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Secondary school student's attitude towards blended learning

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Abstract---Blended learning refers to a formal or informal educational programme that combines online digital content with traditional classroom methods. The study's purpose was to investigate secondary students' attitudes about blended learning and to create a tool to assess secondary students' attitudes toward mixed learning. 895 secondary school pupils from Kerala's Kottayam District were chosen using a stratified random selection method. To examine attitudes about blended learning, an investigator-developed tool was employed. The findings show that no statistical differences existed between the groups based on gender, geography, medium of instruction, school type, or management. The study's findings are offered with recommendations and suggestions for further research.

Keywords---blended learning, attitude, secondary school.

Introduction

The phrase 'blended learning' originally originated in the business sphere, in relation with corporate training, and then in higher education, before eventually arriving in language teaching and learning (Bakeer, 2018). In a blended learning programme, online digital material is utilised in combination with conventional classroom approaches (whether formal or non-formal). It needs both the teacher's and the student's physical presence, as well as some degree of student control over the lesson's time, location, course, and speed. While kids continue to physically attend school with a teacher present, in terms of content and delivery

techniques, face-to-face classroom practises are increasingly being mixed with computer-mediated activities. The creation of mixed learning environments started with rethinking and reworking current practises; a plan for creating blended learning environments was already in place; and blended learning environment standards were already in place (Aqel,2016). It's also known as 'Hybrid Learning' or the 'Flipped Classroom' (Mahato & Kumar,2021). It's also employed in areas like professional development and training. Through the use of blended learning approaches, it is feasible to improve student happiness, decrease stress, and enhance deeper learning. If teachers take advantage of this learning process, they may become more involved with their pupils. As a consequence of this, students will benefit from additional opportunities (Das,2021). Through online training, students have complete control over their learning rate, time, place, and direction. It encourages the development of planning skills, self-control, and self-regulation while also promoting independence (Ali,2021). Blended learning is also known as personalised learning since it combines instructional differentiation with blended learning (Kumar & Panda,2018). Blended learning promotes a more dynamic and adaptable learning environment than conventional learning approaches, giving students more opportunity to learn and improve their performance. Students' motivation to engage in this technology-enhanced learning environment is low, despite the fact that blended learning has been proved to increase student learning results. Lack of appropriate information, as well as a lack of willingness or hesitation to engage in a blended learning system, are seen to be the most typical barriers for students. Another truth is that most students are unable to adjust to the aspects of a blended learning system, resulting in the system's overall performance being low. The course material should be carefully developed, taking into consideration the unique student profile, individual characteristics, and course delivery expenses (Karaaslan and Kilic,2019). Both classroom and computer-mediated learning should take place at the same time in a blended learning system, and this sort of learning comprises a broad variety of learning kits and resources. In general, one may state that a blended learning system combines the best components of conventional learning methods with the advantages of computer-mediated learning methods (Bala,2016). When blended learning settings include technology, they have the ability to help students manage their time better while also offering better academic assistance both online and in person. In higher education, blended learning settings are becoming increasingly frequent (Markovich,2016). The learning results of a blended learning course are intimately tied to the participants' attitudes regarding this sort of learning environment (Jamila and Widodo,2019). The vast bulk of blended learning research has been undertaken in industrialised countries. In poor nations, however, only a modest quantity of study has been done. When their schools or universities initially implement blended learning, students and academic staff members are not all enthusiastic to embrace it (Abbacan,2021). Learners' histories and qualities, as crucial participants in any learning process, have an influence on their capacity to successfully continue learning and engage in blended learning settings (Justice ,Zhu and Kagambe,2017). Learners' views regarding blended learning were shown to have a significant impact on their motivation and satisfaction. The goal of this research was to examine student instructors' views regarding blended learning in order to determine their attitudes toward various aspects of blended learning. Furthermore, according to the findings, an instrument to measure students'

attitudes toward blended learning should be established (Taghizadeh and Hajhosseini,2021)

