

## **A Study of the Attitude of the Pre-Service Students towards Instruction through Blended Learning Approach**

**Kruttika Venkatesh Bhat, Vasundhara Padmanabhan**

K.J.Somaiya Comprehensive College of Education, Training and Research, Vidyavihar, Mumbai 77, Maharashtra, India

---

### **Abstract**

This paper analyses and explores the attitudes of the B. Ed students towards the Blended learning approach through a focus group interview conducted in a Mixed method research with a Convergent Parallel Design, where the researcher used quasi experimental design for testing the effectiveness of the blended learning strategies for addressing instructional pluralism. The researcher conducted a flipped classroom by posting video links to students to be seen before the class to test their conceptual knowledge. Technology based materials were combined with face to face sessions while delivering instruction throughout the intervention. The researcher used various synchronous and asynchronous modes of technology like the virtual classroom, Class blog, Discussion group, etc and used various face to face strategies like Power point presentations, videos, debate, games, Case study, role play, poster making, Worksheets, Song creation, project, Field visit and assignments. This paper discusses only the qualitative part of the doctoral work of the researcher on the basis of the focus group interview conducted. The sample was selected through a purposive and convenient sampling technique, where there were 35 students each in the experimental and control group. The study revealed that there was a positive attitude of students towards the blended approach and the students welcomed the new strategies with open arms. The only drawback seemed to be the technology opportunities, its related limitations and time constraints.

---

### **Introduction**

Education in particular has opened up a lot of challenges to the students, teachers, policy makers, administrators, managers, etc in the wake of the drastic changes in all the spheres of life, be it political, social or economic due to the vast opportunities created by globalization, liberalization, and the technological advancements. Education has to respond to the demands of the changing times to retain its relevance and effectiveness. A planned change in education with an overall qualitative improvement can be instrumental in achieving the target of a better and higher quality of life. An ICT driven teacher has a great opportunity to come up in the centre stage and ensure academic excellence through quality instruction and leadership in the society. Blended learning is therefore taking the educational world by storm, where teachers are experimenting on the right mixes of technology and the traditional method of teaching. The internet and high quality digital learning resources and the ability to access them at home and in the college can alter the experiences and aspirations of the learners. The constructivist approach, experiential learning, motivational theory, all contribute to the success of blended learning.

## Review of related literature

A review of the related literature revealed that e-learning can be used effectively as an instructional medium for course development, online assessment and interaction (Chourishi D et al, 2011); female students had less understanding of the content through e-learning compared to the male students (Patil A, 2011); a learner centric adaptive learning experience should be provided for e-learning to be truly effective (Roy S, Roy D, 2011); standardization of the whole e-learning system is needed and increasing the quality of the existing standards in the presence of various challenges and that the cultural differences in the global distance learning programs are the most neglected area (Kakoty S et al ,2011); more exploration is needed in the areas of the types of skills and strategies that teachers will need to be effective and efficient in online learning environments (Kawatra P.S, Singh N.K. 2011); Kharade K, Peese H, (2012) propose guidelines for the designers to develop more accessible e-learning systems; cultural aspects of online classrooms can be adhered to through improvement in the intelligent on-line learning architecture system (Sakarkar G, et al ,2011); to prepare an environment useful to learn through CALM(Computer assisted learning materials) using functions of the sender, message, medium, mode, receiver and the environment is indeed beneficial for the learners to learn and that Language can be learnt through CALM (Das A, 1998); the effectiveness of the teleconferencing programs projected mixed reactions as some found it very exciting and wonderful while others could not utilize these programs properly (Jain N, 2002);

Research conducted abroad has revealed that the course on the (LMS) Learning Management Systems improved the computer skills and the students worked with collaboration, but they were critical about the improvement in English language skills (Nguyen L. V. 2011); self-paced learning and peer learning was facilitated through provision of softwares, spreadsheets, LMS, moodling, etc., and also alternative classroom instructional strategies (Buraphadeja V, et al (2011); simple and effective wiki technology can increase the quality of engagement of the students (Pantzopoulos A.D, Gray K. 2011); university students in Thailand accept e-learning with ease and are above average in this aspect (Abulideh E.S.,Hassan S, 2009); teacher education programs and general schools can integrate diversity issues into literacy teaching and learning through weblog – technology and Gollnick and Chinn’s cultural- identity model and there was positive attitude amongst the pre service teachers (introvert ones) towards discussions and interactions on the blog. Moreover students blogged to expand their diversity-themed discussions which they did not do in the classroom (Hui-Yin hsu, 2009); a tutor can assess using technology and enable collaborative learning through as part of a blended learning framework, which is visible in the study through a practical example of using Wikipedia and CLAT(Collaborative Learning through Assessment and Technology), a pedagogical model (Doolan M, 2011).

The above studies of Indian review show that lot of work is yet to be done regarding introduction of blended learning strategies in India. Considering that India, with a traditional background and suddenly exposed to the technology boom and in the backdrop of globalization, modernization, multiculturalism, and many other social, economic, financial and political issues, it is a very challenging task for blended learning to actually happen in the classrooms.

