

Comparison of Motivational Level of Students using Blended Learning with those not using Blended Learning

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From cradle to grave the importance of education cannot be denied. Since it not only surrounds our life, but is also the basic foundation of our society. Education is the best means for growth and development. It develops our brainpower and converts inquisitive minds into intellectual ones. Education not only signifies the worldly achievements, it also involves in-depth knowledge and insightful learning. Education has broader significance. It is a way to gather knowledge and enrich one's thoughts as well. Education is the gaining of knowledge, information and skills during the entire life span. India has had a long and rich history of education. Roots of Indian educational system can be traced from ancient era. It is believed that in early period, education was imparted orally by sages and scholars. Thus the information was passed orally from one generation to other. After the development of letters, palm leaves and the bark of the trees were used for writing. This also helped in spreading of written literature. Later, the Gurukul system of education came into existence. In ancient India, education was imparted through the Gurukul system. It was also known as the Guru-Shishya Parampara (Sharma, 2016). The Gurukuls were traditionally Hindu residential schools of learning which were typically in the teacher's or Guru's house or with the guru as a part of his family (Tambat, 2017). In this system of education, when a male Brahman child was seven or eight years of age, he was sent to the Gurukul where he concentrated on and lived with the educator. The period of going to Gurukul was decided by the Varna of youngster (Sharma, 2016). The primary duty of the students was to serve the teacher and his family (Yuva Shakti, 2015).

Today's era is full of technology and digital world is creating a new challenge for pupils to cope up. The impact of digitalization can be seen in all the fields of life. Children of 21st century are born with technological instinct. They are more comfortable in using technology than adults. Digital games have replaced indoor and outdoor games, manual work has changed to computer-based work, and digital records are being maintained for easy access. The use of technology has increased in almost every sphere of our life. Now Mobiles, I-phones, I-pods,

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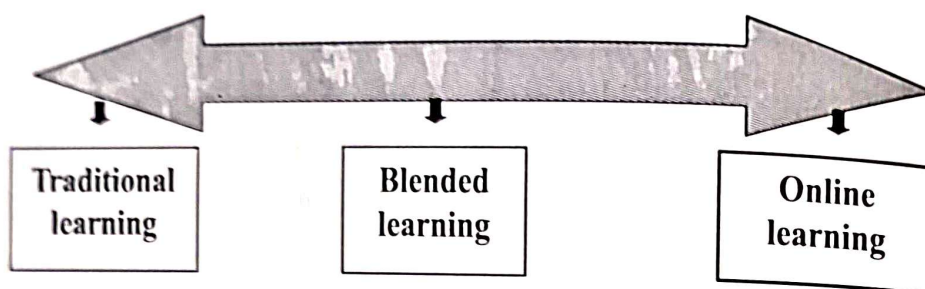
Video games, Internet connection have become necessity of life. These have become the new basic requirement of adult as well as of children.

In this techno savvy environment, the learning pattern of children has shifted from regular classroom method to innovative learning method. Use of a mixture of sense organs through video, power point presentation, documentary etc. during teaching and learning process can create a deep impression in the mind of students. This helps students in better understanding and retaining power. According to Barr and Tagg (1995), Universities are moving away from faculty-centred and lecture-based paradigm to a model where learners are the focus, where faculty members become learning environment designer and where students are taught critical thinking skills.

Improved pedagogical approach is foremost requirement from the teachers. Creative and innovative teaching method can only be helpful in meaningful learning. Since teachers are the best interface between the students and the knowledge, so they need to be well updated and skilful. Teaching and learning process have to be designed according to the needs of students. The use of innovative things in teaching method can increase the concentration as well as motivational level among students. In this technological scenario where electronic gadgets had entered in day-to-day life, there traditional method or regular chalk and board method used in teaching and learning is not sufficient enough to make the content interesting and knowledgeable. Our young minds are full of questions and curiosities, mere bookish knowledge just cannot satisfy them. Need of some additional knowledge according to the requirement of students has to be addressed so that it can satisfy their quest for knowledge and maintain curiosity in gaining new knowledge. With the advancement of technology, it has become possible to modify the way of learning and presenting information to them. Thus modern and innovative teaching method has become necessary to fulfil the growing needs of students and meet the demand of time.