Literature Review

Blended learning has become the most popular teaching and learning method because it enables students to utilise both online and traditional learning methods while also giving them more flexibility and the opportunity to customise their learning experience to their own needs and circumstances (Mahato& Kumar,2021). Before this kind of education can be implemented, it is important to prepare all stakeholders for the concept of blended learning, as well as the advantages and downsides of this style of learning (Birball, Ramdass and Harripaul,2018). Blended learning environments are created to meet the requirements of students while still using current classroom equipment (Aqel,2016). Learners have realised that using a mixed learning method may help them take charge of their own education by enabling them to be self-sufficient and confident in their talents (Bakeer,2018). Educational institutions should prioritise the deployment of systems that enable students to receive/access paper or digital course packages/instructional materials through specified pick-up locations or digital platforms. Both students and teachers must have a good attitude in order for the blended learning process to work well (Das,2021). Students will be able to increase their computer literacy abilities by using a blended learning approach (Ali,2021). To properly prepare for such a transition, it is vital to start small and manage the change process systematically, using a change management framework and taking into consideration institutional needs and expectations (Karaaslan and Kilic,2019). A lack of training, internet access, technical support, time management, teachers' technological skills and experience, and classrooms equipped with technology were among the most frequently encountered difficulties; an increase in workload; students' lack of technological skills; and a lack of administrative assistance were among the most frequently encountered difficulties (Sultan,2018). Because technology may be used to assist teachers monitor each student's progress at any one moment, rather than in a more general fashion, instructors in blended classroom settings aim to work with individual students in a more targeted approach than they could in a conventional context (Farrington,2013). In blended learning, student satisfaction with course design may be a significant factor in the system's capacity to perform well. As a consequence, the students should accept and internalise the strategy that they are now using (Bala,2016). It defines students' behaviour in the teaching-learning interaction when they have a good attitude toward learning. Student attitudes might take the shape of willpower, emotions, mood swings, and other forms (Jamila and Widodo,2019). Every school that wants to provide students the chance to improve their social skills while learning new things has to create an effective blended learning environment (Kumar &Panda,2018). Individual evaluation of individual characteristics may help programmes to give a customised teaching approach that is more successful in fulfilling the needs of their students (Markovich,2016). It's vital to understand the many types of learner characteristics and how they relate to the effectiveness of blended learning (Justice ,Zhu and Kagambe,2017). Students had positive feelings about blended learning technology, which could be attributed to factors like providing different learning options through accessible and diverse materials,

promoting motivation and self-confidence, increasing achievement and satisfaction, saving time, and allowing them to learn more in less time and energy (Taghizadeh and Hajhosseini, 2021).

Objectives of the Study

- To determine the students' attitudes about blended learning at the secondary level.
- Develop a technique to measure secondary students' attitudes toward blended learning.
- To assess the value of a blended learning method in secondary school.
- To provide policy suggestions for secondary students' attitudes toward blended learning adoption.

Hypothesis of the Study

- The attitudes of male and female students regarding blended learning are not considerably different.
- The attitudes of urban and rural secondary school pupils regarding blended learning are not dramatically different.
- Between kids whose parents are graduates and students whose parents are non-graduates, there is no substantial difference in attitude toward blended learning.
- Secondary pupils from both English and Malayalam language schools have similar attitudes toward blended learning.
- Students at government schools, private schools, and government-aided secondary schools have similar attitudes about blended learning.
- Secondary school students at boys' schools, girls' schools, and co-educational schools had similar attitudes about blended learning.

Methodology

Students' views toward blended learning were investigated using a questionnaire to see whether they were linked to certain demographic parameters such as age, gender, home area, school type, school administration, and medium of instruction. The data for this study was collected via stratified random sampling. A total of 895 secondary school pupils from the district of Kottayam in the Indian state of Kerala were included in the study. The investigator developed and validated a test to assess secondary school students' attitudes about blended learning with the support of expert views.

The test includes thirty items, with the most prevalent likert responses being Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree. There were no negative responses in the survey. The scores were 5 for highly agreeing, 4 for agreeing, 3 for unsure, 2 for disagreeing, and 1 for strongly disagreeing with the statement for the positive items. The transformed raw data was analysed using ANOVA, as well as statistical tests such as Mean and Standard Deviation. The results of this study are presented in the section below.

Results

Null hypothesis (I) H_1 Male and Female students do not differ significantly in their attitude towards blended learning between the male and female students.

Table 1 : Mean and Standard Deviation of Attitude Towards Blended Learning Scores of the Male and Female Secondary School Students.

Gender	N	Mean	SD	t' Value	Significance At 0.05 Level
Male	592	81.67	11.07	0.73	Not Significant
Female	303	82.24	10.87		

The 't' value is 0.73, which is not statistically significant at the 0.05 level. The male mean is 81.67, whereas the female mean is 82.24, indicating a little difference. The standard deviations (Male -11.07, Female -10.87) are also not statistically significant. As a result, the null hypothesis is maintained, and it is found that male and female students' attitudes regarding blended learning are not statistically different.

Null hypothesis (II) H_2 Urban and rural secondary school students do not differ significantly in their attitude towards blended learning

Table 2 Mean and Standard Deviation of Attitude Towards Blended Learning Scores of the urban and rural Secondary School Students

Locale	N	Mean	SD	t' Value	Significance At 0.05 Level
Urban	309	80.93	10.62	0.17	Not Significant
Rural	586	82.72	11.31		

Table 2 shows the specifics of the computations. The 't' value is 0.17, which is not statistically significant at the 0.05 level. The mean for urban students is 80.93, whereas the mean for rural students is 82.24, indicating a little difference. The standard deviations (Urban -10.62 and Rural-11.31) are also statistically insignificant. As a result, the null hypothesis is maintained, and it is determined that the attitudes of urban and rural secondary school students about mixed learning are not substantially different.

Null hypothesis (III) H_3 There is no significant difference in attitude towards blended learning between the students whose parents are graduates and non-graduates.

Table 3 :Mean and Standard Deviation of Attitude Towards Blended Learning Scores of Secondary School Students whose parents are graduates and non-graduates.