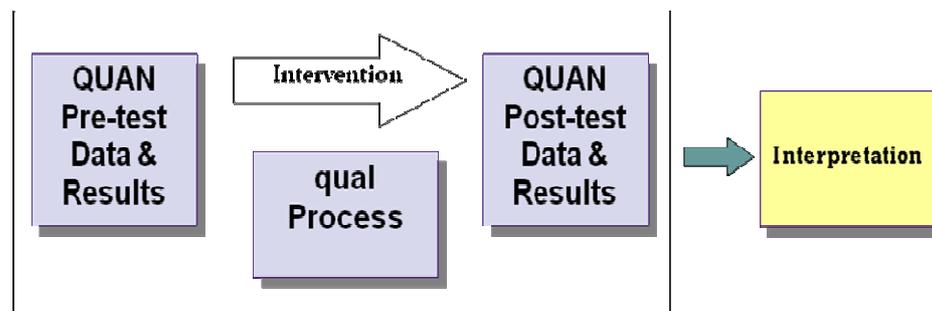
The review of the literature on blended learning shows that there is still a lot to be explored regarding the best and most effective learning tools. Many research studies show improvement in students' achievements, but the researcher wants to find out the effectiveness of blended learning strategies in the Indian set up to address instructional pluralism and the attitude of pre-service teachers towards learning by these strategies.

### **Objectives of the study**

To study the attitude of the B.Ed students towards the instruction through blended learning approach.

### **Methodology**

Two topics (Sustainable Development and Sustainable Environmental Management) in Environmental Studies, subject (B. Ed Course) were selected and sequential activities were prepared for instructional intervention by the Blended Learning Strategies Approach (BLSA). The method adopted is a mixed method research with Convergent Parallel Design. While the researcher used quasi experimental design for testing the effectiveness of blended learning strategies for addressing instructional pluralism, the process of instructional intervention was studied qualitatively. Interpretation was on the basis of quantitative and qualitative data.



Adapted from... John W. Creswell(2012)

### **Participants/Sample**

The population for the study was the prospective teachers undergoing pre service training in B Ed colleges. The sample was selected by purposive and convenient sampling technique. The sample selected for the study comprised of an experimental and a control group, having 35 B. Ed students (pre-service teachers) each studying in two B. Ed colleges in Mumbai.

### **Instruments used**

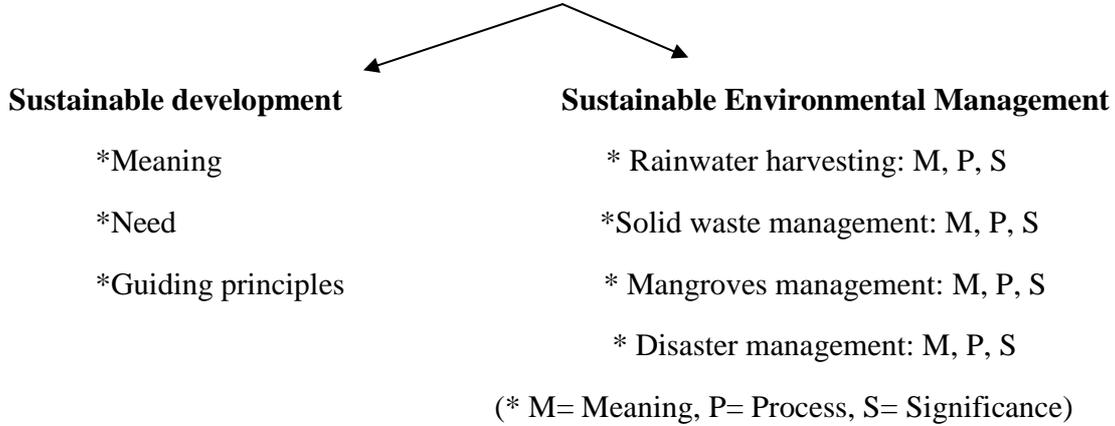
The Researcher made use of the following tools to collect data:

- a) Personal Data Sheet;
- b) Instructional module;
- c) Field Notes;
- d) Focus group interview Schedule( Questions based on Unstructured Interview);
- e) B. Ed College records;
- f) Criterion Referenced Pretest/Posttest.

### **Implementation of the Blended learning Model using Flipped Classroom**

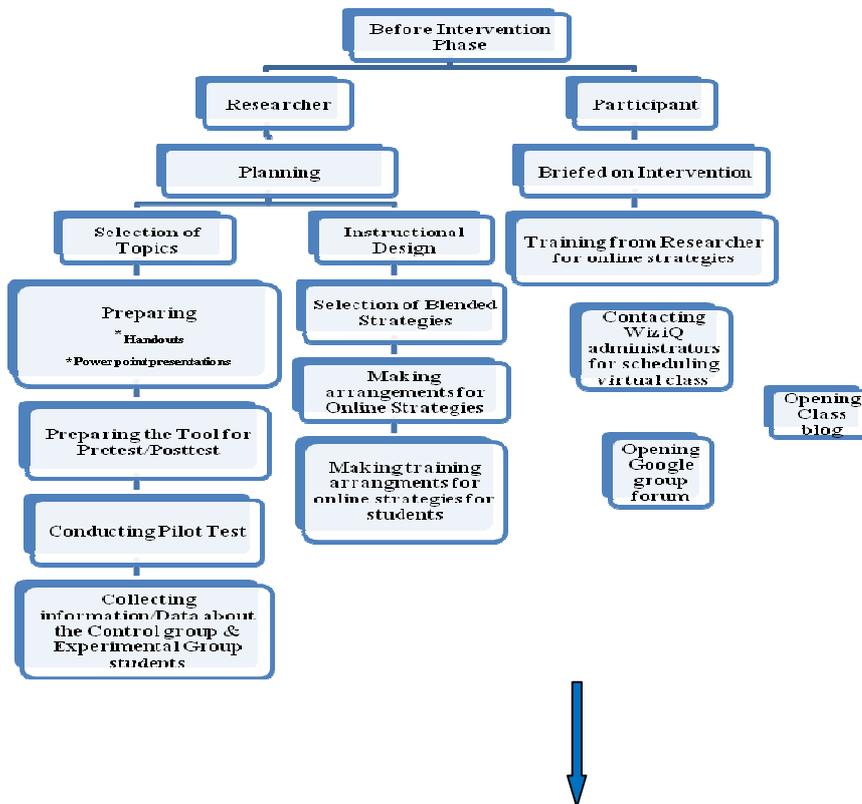
2 Topics of Environment Studies:

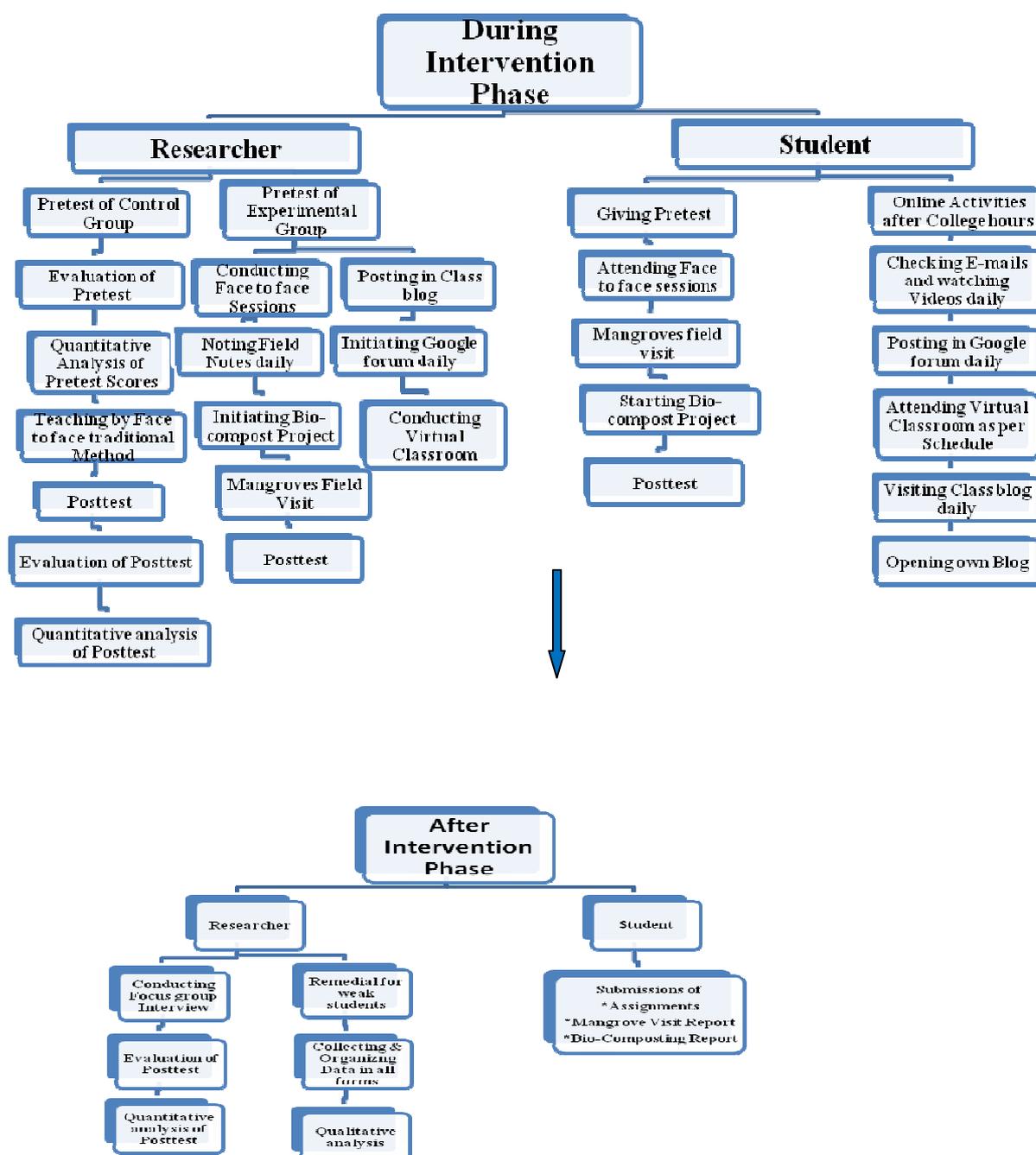
### Sustainable developments and mitigation methods



**Fig 1: Content Analysis**

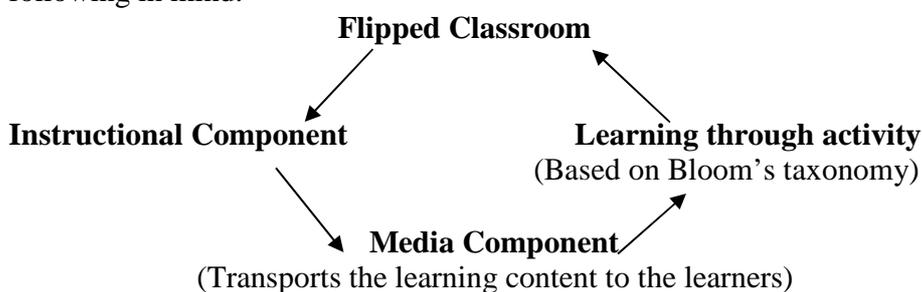
The researcher evolved a broad **BDA** framework of blended learning Module for conducting and facilitating the study smoothly.