Blended learning proves to be an innovative educational solution through an effective mix of traditional learning and online learning. It is a technique in which a student learns at least in part at a supervised brick and-mortar location away from home and in part through online delivery with some element of student control over time, place, path, and/or pace. Blended learning is thus a flexible approach to course design that supports the blending of different times and places for learning, offering some of the conveniences of fully online courses without the complete loss of face-to-face contact. Gardiner (1994-1995) endorsed the need for classroom change to allow students to acquire more significant kind of

cognitive learning, particularly critical thinking skill. Thus blended learning or hybrid learning strategy describe a learning environment that combines teaching methods, delivery methods, media format or a mixture of all these. It also refers to the integrated learning activities such as online and face to face learning. Blended learning do not use any single learning delivery medium, rather incorporates a wide range of learning opportunities such as online and face-to-face.



Blended learning is the middle path of two extreme ways of learning i.e. traditional learning and online learning. It is the best way of facing the challenges in learning with its innovative technology and regular motivation by teachers in classroom. Blended learning can be defined in various ways as:

- It combines face-to-face and online delivery (web enhanced, web focused and web driven).
- A mixture of the various learning strategies and delivery methods that will optimize the learning experience of the user (Kurtus, 2004).
- A combination of face-to-face and online media, with "seat time" significantly reduced. (Voos, 2004).
- A combination of classroom training sessions, computer-based training (CBT) via CD-ROM, web-based training (WBT).
- A student-centred approach that integrates learning experiences in online and face-to-face environments.
- The way teachers and students combine or 'blend' multiple teaching methods and learning styles together.
- The combination of classroom study, guided individual study, and computer-based study.
- An approach to learning and teaching which combines and aligns learning undertaken in face-to-face sessions with learning opportunities created online.

- A mix of delivery methods that have been selected and fashioned to accommodate.
- The various learning needs of a diverse audience in a variety of subjects (McSporran & King 2002).

Science and technology is the basic structure of life. Every facet of life is affected by the growth and development in science and technology. In this epoch of digitalisation every individual is addicted for use of technology. Laptops, mobile, I pod, have become common gadgets to be used by the peoples. It has become basic necessity of life. Through Google they can access a wide wealth of digital information, content and resources. With all of this so natural to their 'outside school' experience, the challenge for the teaching profession is how to harness all this for learning within the classroom at home. This generation of 'digital natives' has much lower need for libraries of physical content for example, the traditional resource used by students half a generation ago. Learning styles are changing and teachers need to adapt their teaching style accordingly.

Thus this triggered the following questions in the researcher mind:

- Does the use of technology in teaching and learning can motivate students to perform better?

Statement of the Problem

Comparison of Motivational level of students using Blended Learning with those not using Blended Learning.

Research Objectives

The specific objectives of the study were :

- To identify the students using blended learning and the students not using blended learning,
- To compare the motivational level of students using blended learning and the students not using blended learning.

Hypothesis

In order to verify the research findings, following specific null-hypothesis was formulated at 0.05 level of significance:

H₀. There is no significant difference between the motivation levels of student using blended learning and those not using blended learning.

Methodology

Descriptive survey method including ex-post facto design has been used by the researcher as her research design. Simple descriptive survey method has been employed to study and compare the variables under study. In descriptive survey method, data are collected from a relatively large number of cases at a particular time. It does not concern with the characteristics of individuals. It is concerned with the generalized statistics that result when data are abstracted from a number of selected individual cases to discover the relative incidence distribution and inter correlation of sociological and psychological variables. This method has been justified by established authorities of research methodology like Smith (1976), Sudman (1976), Best (1996), Kerlinger (1995) etc.

