Perception Towards Blended Learning Among the Sceondary School Students of Kottayam District

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Abstract

Introduction : The conventional instructor-led learning technique has given way to self-paced, individualised learning as technology has advanced. While traditional face-to-face education has its benefits in terms of student-teacher interaction patterns and the learning environment it creates, it also has certain drawbacks. To satisfy the changing demands of today's 21st century learners, a blend of online and offline modes of training is identified as an alternative for conventional classroom instruction. Blended learning, which integrates online and offline modes of education in a modern classroom setting, is born in this context.

Aim: The goal of this study was to find out how secondary schools in the Kottayam district of Kerala felt about blended learning.

Methods : The study experiment included 311 secondary school students from five different schools. The investigator gave the PETBLS (Perception Towards Blended Learning Scale) to the participants, and data was collected from them. It was statistically analysed, and the results are presented in this paper.

Results: The gender variable was shown to be relevant in this research, whereas the other socioeconomic components were found to be inconsequential. In order to make training relevant, the results highlighted the need to establish blended learning techniques that are targeted to gender differences and orientation through awareness programmes.

Conclusion: It is not enough to just amass technologies and technology-based education; rather, it is important to change one's basic beliefs about education's outcomes. The present study, which looked at schoolchildren's attitudes about blended learning methodologies, used the approach of starting at the very beginning, or at the most fundamental level.

Blended learning, perception, and secondary students are the key words.

Introduction

The 21st century education system, which is expected to transform the entire education system from the traditional face-to-face (F2F) mode to a techno-based independent mode where the primary focus will be on developing the potentials and creativity of learners in the most effective ways possible, requires personalised, productive, and collaborative teaching learning experiences (Bordoloi,Das & Das,2020). An environment in which instructional approaches, delivery methods, and media formats are all mixed or a mixture of all of these are combined is an example of blended learning (BL) or hybrid learning. The concept of integrated learning activities includes a mix of online and face-to-face learning activities. Learner-centered learning (BL) is a set of approaches or aspects that include a wide range of event-based activities, such as traditional instructor-led training, real-time virtual classrooms or training, and asynchronous self-paced learning. The growing use of information and communications technology (ICT) to address a variety of social needs has necessitated the deployment of this critical tool in education in developing countries in order to meet the demand of an increasing number of students enrolled in educational institutions in developing countries (Adu and Ohemeng,2015). Blended Learning, on the other hand, is a means of tackling the difficulties of customising learning and development to meet the needs of individuals by combining the most current technological and creative innovations into the process (Ughade and Badre2020). Both teachers and students play a vital role in the teaching and learning process. Students' viewpoints and satisfaction must be taken into account for blended learning environments to be rated high-quality (Lu,2021). Despite the fact that blended learning has the potential to increase learning quality, incorporating technology into the classroom requires a deep understanding of pedagogical goals (Ling and Yang,2016). Meanwhile, experts in the area claim that blended learning is now the most successful and long-lasting technique of learning (Elisabeth and Orzan, 2019), and since students enrol in BL courses for unique reasons, it's important to look at their perspectives on the process (Yilmaz and Malone,2020).

Literature Review

Blended Learning, with the help of technology, may be used as a different method of teaching and learning to motivate students and instructors (Fatimah et.al,2016). The study's results revealed that pupils had a positive attitude toward blended learning.

When it comes to providing education in India in the twenty-first century, blended learning may be the most successful approach. Although open education has widened the scope of learning in comparison to traditional education, unlike traditional education, it has done it under the tagline "bring your own device" to study. Bordoloi, Das, and Das (Bordoloi, Das, and Das, 2020).

Some students were unable to profit from the mixed learning environment due to slow Internet connection and a lack of Internet access. As a consequence, it was suggested that ICT infrastructure be improved, as well as capacity training for lecturers to employ the blended learning strategy (Adu and Ohemeng,2015).

Students expressed positive feelings about their learning environment in general, and they believed that the mixed learning environment may help them improve critical thinking abilities in a number of areas (Lu,2021).

According to Ling and Yang, students' learning flexibility was enhanced while social relationships were preserved in the conventional classroom (2017a). They also mentioned that creating a mixed delivery course requires time, effort, technical expertise, and a defined pedagogical purpose with technological integration. As a result, academics must be provided with a professional development programme as well as aid and support.

Despite the advantages of blended learning, certain technical aspects of the blended learning environment may be harmful to students' learning (Yilmaz and Malone,2020). Blended learning seems to have provided instructors and students with a face-to-face learning environment in the classroom that differed from the traditional classroom learning environment in that it put a higher focus on active learning.

Mixed learning allows children of all ages to collect knowledge from a range of sources, according to Elisabeta and Orzan (2019), and instructors should build a mixed learning curriculum and apply new ways to engage students and encourage them to collaborate.