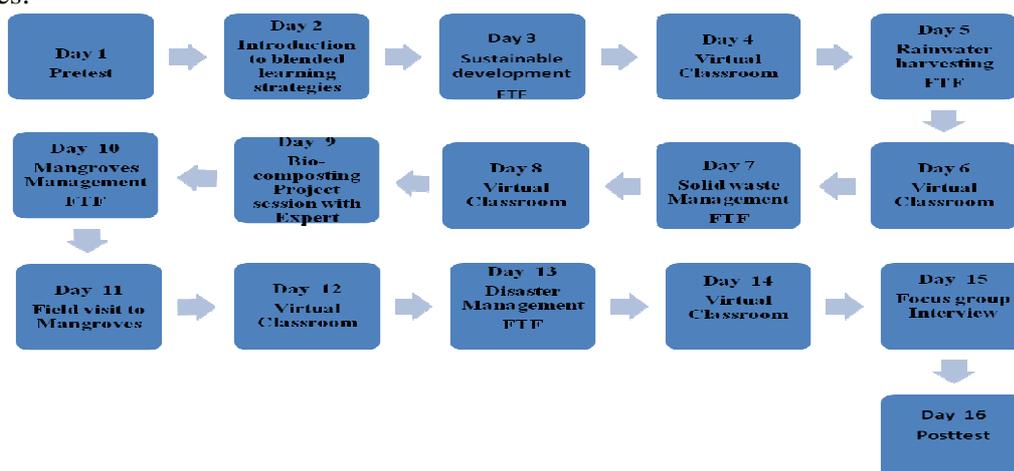
**Fig 2: A broad framework for Blended learning Module**

The learning environment in a way using the Flipped Classroom was designed keeping the following in mind.



**Fig 3: Flipped Classroom Usage**

The researcher selected the instructional component (face to face and online) which then lead to the selection of the media. After which it was delivered to the students through the various strategies which were based on the Bloom's taxonomy. Keeping a focused and methodically richer environment, the learning activities involved a systematic combination of face-to-face interactions and technologically mediated interactions between students, teacher and learning resources.



\*\*\* Note: [The participants watched 2 videos (links emailed by the researcher and also communicated in the class) at home and came prepared for their Face to Face (FTF) interactive sessions)]

**Fig 4: Instructional Intervention for the Experimental group**

### Results (Qualitative)

The researcher conducted a Focus group interview. The interview had open ended questions revolving around 10 main questions.

Q.1 What were your expectations for this type of learning at the beginning and to what extent did the Blended learning environment meet them?

Q.2 Which features you favored the most? Please explain in detail.

Q.3 What aspects of this approach and your instructor's teaching helped you learn best?

Q.4 What are the most positive aspects of this blended learning environment? Why?

Q.5 What are the problems you encountered when using the Blended learning environment?

Q.6 What are the negative aspects of this Blended learning environment? Why?

Q.7 Evaluate the contribution of the strategies to your achievement? Please share your thoughts in detail.

Q.8 What steps could you take to improve your own learning in this approach?

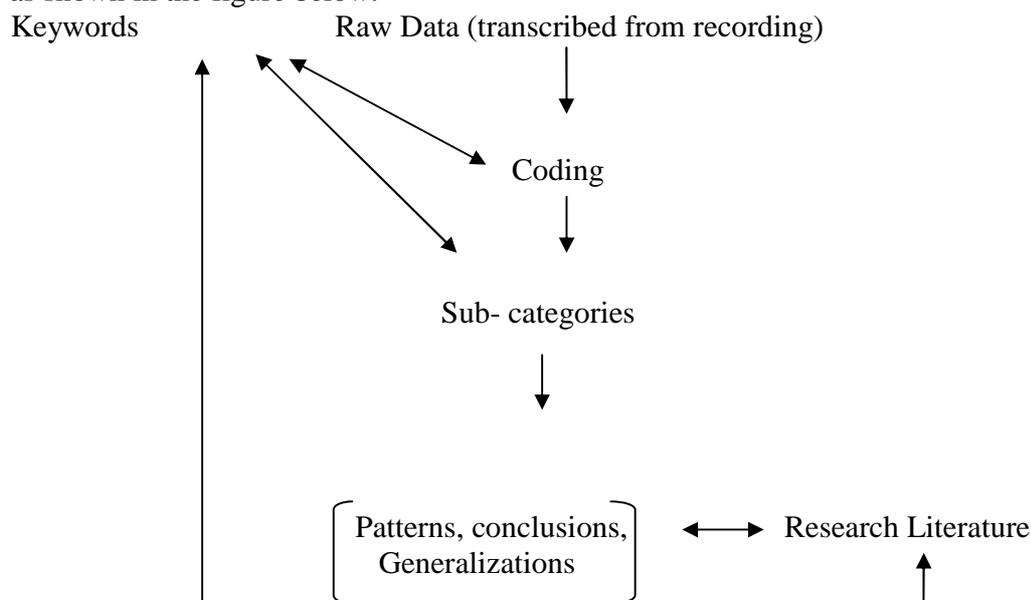
Q.9 Would you like to take courses using Blended learning method in the future? Why?

Q.10 What specific advice would you give to help the instructor to improve your learning in this approach?

The focus group interview helped to know the participants' perspectives and explanations for their behaviors and assisted in generating hypothesis. In the process valuable information was obtained due to this special attention given. Thus attention to the group and assessment of reliability and validity of collected data ensured the quality and integrity of the data.