In the present study Blended Learning is an independent variable. Motivation is dependent variable. All the students of senior secondary schools constitute the population of the study. In order to reach the representative samples, first of all 10 schools were chosen randomly through lottery method from the list of recognized CBSE senior secondary schools of Varanasi city. In this study simple random sampling method has been employed. The data were collected on final sample of 600 students.

Tools

In the present study no readymade tool was found suitable for identifying students using blended learning and measuring the academic motivation of students. Thus two self-developed tools had been used for collecting data.

Blended Learning Schedule (BLS) - This schedule consists of 34 items. The items were based on three dimensions of blended learning i.e. lecture, tutorials and web based learning.

All the three dimensions identified for the students using blended learning are discussed further to explain the content falling under these headings :

a. Learning through traditional method :

Learning through traditional method includes face-to-face interactions with teachers. Study materials are taught by delivering lectures. There is an instructor present in the class to demonstrate study material. Feedback is also an important activity perform by every teacher after each class.

b. Learning through tutorials :

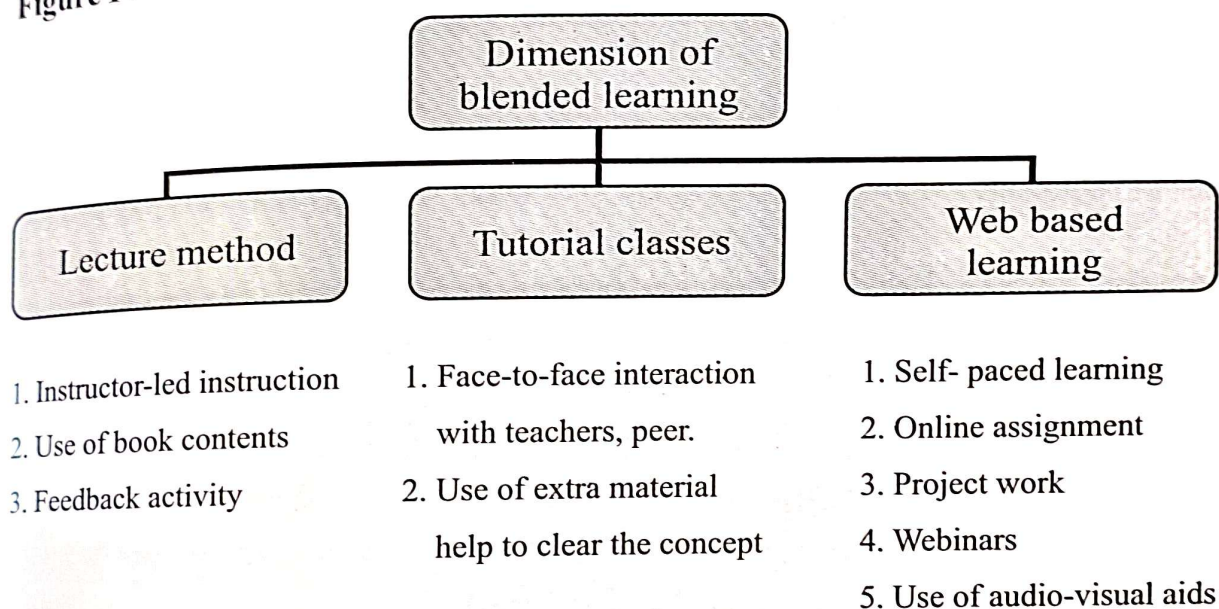
Sometimes classroom learning is not enough for concept clearance. Few students in class are weak and shy, thus their performance is poor. In order to help these

students in their studies, tutorial classes are given by the school. Here group of students are given personal care and attention so that they can perform better and clear their concepts.

c. Web based Learning:

Web based learning is self-paced. In this students learn according to their time and speed. Some topics are assigned by the teachers and distributed among students as an assignment. Students are required to complete those assignment and report accordingly. Students search various study material and complete according to their time and speed. Sometimes teachers also help students by giving particular website address for searching relevant matter.