Ughade and Badre (2020) explored the applicability of blended learning frameworks for higher education using a mixed learning framework. The study's conclusions are based on absolute characteristics that are not gender specific. Blended learning has therefore shown to be a feasible and effective technique for enhancing student performance in higher education, and when used as an alternative way to teaching and learning, blended learning may even help to motivate students.

Blended learning has both beneficial and bad features, as shown by the research study. Furthermore, student perceptions have a significant effect in the quality of blended learning. Because some components of blended learning obstruct learning, further research is needed, and gender was shown to be unimportant in the context of higher education. The observed research vacuum prompted the creation of the current study, which aimed to investigate secondary school students' perceptions in Kerala's Kottayam district.

Methodology

The goal of the study was to find out how secondary schools felt about blended learning. As a result, the study's goals are as follows:

Objectives of the Study

- To find out how secondary school pupils in the Kottayam district feel about blended learning.

- To determine the impact of gender and location on secondary school pupils in the Kottayam district's perceptions of blended learning.
- To see how specific demographic characteristics among secondary school students in Kottayam influence their attitudes toward blended learning.
- To provide policy decision-making recommendations based on the study's results.

The following hypotheses were formulated and tested based on the goals.

Hypothesis of the Study

- In terms of gender, there is no significant variation in the mean score of Secondary School Students' Perception of Blended Learning.
- There is no significant variation in the mean score of Secondary School Students' Perception of Blended Learning based on their Father's Educational Qualification.
- There is no significant variation in the mean score of Secondary School Students' Perception of Blended Learning based on their Mother's Educational Qualification.
- There is no significant variation in the mean score of Secondary School Students' Perception of Blended Learning based on their Father's Occupation.
- There is no significant variation in the mean score of Secondary School Students' Perception of Blended Learning based on Mother's Occupation.

Analysis of Findings

The present study used a normative survey technique, in which the researchers produced a questionnaire to utilise in the study. The PETBLS tool was developed to extract data from the sample. The twenty-item tool was built with a five-point grading system for each item. The study comprised 311 secondary school students from five different schools in the Kottayam area, who were selected using the Stratified Random Sampling approach to be included in the study. Based on their geographical location, the schools were separated into two categories: rural schools and urban schools. Following that, the researcher chose five schools at random from each stratum and administered the instrument to them. The statistical analysis' findings were then applied to the completed questionnaire. The original data was altered, and the outcomes were scrutinised for conclusions.

(H_o1) There is no significant difference in the mean score of Perception towards blended learning of Secondary School Students with respect to Gender.

A "t" test was used to determine if there was a significant difference in the mean score of Perception towards blended learning between male and female Secondary School Students.

Table 1: Mean, Standard Deviations and 't' value of Male and Female Perception towards blended learning of Secondary School students

Variable	Gender	N	Mean	Std. Deviation	"t" value	Level of Significance
Perception towards	**Male**	157	109.99	23.865	2.083	Significant at 0.05 %

blended learning	**Female**	154	104.68	21.045		

The 't'-value of male and female Higher Secondary School students' perceptions of blended learning is 2.083, which is statistically significant at the 0.05 level, as indicated in the table. According to the findings, male and female students have drastically different opinions of blended learning. Furthermore, male students have a mean score of 109.99, while female students have a mean score of 104.68, showing a marginally significant difference between the two groups.

(H_o2) There is no significant difference in the mean score of Perception towards blended learning of Secondary School Students with respect to Father's Educational Qualification.

An One Way ANOVA was used to determine if there was a significant difference in the mean score of Perception towards blended learning between their Father's Educational Qualification of Secondary School Students such as illiterate, 1 - 10th std, 11th and 12th std, Undergraduate and above.

Table 2: Summary of ANOVA showing the significance difference in the mean score of Perception towards blended learning of Secondary School Students with respect to Father's Educational Qualification.

Sources of Variation	Sum of Squares	df	Mean Square	F
Between Groups	208.463	3	69.488	.135
Within Groups	158599.203	307	516.610	
Total	158807.666	310		

The ANOVA comparisons do not disclose a statistically significant difference, as shown in the previous table (4.5). When utilising the df technique, the derived 'F' value is (0.135), which is not statistically significant at the 0.05 level (3,307). It implies that there is no statistically significant difference in how blended learning is perceived on average. As a consequence, the theory put forward is accepted.

(H_o3) There is no significant difference in the mean score of Perception towards blended learning of Secondary School Students with respect to Mother's Educational Qualification

An One Way ANOVA was used to determine if there was a significant difference in the mean score of Perception towards blended learning between their Mother's Educational Qualification of Secondary School Students such as illiterate, 1 - 10th std, 11th and 12th std, Undergraduate and above.

Table 3: Summary of ANOVA showing the significance difference in the mean score of Perception towards blended learning of Secondary School Students with respect to Mother's Educational Qualification.