The students had a lot of expectations from the blended approach at the beginning. Some wanted fun and excitement, while some wanted to learn at home. Some wanted a change with the mode of teaching, while some wanted to break the monotony. Some wanted to learn everything in the class itself. Students wanted to learn without much tension and wanted to enjoy learning and not take it as an ordeal.

Krueger has suggested a method of data analysis called, "data reduction" which involves examining, categorizing, tabulating (in some cases) and interpreting the responses to address the focus group aims or study prepositions. The researcher followed the actual process of analysis as shown in the figure below:



**Fig 5: Process of Analysis**

The actual process involved starting with eliciting raw data from the recorded interview and from two student scribbles, transcribing the participants' comments, and coding them into probable keywords. The one hour interview took 19 to 20 hours to transcribe and generated about 20-22 pages of transcripts. During this process, the keywords were also amended and re-categorized again and again. The next stage was finding the sub-categories. This repeated process of coding and searching guided the analysis of the interview data and resulted in useful generalizations related to the qualitative experiences and attitudes of the participants with respect to the Blended learning environment. As the qualitative analysis patterns were written down, conclusions and generalizations were developed with reference to the research literature. Some of the keywords were created inductively from the participants' comments, while others emerged from the expectations of the researcher, which were based on the framework of the study and the literature.

Following are a few sample responses of the participants:

**Table 1: Sample Responses of Focus Group questions**

<b>Table of Sample Responses to the Focus group questions:</b>	
<b>Question</b>	<b>Summary of response given by participants</b>
Q.1 What were your expectations for this type of learning at the beginning and to what extent did the Blended learning environment meet them?	<p><i>'I want fun and excitement in class. I'm usually bored listening to the usual lectures and so I sleep at times'. Yes, BLSA really fulfilled my wish and I thoroughly enjoyed the whole program. Wish other subjects too were taught in this approach.'</i></p> <p><i>'Wish I could access class when I am not well'. The virtual classroom on WiZiQ certainly helped me when I had a bout of Malaria.'</i></p>
Q.2 Which features you favored the most? Please explain in detail.	<p><i>'Virtual classroom was awesome. Also, the Field visit to the Mangroves.'</i> Attending the online class from the comforts of my home appealed to me. The visit to the Mangroves (which I had only seen in pictures and photographs) gave me a new perspective on the importance of Mangroves.'</p> <p><i>'The monotony of the traditional classroom was broken by the Blended approach.'</i></p>
Q.3 What aspects of this approach and your instructor's teaching helped you learn best?	<p><i>The in class lectures and the online virtual classroom both supplemented each other. Also, if I missed the online class for some reason, I could always see the recording which was made available by the teacher. So very cool.'</i></p> <p><i>'I knew before hand what the teacher would teach as I had seen the videos beforehand made available by the teacher. So, it kind of prepared me for the class and my confidence improved.'</i></p> <p><i>'The Worksheets, the Power point presentations and the recorded videos of the virtual class have proved as the most</i></p>

	<i>beneficial tasks for me’.</i>
Q.4 What are the most positive aspects of this blended learning environment? Why?	<i>‘Time of 1 hour was like fun and excitement daily. I never learnt this way in my life so far. Moreover, I remember all the topics which will be very helpful for my exams I suppose.’</i>  <i>‘It kept me relaxed all the time. Wish the other teachers also taught in this way.’</i>
Q.5 What are the problems you encountered when using the Blended learning environment?	<i>‘It was the technology failure most of the time.’</i>  <i>‘Virtual classroom brought me anxiety daily as to whether my internet would work well or not today.’</i>
Q.6 What are the negative aspects of this Blended learning environment? Why?	<i>‘I did not know many things about technology. So lack of information and knowledge about technology is one of the negative aspects of Blended learning.’</i>  <i>‘I felt left out, as I do not have a computer at home and had missed all the online lectures.’</i>
Q.7 Evaluate the contribution of the strategies to your achievement? Please share your thoughts in detail.	<i>‘I still remember the videos shown. They were awesome. It will be easy for me to remember and to write in the exams as the various strategies added lot of content to the topic of discussion.’</i>  <i>The field trip to the Mangroves gave me a lot of insight. I am sure I will be able to write in my exams on this topic without touching the book.’</i>
Q.8 What steps could you take to improve your own learning in this approach?	<i>‘I have to interact actively in class and I have realized that I have to take onus on myself of my studies with this approach.’</i>  <i>‘I would now not postpone my learning to the next day.’</i>
Q.9 Would you like to take courses using Blended learning method in the future? Why?	<i>‘Definitely. In fact, I would love if other teachers also use blended approach.’</i>  <i>‘Blended approach has taught me to think, to participate, to motivate, to give my opinion whether anyone likes it or not, to be a free learner without any strings attached.’</i>
Q.10 What specific advice would you give to help the instructor to improve your learning in this approach?	<i>‘Keep Assignments away as they take lot of time.’</i>  <i>‘I do not like Worksheets. Want some rest after the lecture.’</i>

The following codes emerged from the focus group data in relation to the blended learning strategies. Each of these codes is briefly discussed below along with excerpts from participant’s responses.

**Knowledge application:** Students responded that they favored the opportunity they got to learn online and through various interactive classroom activities. Students reported that there

was lot of peer interaction as well as interaction with the teacher which was rare otherwise in a traditional classroom. One participant stated “I feel like this (blended learning approach) was made for me. I loved the group activities, we were always interacting, and it was new to us”.

For many students, the in-class learning activities proved valuable as they prepared for their final exams. One student “When I came back home to study for the exams, I was very surprised myself that I could remember from the activities and the online virtual classroom”, while another claimed, “I liked the hands on activities like the game of ‘Web of Life’ and the Worksheet on ‘Ecological footprint’ which were very much relevant to my world”.

