Assessment of Student Satisfaction with Distance and Blended Learning

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Abstract

Introduction. Blended learning has gained prominence due to increased technological inclusion in the wake of post-Covid era. It comprises hybrid learning strategies where in-campus and online learning mediums are used. However, the students' satisfaction has become the most significant concern of the researchers in the context of the adoption of blended learning in the educational domain. The purpose of this article is to present the results of a study on the effectiveness of blended and distance learning in terms of student satisfaction.

Materials and Methods. The study is quantitative in nature and purposively recruits 200 study participants who were either undergraduate students or diploma holders studying at a university. An online survey form was designed to collect data from the participants. The data collected was analyzed using Statistical Package of Social Sciences version 23.0. Descriptive Statistical Analysis using frequencies and percentages were used. Moreover, to find the association between students' satisfaction and blended and distance learning, ANOVA test was conducted.

Results. The study shows that students' satisfaction had been greatly acknowledged as a significant factor in recognizing the course's effectiveness, especially the blended learning course. In conclusion, this study provided positive feedback about hybrid learning methods and distance learning and their effect on students' satisfaction, leading to better learning and academic performance.

Discussion and Conclusion. The findings of this study are significant for the teachers as they will be coordinating with the students and will be able to assist them in learning and management issues.

Keywords: distance learning, student satisfaction, instructor's performance, course evaluation, student-instructor interaction, blended learning

Оригинальная статья

Оценка удовлетворенности студентов дистанционным и смешанным обучением

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Аннотация

Введение. Удовлетворенность студентов является важным вопросом для ученых в образовательной сфере в контексте внедрения смешанного обучения. Цель статьи – на основе проведенного исследования определить эффективность смешанного и дистанционного обучения с точки зрения удовлетворенности ими студентов.

Материалы и методы. Выборка количественная. Было опрошено 200 чел.: студенты бакалавриата, а также обладатели дипломов университета. Для изучения проблемы проведен онлайн-опрос. Полученные данные анализировались при помощи SPSS версии 23.0. Применялся описательный статистический анализ с использованием частот и процентов. Для определения связи между удовлетворенностью студентов смешанным и дистанционным обучением проведен тест ANOVA.

Результаты исследования. Полученные данные показали, что удовлетворенность студентов признана важным фактором в эффективности курсов, особенно курсов смешанного обучения. Настоящее исследование дало положительные отзывы о гибридных методах обучения и дистанционном обучении и их влиянии на удовлетворенность студентов. Использование данных видов привело к лучшему обучению и академической успеваемости.

Обсуждение и вывод. Сделанные автором выводы позволяют преподавателям координировать свои действия со студентами и способствуют решению вопросов по организации учебного процесса.

Ключевые слова: дистанционное обучение, удовлетворенность студентов, производительность труда преподавателя, оценка курса, взаимодействие студент – преподаватель, смешанное обучение

Introduction

The teaching and learning environment is accepting a number of innovations and most of them involve the use of technology through blended learning. This innovative approach has been embraced quickly as it goes through the process. The introduction of blended learning is part of the innovation, but its implementation in the developing countries is challenging for it to be used as an effective means in teaching and learning [1]. Numerous applications facilitate elevating the ability in variations of distance communication. New opportunities are created by information and communication technology (ICT) for education, particularly in higher education. The progressions in methods, techniques, and knowledge related to ICT enable substantial modifications in the educational practice [2]. The progression of ICT has undertaken e-learning as an important aspect of modern education. Learning can emerge anytime and anywhere, even if there is a geographical separation between teacher and students or peer students[1]. Considering today's educational sector, ICT is considered as one of the most important factors for societies to prosper and progress. In addition to this, Yavuzalp et al. state that distance learning can help students attain their targets in a designated time and place while easily managing the cost, time duration, and space [3]. In today's globalized world, we cannot overlook the importance of information and communication technology.