Sources of Variation	Sum of Squares	df	Mean Square	F
Between Groups	1191.821	3	397.274	.774
Within Groups	157615.844	307	513.407	
Total	158807.666	310		

The ANOVA comparisons do not disclose a statistically significant difference, as shown in the table above. The df test revealed that F = (0.774), which was not significant at the 0.05 level (3,307). It shows that the average perception of blended learning does not change greatly depending on their mother's educational background. The null hypothesis is thus accepted.

(H_o4)There is no significant difference in the mean score of Perception towards blended learning of Secondary School Students with respect to Father's Occupation.

An One Way ANOVA was used to determine if there was a significant difference in the mean score of Perception towards blended learning between their Father's Occupation of Secondary School Students such as Government, Private, Self Employed, Agriculture, and Others.

Table 4: Summary of ANOVA showing the significance difference in the mean score of Perception towards blended learning of Secondary School Students with respect to Father's Occupation.

Sources of Variation	Sum of Squares	df	Mean Square	F
Between Groups	2449.894	4	612.473	1.199
Within Groups	156357.772	306	510.973	
Total	158807.666	310		

The ANOVA comparisons do not disclose a statistically significant difference, as shown in the table above. The resultant 'F' value of (1.199), which is not statistically significant when evaluated at the 0.05 level with df(4,306), indicates that the mean Perception of integrated learning is unaffected by their father's employment. As a result, the null hypothesis is deemed to be accepted.

(H_o5)There is no significant difference in the mean score of Perception towards blended learning of Secondary School Students with respect to Mother's Occupation.

An One Way ANOVA was used to determine if there was a significant difference in the mean score of Perception towards blended learning between their Mother's Occupation of Secondary School Students such as Government, Private, Self Employed, Agriculture, and Others.

Table 5: Summary of ANOVA showing the significance difference in the mean score of Perception towards blended learning of Secondary School Students with respect to Mother's Occupation.

Sources of Variation	Sum of Squares	df	Mean Square	F
Between Groups	3057.496	4	764.374	1.502
Within Groups	155750.170	306	508.987	
Total	158807.666	310		

The ANOVA comparisons do not disclose a statistically significant difference, as shown in the table above. As seen by the predicted F value of (1.502), which is not statistically significant when evaluated at the 0.05 level using df, the mean Perception of blended learning does not vary much based on their Mother's Occupation (4,306). As a result, the null hypothesis is deemed to be accepted.

(H_o6)There is no significant difference in the mean score of Perception towards blended learning of Secondary School Students with respect to Locality of the Student.

A 't' test was used to determine if there was a significant difference between the rural and urban locations of Higher Secondary School students.

Table 6 :Mean, Standard Deviations and 't' value of Rural and Urban Perception towards blended learning of Secondary School Students with respect to Locality of the Student.

Variable	Locality of the Student	N	Mean	Std. Deviation	"t" value	Level of Significance
Perception towards blended learning	**Rural**	181	108.69	23.192	1.219	Not Significant at 0.05%.
	Urban	130	105.52	21.787		

The 't'-value of the mean score on Perception of Blended Learning of rural and urban Secondary School students in relation to their geographical location is 1.219, which is not statistically

significant at the 0.05 level of significance, according to the data. It reveals that there is no statistically significant variation in perception of blended learning between rural and urban students. In addition, the mean scores show that there is no statistically significant difference between rural and urban pupils (108.69). (105.52). The null hypothesis, as a consequence, has been accepted.

Discussion

The findings imply that students' opinions of blended learning techniques in secondary school are influenced by gender, which is consistent with earlier studies. Male and female students have distinct perspectives on blended learning, and this difference is significant. Gender has no influence on views of blended learning in higher education, according to the findings of a study by Ughade and Badre (2020). The present study is being conducted in the context of secondary school education. This opens up new research areas in which students' opinions of blended learning are influenced by their educational level, and vice versa. A future study might look at the perspectives of students at various levels of schooling. Other factors such as the father's educational qualification, the mother's educational qualification, the father's employment, the mother's occupation, and the student's location had no significant impact on secondary students' attitudes toward blended learning. It's possible that further study examining the influence of pupils' socioeconomic circumstances, taking into account their parents' job and income, will be conducted. Both students and teachers may benefit from orientation programmes that educate them on the advantages of blended learning as well as how to solve technical challenges that may occur while utilising blended learning.

Conclusion

Despite the fact that developed countries have the capacity to switch to blended learning more rapidly and effectively, the digital divide makes implementation problematic. ICT-based education in the form of blended learning must be re-engineered in locations where universal education is not yet a reality. Stakeholders in education, politicians, and every citizen of the country should collaborate to enhance education at the grassroots level, since it is the cornerstone of high-quality education. It is not enough to just amass technologies and technology-based education; rather, it is important to change one's basic beliefs about education's outcomes. To put it another way, the present study, which looked at schoolchildren's attitudes regarding blended learning methodologies, took the approach of starting from the beginning, or at the most fundamental level.

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Conflict of Interest and Source of Finding

Nil

Author Contributions

The work was equally contributed to by all authors.

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