**Content delivery:** The majority of the students liked the face to face content delivery, while as for the virtual classroom, only those who could connect to all the classes seemed happy and contented. One student stated, “I badly wanted to attend the virtual classroom, but my wifi was very slow and the video and audio would drop. Eventually I had to leave the classroom”. Another student replied, “The teacher made use of the classroom time very intelligently. She infused videos, power point, games, and worksheets all within 1 hour. Amazing!!!!She had planned it all very well”. Yet another student stated, “This (blended approach) is much better than the usual lectures which makes me very sleepy all the time. I remained alert at all times during these lectures and helped me to remember the content”.

**Innovation:** This blended approach was innovative and it offered a distinct learning experience and environment from all other subjects taken. The students appreciated the additional efforts put in by the teacher towards designing and implementing these strategies. For e.g., one student commented, “The teacher’s approach was very different. There was a mystery daily as she entered, as to how are we going to study today. Due to this I did not miss a single lecture”. Another student expressed appreciation for this new experience in this manner, “I really appreciate the hard work and the interest the teacher has taken to make my learning interesting and for giving so much variety”. While another student pointed, “I thoroughly enjoyed the classes because it was always changing daily. It was very different from the other subject classes”. The user interface of the virtual classroom was perceived as simple and clear and comprehensible by about 75% of the participants. They also liked the screen design and the color etc. One of the participants stated, “It was somehow difficult in the beginning to find the various features”. But later on I became conversant with it”.

**Usefulness as an instructional tool:** This approach proved useful to many. One student stated, “I was very shy in the beginning, but I felt motivated during the activities in the class. Now I feel very confident to face my peers in the class and put my view point”. While another commented, “The concept map which we did in one session helped me to learn faster. Now I always prepare concept maps for all my subjects. I am very comfortable with them”. As regards the blog and virtual classroom, the participants felt that they would be useful when they become actual teachers and will do so for their students. “I love the blogs. I have prepared one for myself. There is so much I can do. In fact, just like the teacher, I will also put videos, notes, photos, announcements, etc for my students.” Another student stated, “I cannot depend on the virtual classroom. Technology fails at times and moreover even my students should have internet connection. Otherwise it is a disaster.”

**Time investment:** Students shared their apprehensions on this important aspect of time in this approach. “How can I attend the virtual classroom, when I have to attend to my 2 year old daughter at home after college? Even my husband disapproves this and wants quality time at home. Thank God for the recorded lectures”!! Another student, “So much to do in such a short

time. I am exhausted. I can do only one or two at the most. That is why I did not do my assignments at all”.

**Online component:** Students were anxious at the beginning and were wondering whether they could do it. “I did not have an internet connection at home. But yet, I posted in the forum, saw the class blog, and emailed my doubts to the teacher whenever I was in College in the computer lab. But I could not attend the virtual classroom though....” Another student, “I was afraid when the teacher briefed us about the blended approach. I became sad and tried to avoid the whole thing in the beginning”. But later on after a session or two, the whole scenario reversed. One student, “I felt proud that I attended the virtual classroom. And I have told my extended family and other friends about it. They are all like in awe!!” While another stated, “I used the recorded video to review the concepts and revise”.

**Immediacy of dialogue:** It is the extent to which the students feel that they can gain quick access to their teachers. In this blended approach, students were quite happy and had a good perception of the timeliness of the teacher’s responses. “I was happy that my doubts were cleared instantly by the teacher. Be it, in using the blog or in posting in the forum. The teacher was always there and made it easy for all of us to learn better”. Another student commented, “I felt I was always connected to the teacher 24x7”.

**Friendship with the teacher**

“Since childhood I always yearned for the teacher’s attention. My wish was fulfilled here when our teacher gave lot of personal attention to me and I knew all my problems would be solved with her help”, stated one student on friendship with the teacher. Almost 60% students became friends with the teacher. They felt good to remain connected with the teacher and discussed all their day to day activities.

**Tolerance with technology**

“Today, I could not connect, so what? Tomorrow I will be able to”, stated one student. Another student commented, “Never have I been able to enter the virtual classroom in one go. I had to log in and out several times. But I did manage to attend the class a bit, if not fully. The recorded lectures helped me a lot. Though I missed being there on real time, I did not lose hope. I kept trying every day”. This feedback from the students indicate that their tolerance level were high as far as the availability of connectivity was concerned. They were patient and always felt that they must upgrade their internet connectivity to 4G as advised by the researcher.

**Student satisfaction:** Not all students were satisfied with the blended approach. About 20% felt that the blended approach was not giving them satisfaction. Especially, the ones who did not have an internet connection. Following are some of the sub categories:

- **Time to reflect:** students who needed time to reflect preferred the asynchronous communication through the forum and the email. “The activities were going on one after another. I was only going with the flow. I had no time to reflect over the content. It is only after all the lectures; I realized that I could have done much better”. Another student felt, “I found it convenient to post in the forum at my own pace. Moreover great help was given by the teacher through emails which directed the whole thing easily”.
- **Personal autonomy:** “I could read and study whenever I felt like it. Everything was put in the blog and in the handouts provided by the teacher. I could even see the recording of the virtual classroom again and again. This freedom I do not get in the traditional classroom”.
- **Social presence:** Many students did admit that they wanted to see their posts on the forum. They felt that they would be respected in class if they gave some message or post which was

new and therefore they searched the internet for it. “My friends teased me for my posts. But I felt really good that I was a technology friendly student”. Some students enjoyed my videos which I had posted. This encouraged me to make more such posts”.