Distance learning systems are very helpful for individuals in geographically scattered locations who can't attend the classes from the institutions [4]. The distance learning education system is designed keeping in mind the flexibility that caters to individual needs for learning and development to take place positively [5]. According to Gökmen et al. [6], distance learning program caters to more gadget-friendly students, which means they are very comfortable with the online courses they take. According to Allen & Seaman, the educational sector has started to take distance learning as a necessary tool to impart knowledge to students[2]. With the growing need for information technology and

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communication, higher education institutes that do not include distance learning in their institutional culture will be looking to take up this aspect to increase the population of students in their institutions [7].

According to Watts, in distance learning programs, students and instructors take up synchronous sessions to learn about the course they opted for through the internet whenever they want to be connected [8]. The communication between the instructor and the participants take place either through email or another online platform. Everything has its advantages and disadvantages; similarly, distance learning also comes with both. The advantages of taking courses through distance learning are that the learning is self-paced, flexibility in terms of time and space is available, helps to save commuting time, and is cost-effective. Coming to the disadvantages are it leads to isolation, there is a continuous struggle to stay motivated, physical or face-to-face interaction is not there, immediate feedback is not possible and reliable internet connection accreditation [9]. With so many advancements in technology and educating the students, it has become necessary to integrate information technology and communication with the courses. In consideration, blended learning is a learning atmosphere that combines several delivery modes to offer an active learning experience for the students. In short, it is a blend of face-to-face and online instructions and activities to attain certain goals and objectives of any particular program [10].

According to Lindsay, blended courses encourage technological advancements for the students, improve self-regulated learning methods, and provide social engagement and peer interaction [11]. In this way, students are more involved in learning as they take ownership of it once they have the freedom in the online space, engagement and time with the learning outcomes. All of this can lead to the satisfaction of the learning experience, which will help to determine whether the students will again opt for the same course or not. When an online learning environment and a classroom environment are combined, the benefits of both modes of training are likely to be maximized. However, instructional designers and remote educators must provide more flexible delivery options and more flexibility to students and carefully construct distance courses to provide relevant changes to students [12].

What is satisfaction? It can be defined as participants being satisfied when their expectations are met. For administrators, students' satisfaction is important as it shows them that their courses are functional and liked. It also shows that the students enjoy the learning experience in that course they have opted for [13]. According to Finn and Bucceri, blended learning is a different form of distance learning that amalgamates distance education benefits with the operative aspects of face-to-face education[3]. Heterick and Twigg described the aim of blended learning approaches to find a pleasant balance between online access to information and traditional learning approach like face-to-face interaction[4]. Furthermore, the above studies found evidence that blended learning is more likely to be effective and efficient than traditional classroom teaching.

According to Staker and Horn, "A formal education programme in which a student learns in part online with some aspect of student control regarding time, place, path, and/or pace, and in part at a supervised brick-and-mortar facility away from home"[5]. The literature provides evidence that distance and blended learning can support students to continue their learning in a different setup. To be more precise, distance learning is a systematic platform where the instructor and student participate in a distant educational setup in various ways. In the academic arena, the role of ICT has achieved significant importance in undertaking the current COVID-19 pandemic affecting all institutions globally for closing down and; therefore, offering hope to multiple challenges at all levels and phases of education, particularly for students [14]. The

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thriving, innovative technologies have taken a headway to provide a functional solution for educators and policymakers to integrate ICT throughout the quarantine days to cover the course work [13]. Such development makes distance education potential and stimulating for individuals to engage in learning, specifically adults. Recently, expansions occurred in internet-based technologies as they have facilitated the e-learning model to be a substantial aspect of distance education [15]. Using the internet, distance education can offer colleges and universities a flexible and low-cost option to expand into global markets [16]. Higher education institutions present numerous opportunities for taking online courses and completing online degree programs. This fulfills the enduring expansion in online learning enrollments [17].

There is a need for research to identify factors that play an essential role in student learning and satisfaction as the number of enrollments in higher education increases, specifically in online courses. Student satisfaction emphasizes the perceived learning experience of learners [18]. It is assumed as one of the core aspects of learning effectiveness, scale, access, and faculty satisfaction for assessing the quality of online learning determined by the online learning consortium [19]. These aspects can be integrated to evaluate and develop online programs and courses in various educational institutions [20]. The significance of student satisfaction with online learning is well-ascertained in research and revealed to be highly associated with dropout rates, commitment, motivation for completing a degree online, and success rates.

