	1.6717	2.1083
Post-test	59.352	99	.000	6.91000	6.6790	7.1410

Figure 5.3 t-Test value of Pre test and Post test.

The abovementioned table reveals that the experimental group's pre-test and post-test mean scores were 1.89 and 6.91, respectively, with standard deviations of 1.10 and 1.16. The experimental group's post-test average scores ($M_1=6.91$) are greater than the pre-test average ($M_1=1.89$). The estimated post test result ($t=59.352$) above the critical values of (2.58), at the 0.05 level of significance with $df=99$. Hence, the null hypothesis "There is no significant difference between pre-test and post- test scores of experimental group B.Ed. teacher trainees in their perception towards blended learning" is rejected. Therefore, it may be concluded that, the B.Ed. student's post-test perception score is higher than the pre- test.

6 Conclusion

This study underlines the significance of Blended learning which plays an essential role in improvising the effectiveness and efficiency of students' learning process in higher education institutions. This study showed that student's perception toward blended learning is very positive. It also indicates that blended learning which combine online learning is more useful than using traditional learning process. The study also shows that with blended learning the information is obtained by more than one way. Students believed that blended learning assignments give them opportunity to learn more. Furthermore, the results of the study indicated that blended learning is useful to students, and that most students fully understand the goals of e-learning through blended learning.

Exposure to the blending of traditional classroom instruction with online learning did enhance the perception of blended learning. The perception of learning flexibility, beliefs regarding online learning, attitudes towards

managing one's studies, perception of classroom learning, and attitudes towards online engagement have all improved. Non-exposure, on the other hand, does not result in these gains and may even cause a decline in some attitudes towards blended learning, such the usage of web technologies and online collaboration.

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