Thus, on the basis of the recordings and observations and notes written by the researcher, the study was answered as follows:

### **Answering the Research question**

**R1.** What is the attitude of B Ed students towards learning by blended learning strategies?

The researcher conducted a focus group interview with the Experimental group of 35 students for about an hour to assess their attitude and perspectives towards the Blended learning approach. The researcher went for an unstructured interview (to make the participants comfortable) keeping in mind of course some 10 Key questions which revolved around the unstructured questions.

The focus group interview helped to know the participant’s perspectives and attitudes seek explanations for their behaviors and assisted in generating hypothesis. In the process valuable information was obtained due to this special attention given. Thus attention to the group and assessment of reliability and validity of collected data ensured the quality and integrity of the data.

The students had a lot of expectations from the Blended approach at the beginning. Some wanted fun and excitement, while some wanted to learn at home. Some wanted a change with the mode of teaching, while some wanted to break the monotony. Some wanted to learn everything in the class itself. Students wanted to learn without much tension and wanted to enjoy learning not take it as a burden.

### **Discussion**

Some comments like

- “It was indeed very good! But.....the roles did not match” (Student 1)
- “I enjoyed every bit. It was an opportunity to lay my fears back .Also putting theory into practice is a great way of learning” (Student 2)
- “The in-class strategies were really awesummm! The teacher put in lot of efforts which motivated me more. That is why I participated in all the activities wholeheartedly” (Student 3) expressed a positive experience for these students. However, the responses below give a clear message that the instructions which were provided regarding the use of the online tools like discussion boards, blogs, virtual classroom, etc needed greater clarity:
- “I was initially totally confused with the virtual classroom. I did not know where I should chat. But when my friends started typing their responses, I became frantic and I also wanted to contribute “(Student 4).
- “This online thing was a big big challenge!!! I thought I could do it easily as I consider myself computer savvy. This really put me off and it affected my submissions of assignments which I really did not complete eventually “(Student 5)
- “Although I hate preparing for the debates, I admit that I certainly learned a lot more as a result of the debate conducted in the class.”(Student 6)

From the above observations, it is clear that the benefit of blended learning were the various opportunities students got to contribute asynchronously, in their own pace, and their ability to engage in more than one learning environment.

### **Limitations:**

Students reported more workload and confirmed that they had lot of things to do in a very short period of time with no feedback at the beginning and the middle stages of their work which led to a lack of motivation. To which Lim et al (2007) also agree. Moreover, technology glitches, super active participation, multitasking, assignments and individual project proved to be the pitfalls.

### **Findings**

So, overall the attitude of the students towards the blended learning was positive. The students expressed their desire to have such blended approach in their other subjects too. It could have been made more student-friendly by providing technology to the students within the college itself or outside. Also, the technology needs to be of high definition to make technology communication clear and smooth real time.

### **Conclusion**

It can be concluded from the responses of the Focus group interview that students like the instructions to be transacted through the Blended learning approach rather than the traditional face to face approach. In fact, they suggested that all other courses could also be transacted in the same way provided technology is available to them both at home and in the college.

### **References**

- Acar A. (2013), Attitudes toward Blended Learning and Social Media Use for Academic Purposes: An Exploratory Study, *Journal of E-Learning and Knowledge Society*, v.9, n.3, 107-126. ISSN: 1826-6223, e-ISSN: 1971-8829
- Abulideh E.S, et al (2011), “ E-learning interactions, information technology, self efficacy and student achievement at the University of Sharjah, UAE.”, *Australasian Journal of Educational Technology* 2011, 27(6), 1014-1205. [www.ascilite.org.au/ajet/ajet27/abulibdeh.pdf](http://www.ascilite.org.au/ajet/ajet27/abulibdeh.pdf) Retrieved on 12th Oct,2012
- Aggarwal , J.C.(2002). *Educational Research: An Introduction*. Delhi: Arya Book Depot.
- Altun A et al. (2008), Use of Content Management System for Blended Learning: Perceptions of Pre-Service Teachers, *Turkish Online Journal of Distance Education-TOJDE* October 2008, ISSN: 1302-6488, Vol.9, n.4: Article 11
- Buraphadeja .V , Kumnuanta.J (2011), “ Enhancing the sense of community and learning experience using self-paced instruction and peer tutoring in a computer-laboratory course.”, *Australasian Journal of Educational Technology*, 2011, 27(Special Issue, 8), 1338-1355. [www.ascilite.org.au/ajet/ajet27/buraphadeja/pdf](http://www.ascilite.org.au/ajet/ajet27/buraphadeja/pdf). Retrieved on 14th Oct, 2012.
- Chourishi .D et al (2011), “ Effective E-Learning through Moodle”, *International Journal of advance Technology and Engineering Research(IJATER)* Vol -1,I -1, Nov,2011. [www.ijater.com/Files/IJATER\\_01\\_06.pdf](http://www.ijater.com/Files/IJATER_01_06.pdf) Retrieved on 19<sup>th</sup> Nov, 2012.
- Best, J.W and Kahn, J.V. (2003). *Research in Education* (9<sup>th</sup> Ed). United States: A Pearson Educational Company.
- Best and Kahn.(1995). *Research in Education* .Delhi: Prentice Hall Publishing House.
- Cresswell, J and PlanoClark, V (2007) . *Designing and Conducting Mixed Methods Research*. California: Sage Publications.
- Das.A (1998), “Exploring effectiveness of Computer assisted learning materials on Rhymes in different modes.” [D/research%20/section\\_8.pdf](http://D/research%20/section_8.pdf). Retrieved on 29<sup>th</sup> Nov,2012.