The literature stressed a need for distance and blended learning to inform teaching and learning advances. That learner attitudes and perceptions are important in the quality and development of distance education [21]. Attaining feedback from students regarding the design and integration of the learning environment offered is an important aspect of identifying what has worked and where enhancements could be made prospectively [22]. However, research on distance and blended education is comparatively narrow and confined, specifically on concerns associated with learning environments. Therefore, this study assessed

the attributes of online and blended learning course environment and the satisfaction of students enrolled in distance and blended learning courses. The correlation between student satisfaction and distance and blended learning was examined in the online and blended learning environment. Assessing student satisfaction facilitates educational institutions for detecting realms for expansion and enhancement of online and blended learning. This study identified factors that can forecast and relate to student satisfaction throughout online and blended learning environments in higher education. The study findings are of significant importance to different stakeholders for manifold reasons. Critical areas will be uncovered in this study and will contribute to local literature on the subject, which can be used by appropriate authorities to improve their educational strategies. Teachers will consider the importance of undertaking studies in ICT and online modes to up-skill their teaching abilities. The finding of this study will reflect the advantage of higher education institutions by offering them essential insights into ICT integrated teaching, which facilitates them in strengthening their programs for dealing with the diverse demands of the COVID-19 pandemic.

In addition, this study will make a significant contribution using its findings by identifying the difference between different groups and their attitudes towards implementing ICT in learning and teaching. Importantly, the findings will be of significant interest to the staff as they will be coordinating with the students and will be able to facilitate their behavior and address online management issues politely. Simultaneously, it will further rebound essential information to educational authorities regarding the advantages of ICT integrated learning, allowing them to encompass them as pedagogical educational reforms. Particularly, they may have to revitalize their curriculum to encompass ICT knowledge in their text at both primary and secondary levels.

Literature Review

The new normal is distinguished due to the rapid adoption of different learning and teaching methods that were not popular before that offer distinct advantages to the educational

community at large. Gherheș et al. [23] conducted a study to explore the perception of students and teachers about e-learning and face-to-face learning and their intent to return to the conventional methods of learning and teaching. The results of the study showed the students of the first year had no desire to return to the traditional learning method in comparison with the students that were enrolled in the second or third year. However, in the opinion of the teacher, the blended method was more appropriate for them as an effective pedagogical method to teach the students. Another study by Agustina et al. documented the perceptions of the students of junior and senior schools in Indonesia [24]. The students were enquired regarding the quality of learning their courses during the pandemic. The findings of the study showed that online or web-based learning was not adequately effective to obtain educational outcomes and the most frequently reported challenge was the lack of internet connection. These results implied that the effectiveness of online or digital learning cannot be superseded by the challenges such as connectivity in the context of developing or under-developing countries. Given a few students, felt a lack of active and on-campus interaction with teachers as they had no reaction time and socialization with their peers.

Maqableh and Alia researched the pivot to online learning from conventional learning during the pandemic [25]. This study accounted for the survey observations of 438 undergraduate students wherein they expressed their negative or positive perceptions about this pivot. The findings of the study revealed that a manifold issue was encountered by the students concerning time management, the balance between educational activities and social life, mental well-being, and the lack of technical skills to avail of the real dividends of online learning. In addition, difficulty in maintaining focus and distractions were also highlighted as commonly encountered challenges by the students. However, the study did not report that the lack of internet connection was a challenge for the students. Therefore, it can be inferred from the fact that there is a higher inclusion of technology and internet in the society that for educational purposes, the availability of better connectivity is assured in the new normal. Concerning the adoption

of a blended teaching model, Lorenzo-Lledó et al. also investigated the experiences and difficulties of students when they incorporated a hybrid learning model [26]. The findings revealed that the lack of motivation and social interaction, connection interruptions during online classes, and technical barriers were the most significant challenges faced by the students while attending hybrid education. The satisfaction level of teachers was found moderate. The factor of low level of interaction between students and teachers was further studied by Gavrilis et al. [27] which indicated that there was a lower level of teacher-student interaction due to distance learning. However, the results showed that the students were satisfied with distance learning. Rajabalee et al. have investigated the relationship between students' engagement and their level of satisfaction of students [28]. The results showed a significantly positive correlation between student engagement and satisfaction with online learning. However, the study also figured out that the lack of support from the tutors and technical assistance were the major challenges encountered by the students.