Figure 1: Dimension of Blended Learning



Data were collected from both types of schools. The purpose of the researcher is to study the teaching and learning process of the schools using traditional or black-board and chalk method with those schools using blended learning method. Blended learning schedule was distributed to students. They were asked to mark their option on the basis of use of blended learning in their classroom. Students have to select one option among the given four options of Often, Sometimes, Rarely, Never.

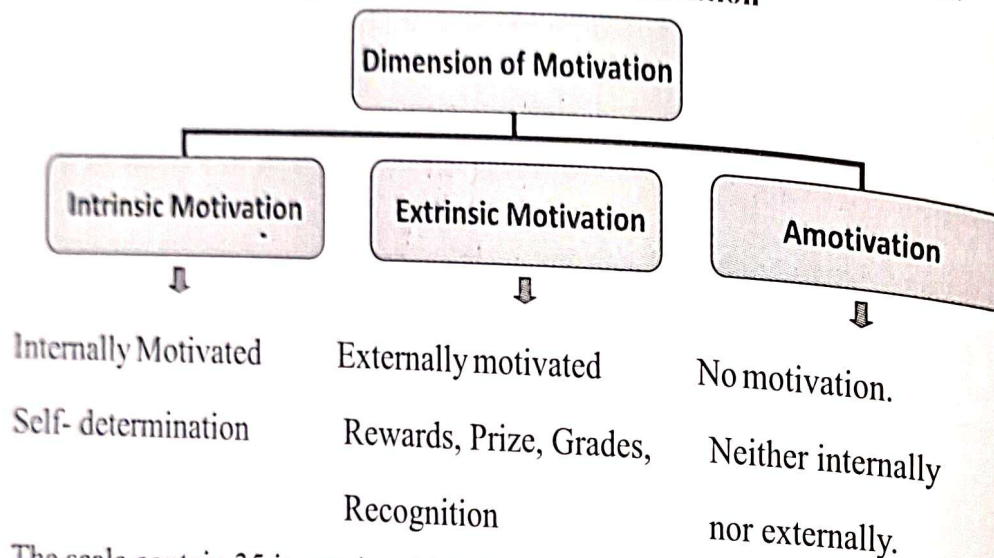
Academic Motivational Scale (AMS) - To assess the motivation of students. There are three dimensions of the Academic motivational scale –

1. Intrinsic Motivation
2. Extrinsic Motivation

3. Amotivation.

The dimensions of motivation are explained further to get clarity of content.

Figure 2 : Dimension of Motivation



The scale contain 35 items, in which 30 are based on the above three dimensions of motivation and 5 items are filler question. Through motivation tool researchers tried to measure their internal as well as external motivation. Students were enquired about their likes for prize, rewards and grade. Percentile norms were made according to the pilot study done. The students scoring 50 percentile and above on motivational scale were considered highly motivated and the students scoring below 50 percentile were considered low motivated. AMS was distributed among the students and they were asked to fill according to their preferences. Data were analysed using percentage, mean, t-test at 0.05 level of significance.

Result and Discussion

A total of 600 senior secondary students participated in the current study. Prior to analysis, variables were examined through SPSS for accuracy of data entry, missing values, skewness, kurtosis and outliers. Values of 16 cases were found to be missing. Thus they were excluded from the study. Now the researchers will discuss the findings of the study objectives wise. This will not only provide a deeper understanding about the work but also presents a clear picture of the research done.