- Doolan M.A (2011), "Developing a pedagogy: The role of the tutor in enabling student through the use of a wiki.", *Cutting-edge Technologies in Higher Education*, Vol-1pp189-205. [www.emeraldinsight.com/books.htm?issn=2044-9968&volume=1&chapterid=1906610&show](http://www.emeraldinsight.com/books.htm?issn=2044-9968&volume=1&chapterid=1906610&show) Retrieved on 14<sup>th</sup> Oct, 2012
- Fehr M.C (2010), "Culturally responsive teaching awareness through online fiction.", *Multicultural Education and Technology Journal*, Vol-4, I-2,2010. [www.emeraldinsight.com/search.htm?st1=e-learning+for+preservice+teachers&ct=all&ec=1&bf=1&go=Go](http://www.emeraldinsight.com/search.htm?st1=e-learning+for+preservice+teachers&ct=all&ec=1&bf=1&go=Go). Retrieved on 14<sup>th</sup> Oct,2012.
- Garrote, R.J (2012), "Barriers to a wider implementation of LMS in Higher Education: a Swedish case study, 2006-2011.", *Australasian Journal of Educational Technology*. 2011,27(4). 619-632. [www.ascilite.org.au/ajet/ajet27/garrote\\_14/10/2012](http://www.ascilite.org.au/ajet/ajet27/garrote_14/10/2012) Retrieved on 27<sup>th</sup> Oct,2012.
- Hui-Yin Hsu (2009), "Preparing teachers to teach literacy in responsive ways that capitalize on students' cultural and linguistic backgrounds through weblog technology.", *Multicultural Education and Technology Journal*, Vol-3,I-3,2009. [www.emeraldinsight.com/search.htm?st1=e-learning+for+preservice+teachers&ct=all&ec=1&bf=1&go=Go](http://www.emeraldinsight.com/search.htm?st1=e-learning+for+preservice+teachers&ct=all&ec=1&bf=1&go=Go). Retrieved on 14<sup>th</sup> Oct,2012
- Kakoty .S et al (2011), "E-learning as a Research Area: An analytical Approach.", *International Journal of Advanced Computer Science and Applications*, Vol-2,I-9,2011, [www.ijacsa.Thesai.org/Downloads/volume2No9/Paper%2023%20-%E-learning%.pdf](http://www.ijacsa.Thesai.org/Downloads/volume2No9/Paper%2023%20-%E-learning%.pdf) Retrieved on 19<sup>th</sup> Nov, 2012
- Kalpana K, Hema P. (2012), "Learning by E-learning for visually Impaired students: opportunities or again marginalization?" A Research Report in *E-Learning and Digital Media* Vol.9, No.4,2012. [www.words.co.uk/ELEA](http://www.words.co.uk/ELEA). Retrieved on 5<sup>th</sup> Oct, 2012
- Kawatra P.S, Singh,N.K (2006), "E-learning in LIS education in India" A-LIEP Journal, April,2006 pp605-611. [www.Arizona/openrepository.com/Arizona/bitstream/10150/105799/1/85/P\\_S\\_Kawatra-pp605-611.pdf](http://www.Arizona/openrepository.com/Arizona/bitstream/10150/105799/1/85/P_S_Kawatra-pp605-611.pdf) .Retrieved on 19<sup>th</sup> Nov,2012.
- Kothari, C.R.(1996). *Research methodology: Methods and Techniques*. Delhi: Vishwa Prakashan .
- Koul, L.(2007). *Methodology of Educational Research*. Noida: Vikas Publication
- Krueger, R.(1998). *Analyzing and Reporting Focus Group Results*: Sage Publishing, Thousand Oaks, CA.
- Mijatovic,I, et al (2012), "Students online interaction in a Blended learning environment- A Case study of the first experience in using an LMS." [www.csedu.org/2012/eSEe/2012.htm#Area](http://www.csedu.org/2012/eSEe/2012.htm#Area) Full Papers. Retrieved on 14<sup>th</sup> Oct,2012.
- Nguyen, L.V (2011), "Learner's reflections on and perceptions of computer mediated communication in a language classroom: A Vietnamese perspective.", *Australasian Journal of Educational Technology*. 2011, 27(special issue, 8),pp 1413-1436. [www.ascilite.org.au/ajet/ajet27/nguyen.pdf](http://www.ascilite.org.au/ajet/ajet27/nguyen.pdf) Retrieved on 14<sup>th</sup> Oct,2012.
- Patil .T (2011), "Role of R-Learning in teachers professional development for quality of researches in Teacher education", *Indian Streams Research Journal*, Vol-1,Issue 1,Mar, 2011,pp34-36. [www.isrj.net/march\\_2011.007.pdf](http://www.isrj.net/march_2011.007.pdf) Retrieved on 19<sup>th</sup> Nov, 2012
- Roy .S (2011), "Adaptive E-learning system: A Review", *International Journal of Computer Trends and Technology*, Mar-April Issue, 2011. [www.ijctjournal.org-v1i1p21.pdf](http://www.ijctjournal.org-v1i1p21.pdf). Retrieved on 19<sup>th</sup> Nov, 2012.
- Wheeler S. (2007), *The influence of communication technologies and approaches to study on transactional distance in blended learning*, *ALT-F, Research in Learning Technology*, v.15, June 2007, pp.103-117. ISSN: 0968-776, e-ISSN: 1741-1629 /07/020103-15