Parents Educational Qualification	N	Mean	SD	t' value	Significance At 0.05 Level
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Graduates	470	82.29	11.30	1.15	Not Significant
Non Graduates	425	82.50	10.72		

Table 2 shows the specifics of the computations. The 't' value is 0.17, which is not statistically significant at the 0.05 level. The mean for urban students is 80.93, whereas the mean for rural students is 82.24, indicating a little difference. The standard deviations (Urban -10.62 and Rural-11.31) are also statistically insignificant. As a result, the null hypothesis is maintained, and it is determined that the attitudes of urban and rural secondary school students about mixed learning are not substantially different.

Null hypothesis (IV) H₄ English medium and Malayalam medium secondary students do not differ significantly in their attitude towards blended learning.

Table 4: Mean and Standard Deviation of Attitude Towards Blended Learning Scores of English Medium and Malayalam Medium Secondary School Students

Medium of Instruction	N	Mean	SD	t' value	Significance at 0.05 Level
English Medium	462	72.38	13.04	1.29	Not Significant
Malayalam Medium	433	73.41	11.01		

The table shows that the 't' value is 1.29, which is not significant at the 0.05 level. The graduation mean for English medium students is 72.38, whereas the graduate mean for Malayalam medium students is 73.41, indicating a little variation. The standard deviations (English medium -13.04 and Malayalam medium -11.01) are statistically significant in a minor way. As a result, the null hypothesis is maintained, and it is concluded that secondary students from English and Malayalam mediums have similar attitudes regarding integrated learning.

Null hypothesis (V) H₅ Government schools, private schools and Government aided Secondary school students do not differ significantly in their attitude towards blended learning

Table 5 ANOVA results of Secondary School Students studying in the Government Schools, Private Schools, and Government Aided Schools.

Source of Variation	Sum of Squares	df	Mean	F' Value	Significance at 0.05 Level
Between The Groups	320.382	2	163.181	1.315	Not Significant
Within The Groups	118556.768	893	134.845		

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The 'F' value is 1.31, which is not statistically significant at the 0.05 level. As a result, the null hypothesis is maintained, and it is concluded that students in government schools, private schools, and government-aided secondary schools have similar attitudes regarding integrated learning.

Null hypothesis (VI) H_6 Secondary school students studying in the Boys schools, girls schools and in the co-education school do not differ significantly in their attitude towards blended learning

Table 6 : ANOVA results of Secondary School Students studying in the Boys schools, girls schools and in the co-education schools

Source of Vairation	Sum of Squares	Df	Mean Square	F' Value	Significance At 0.05 Level
Between The Groups	303.824	2	159.912	1.268	Not Significant
Within The Groups	118573.336	893	132.856		

The 'F' value is 1.26, which is not statistically significant at the 0.05 level. As a result, the null hypothesis is preserved, and it is concluded that secondary school students in boys', girls', and co-educational schools have no significant differences in their attitudes about blended learning.

Discussion and Recommendations

Blended learning is the product of technological advancements. It is the effect of modern technologies being introduced into educational environments. The teaching-learning process is incomplete without both teachers and pupils. The attributes of students have an influence on the teaching and learning processes in any educational institution. When it comes to improving educational quality, identifying student characteristics and doing research to assess them cannot be overstated. In light of this, the present study, which attempts to evaluate secondary school students' opinions about blended learning, is very important. Gender, geographic area, parental education, medium of instruction, school type, and school administration are among the variables investigated in the study, although statistical significance for these variables is not revealed. The standard deviation and mean values did not vary substantially throughout the whole sample. This shows that blended learning and the attitude toward it are suited for all sorts of learners, regardless of their differences. The findings of (Mahato & Kumar, 2021), who revealed that PG students did not differ in terms of numerous demographic characteristics, are in line with the present study's conclusions. Such research may be undertaken under the auspices of education in a number of geographical locations and with a range of samples. Future research may opt to look at participant attitudes, such as teacher attitudes and stakeholder attitudes. Blended learning, like other technologies, is expected to grow in popularity in the near future. It is possible to go further into the factors that influence mixed learning. In order to get the greatest potential outcomes, teachers and students involved in technology-integrated learning should be oriented and sensitised.

Conclusion

To improve students' overall performance and learning, it is recommended that all stakeholders in educational institutions accept and employ blended learning approaches. Teachers should be encouraged to employ blended learning approaches, and students should be encouraged to take virtual courses and participate in online activities. Educators should consider how they may organise activities that stimulate student-to-student engagement as well as student-to-teacher interaction, that extend outside the classroom to boost students' understanding, and that enrich their classrooms using virtual graphics, images, and video. The most accurate statement is that the demands of the learners determine the progress of the learning process; thus, in order to meet the needs of all learner types, the designed course with blended system should be planned in detail and checked on a regular basis to identify and correct any potential problems before they become a hindrance to the system's efficiency. Ineffective communication between instructors and learners, ineffective interaction between learners and instructors, inadequate assistance from instructors, and technological flaws should not be obstacles to correctly running the system. Blended learning, according to the percentage of students who have a favourable attitude toward course content, allows students to practise course material in a more flexible and relaxed atmosphere outside of the traditional classroom.

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