1. To identify the senior secondary students (SSS) using blended learning.

In the present study, the first objective was to identify the students using blended learning from those not using blended learning. In order to achieve this objective a blended learning schedule was constructed by the researches. Apart from the

three dimensions mentioned in the blended learning Schedule, the researchers had identified some basic characteristics that schools using blended learning possess. They were:

1. Digital board in classroom
2. Computer labs for students
3. Internet connections in digital boards and computer lab.

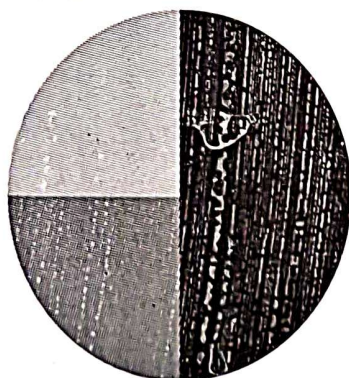
Blended learning schedule was administered on senior secondary students (SSS) to know that they were using blended learning. They were asked to mark their option on the basis of use of blended learning in their classroom. Students have to select one option among the given four options: Often, Sometimes, Rarely, Never. On the basis of score obtained the researchers had categorised the students into two groups. The table below shows the number of students representing each group.

Table 1: Identifying the students using blended learning

Groups	Number of students	Percentage(%) of students
Students using blended learning	288	49%
Students not using blended learning	296	51%
Total	584	100%

It is revealed from the above table that out of 584 students only 288 students were found using blended learning. Rest of student's i.e. 296 were not using this approach. Students using blended learning constitute only 49 % of the population whereas majority of students were not having this approach in their school.

Figure : 3



Based on the above findings it can be safely concluded that most the students were found following traditional method of learning. Their exposure to use of technology was very less. Researchers enquired about the classroom atmosphere. It was found that teachings were basically teacher centred. Teacher acts as instructor in the classroom. Classroom environment was autocratic, students were passive listener. Main focus of the teachers was to complete the syllabus rather than understanding and concept formation of the students. Students curiosity related to technology was neglected by the teachers. Researcher also found that teachers were also not interested in using innovative methods of teaching in classroom. They depend only on textbook for classroom teaching.

2. To compare the motivational level of students using blended learning with those not using blended learning.

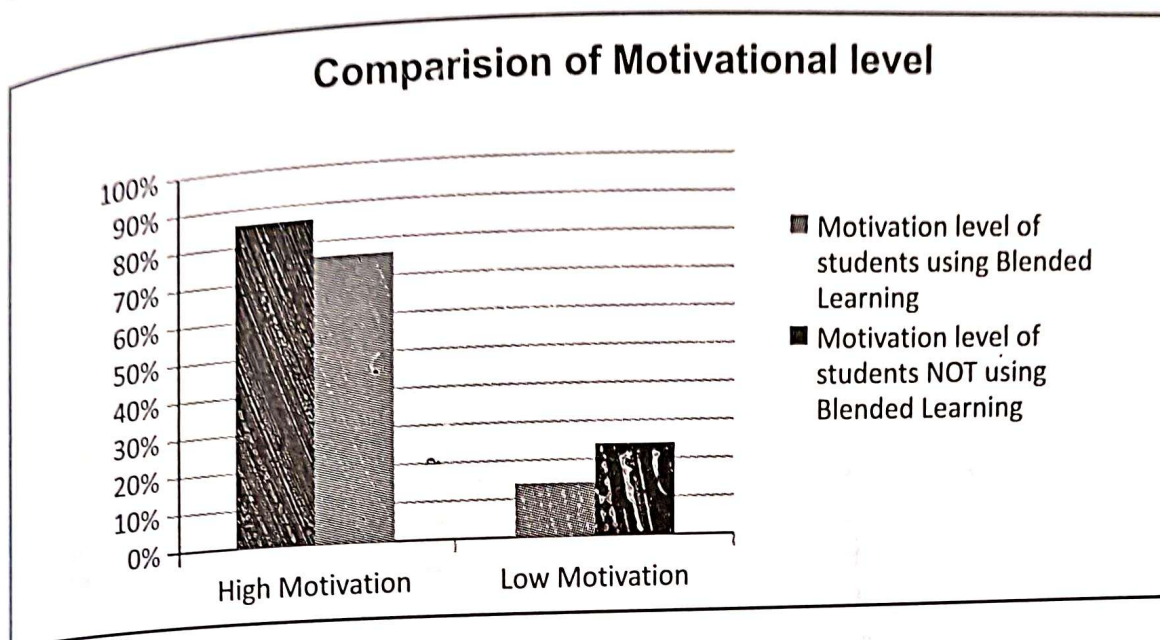
As we know that motivation is the foundation of our activities. It forms an essential ingredient in our daily life. For achieving the second objective of this research paper, researcher had constructed an Academic Motivational Scale. Students were enquired about their likes for prize, rewards and grade. Table: 2 show the percentage of motivational level of students on Academic Motivational Scale.

Table 2: Comparing the motivational level of students using Blended learning from those not using blended learning

Groups	High motivation (%)	Low motivation (%)	Total
Motivation level of students using blended learning	86%	14%	100%
Motivation level of students not using blended learning	76%	24%	100%

It is evident from the above that the student using blended learning shows 86% of high academic motivation whereas the student's not using blended learning shows only 76% of high motivation. The percentage of low academic motivation among the students not using blended learning was 24% which is higher than the student using blended learning, which consists of only 14%. Thus, it was clear from the above data that the students using blended learning possesses high academic motivation.

FIGURE: 4



Motivational level of students of both the groups presented in the graph given above clearly shows the difference existing between them. From this it can be inferred that the use of technology in classroom may have helped student in deeper understanding and concept formation. It creates a conducive environment for students to learn. Students are able to feel the content taught. They are also able to access internet according to their requirement. Use of audio-visual aids in classroom teaching catches the attention of students and make environment more educative. When researchers enquired student about the use of technology in classroom teaching, students were satisfied with this method of teaching. They feel it more systematic and interesting. For students the use of blended learning was motivating. They have facility of computer labs and are free to access internet according to their need. Whereas on the other hand students not using blended learning were less motivated may be due to the use of set pattern of teaching. Here teacher basically focus on the content of text book given. There is very less scope for the additional information. Thus teaching and learning become monotonous for students. They may get bored easily finding nothing innovative and challenging. Researchers asked them about the use of computer and other teaching aids in their classroom. Students replied that their teacher never uses any innovative method in classroom teaching. They were taught through lecture method only. From the part of school authority no feedback was ever collected. Researchers observed that students were not satisfied from few subject teachers. They usually misbehave in their class and act as a disturbing element. Some students were attentive and disciplined in others class. This

difference may be because of dull teaching method used by teachers. When researcher asked students about their behaviour, student answered boldly for the teaching method used by their teachers. One common problem among the students not using blended learning was the teaching methodology used by their teachers. Students complained that their teacher never uses any innovative method while teaching while other school uses computer in their classroom. Thus researchers find this reason strong enough for having low motivation among the students. There was also a problem of student-teacher ratio. The strength of class was large enough to be controlled by teachers. Teachers were not able to check students individually. Thus the atmosphere of class was dull and dead.

This finding is corroborated by the findings of McKay (2015) who in his research discussed the importance of motivation. He emphasized that enhancing student's sense of connectedness with their teachers and their peers can fortify the motivation among students. James et al. (2002) told motivation as an important factor in achieving goal. He has also emphasized on intrinsic motivation as one of the important dimension of motivation. Researchers had also use intrinsic motivation as one of the dimension of there academic motivational tool. Further the finding of the present study is also supported by Singh et al. (2003) who studied on the motivational level of students in the traditional education system and open education system. He found that the students of open education system (also using online mode) show high motivation level.

In order to verify the above result statistically, t-test was applied. In the table given below we can see that the mean value of students using blended learning is 56.01 which are higher than the mean value 54.22 of students not using blended learning.

Table 3: Showing difference between the motivational levels

Groups	N	Mean	Standard deviation	Standard error	Degree of freedom(df)	t-value
Students using blended learning	288	56.01	10.00	.583	590	2.056*
Students not using blended learning	296	54.22	11.14	.648		

*significant at .05 level

It is evident from the table 3 that calculated t-value 2.056 is significant at 0.05 levels. Hence the null hypotheses H_0 is rejected and alternatively the research

hypothesis H₁ stating that there is a significant difference between the motivation level of students using blended learning and students not using blended learning is accepted. This implies that the motivational level of students at senior secondary level varies significantly with the students using blended learning with those not using blended learning.

The students using blended learning were found highly motivated. It can be inferred here that the high level of motivation may be due to the innovative teaching approach used in classroom by the teacher. This approach may be more appealing for them. As blended learning approach is a teaching through senses. Here all the senses become active and students participation is maximize. Students were very positive with their answer on academic motivation tool. They enjoy doing their assignment work and were confident in using computer. Researcher further enquired students about the importance of marks and grades in their life. Most of the students replied that good marks matter for them. Good marks may provide them job opportunity with handsome salary. Students also see high marks as a prestige issue. It was also observed by the researchers that concept clarity was equally important for students. Students ask their query and get clarified there itself. Whereas the students not using blended learning were passive listener in class.

Figure 5: Mean score of students using Blended Learning and students not using Blended Learning

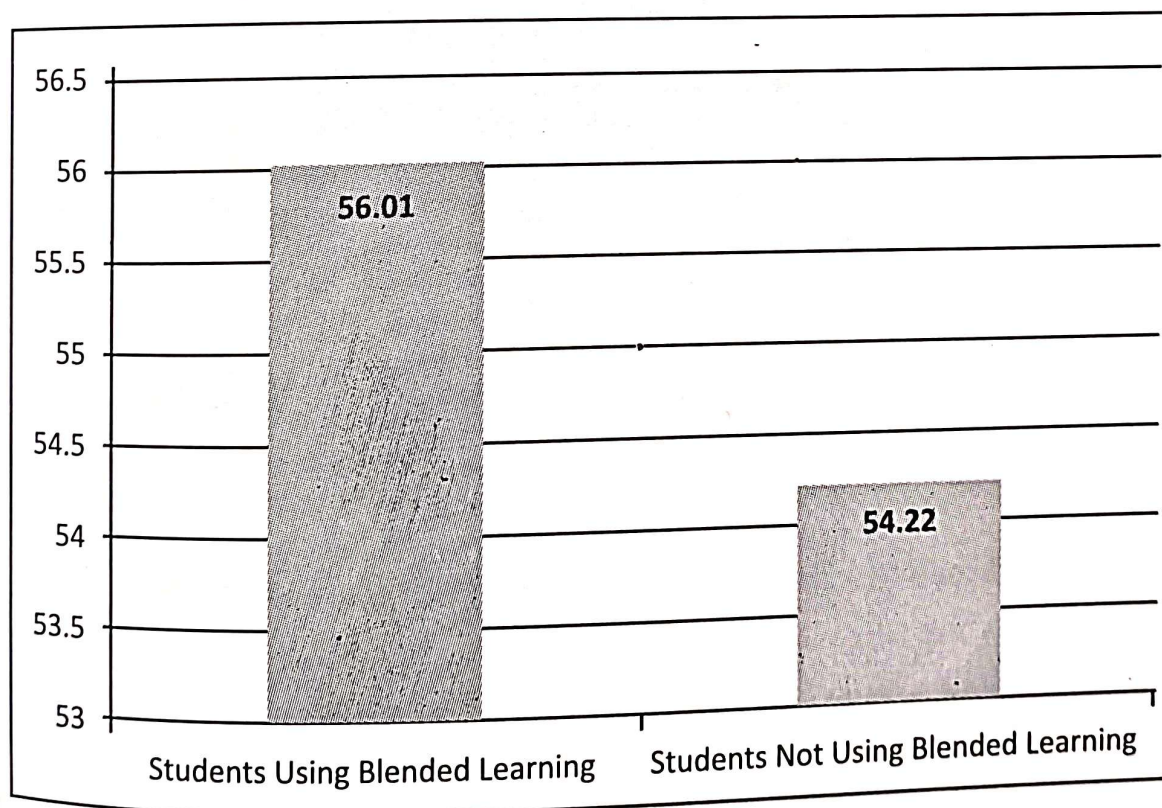


Figure 5 reveals that mean scores of students using blended learning is 56.01 which is higher than the mean score of students not using blended learning i.e. 54.22. It connotes that more the use of innovative method in classroom teaching, higher is the motivation level of students. Use of technology and other teaching aids in classroom create a positive impression on the mind of students. Whereas the students not using blended learning were passive listener in classroom. Researchers noticed that very few students in class raise question and clear their doubt. Fewer students were found attentive in class. When researchers inquired them regarding the importance of grades and marks in their life, most of the students were not very sure for the need of high grades. They study basically for their family and parents. Students were unable to tell their personal aim in life. These all may be due to lack of motivation in their life.

This finding is directly corroborated by the findings of Bekele (2010) who studied on the motivation and satisfaction in internet supported learning environment found internet based learning more satisfying and motivating for students. Another similar study by Lam(2012) on an innovative research on the usage of Facebook in higher education shows that student motivation in learning can be influenced using Facebook as a part of online learning platform. Heick (2013) found that a blended learning classroom is motivating the students because here a student's ability to follow their curiosity, recognize and evaluate possible learning pathways, collaborate freely and interact directly with content and peer sets all impact the confidence, curiosity and motivation of a learner. An important research by Ocak et al (2014) state that the motivation of the medical students was increased by the use of videos and animations in classroom teaching supported through the case study discussion.

Findings and Conclusions

Based on the findings presented following conclusions were drawn:

- 51% of the students fall in the category of not using blended learning (NUBL) or they were found following traditional method of learning. Their exposure to use of technology was very less. Researchers enquired about the classroom atmosphere. It was found that teachings were basically teacher-centred. Teacher acts as instructor in the classroom. Classroom environment was autocratic and students were passive listeners. Main focus of the teachers was to complete the syllabus rather than understanding of the students. Students' curiosity rated to technology was neglected by the teachers. Researchers also observed that teachers were not interested in using modern methods of teaching in classroom. Whereas the students using technology in their classroom were curious and attentive.

Their participation in classroom learning was good. They were confident and techno savvy. Teacher conducted various activities like quiz, test, and assignment to inculcate the feeling of belongingness and enhance their knowledge.

- The students using blended learning have high motivation level as compared to students not using blended learning. It was found that there is a significant difference between the motivation level of students using blended learning and students not using blended learning as the use of audiovisual aids in classroom teaching catches the attention of students and make environment more educative. When researcher enquired student about the use of technology in classroom teaching, students were satisfied with this method of teaching. They feel it more systematic and interesting. For students the use of blended learning was motivating. On the other hand the students not using blended learning in their classroom complained about the monotonous method being used by their teacher. They were not satisfied with their classroom teaching and were eager to use technology for their studies. They find their teachers boring which make them inattentive and dull. When researchers enquired about the different methods of teaching use by their teacher, the students answer were the use of lecture method .

Implication of the Study

The conclusion based on the findings of the present study lead towards some educational implications which are as follows:

- Tool (Blended learning schedule and academic motivation scale) developed by the researchers would help to identify the students using blended learning and asses the motivational level of senior secondary students.
- Comparative study between the traditional learning and blended learning would help teacher educators to know the inclination and preference of students towards two different forms of learning.
- This study would be helpful for curriculum planners. Curriculum could be designed according to the students need and interest by providing a compulsory section for using ICT in classroom teaching.
- This study is also helpful for the parents. They would understand the interest of their children and create a digital environment at home.
- This study is very helpful for educational institutions. Keeping in mind the interest of students the educational institution should train their teachers in using ICT tactfully in classroom.

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