Based on the literature reviewed, it has been figured out that no study has investigated the relationship between students' level of satisfaction with distance and blended learning. The following hypotheses have been formulated based on the empirical and theoretical evidence cited above:

H1: The students were perfectly satisfied with the blended course.

H2: There was positive online interaction among students, instructors, and peers.

H3: The instructors were always accessible for feedback and queries.

H4: Internet connectivity was not a hindrance in online learning.

Moreover, Figure illustrates the conceptual model of the study following the proposed hypotheses.

Materials and Methods

Study Design and Participants. This study used a quantitative approach and incorporated undergraduates and diploma holder. The participants of the study were purposively recruited as the study approached the ones who were enrolled in blended as well as distance learning courses.
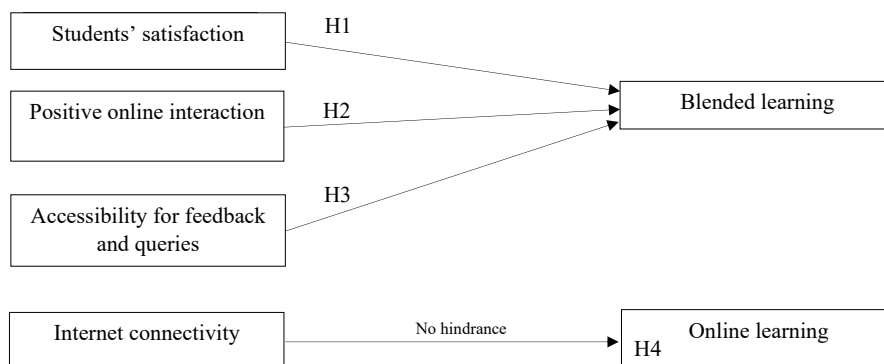
F i g u r e. Study Hypotheses

Source: Compiled by the author.

Therefore, a total of 250 participants were approached to fill the online survey form. According to Raosoft online calculator, the recommended sample size was 152 with 95% confidence interval and 5% margin of error. The researcher received 220 forms back out of which 20 forms were excluded as they were partially filled, so the final sample size was 200. The study comprised of 115 females and 85 were males aged between 18–35 years. An informed consent was obtained from all respondents to participate in the study/processing of their responses

Study Instrument. The online survey form developed consists of 15 questions divided into 2 parts. The first part of the form was based on demographic details of the participants, whereas the other part incorporated questions related to blended approach and distance learning. The form was based on 5-Point-Likert scale 1-Strongly Agree, 2-Agree, 3-Strongly Disagree, 4-Disagree, 5-Neutral.

Survey Questionnaire
Demographics
Gender:
Age:
Education:
Section 1
1. Overall, how satisfied or dissatisfied were you with the blended learning course?
2. How satisfied or dissatisfied were you with the content of the blended learning course?
3. How satisfied or dissatisfied were you with the format of the blended learning course? (Format, Assignments, Testing, etc.)

4. How satisfied or dissatisfied were you with the ability to navigate through the blended learning course?
5. How satisfied or dissatisfied were you with the online help features of the blended learning course?
6. How satisfied or dissatisfied were you with the download time for the blended learning course pages?
7. The presentation of blended learning course topics was clear.
8. The requirements for completion of the blended learning course were clearly outlined.
9. How many blended learning courses have you participated in, including this one?
10. Do you plan to participate in another blended learning course the next year?
Section 2
1. How satisfied or dissatisfied were you with the online interaction you had with the instructor?
2. How satisfied or dissatisfied were you with the online interaction you had with other students in this course?
3. The course instructor was accessible to answer questions or give feedback.
4. Did you access the course from your home computer, laptop, tablet, smartphone, other?

Overall, how satisfied or dissatisfied were you with your technical issues (internet connection, load speakers, mic, etc.)?

Data Analysis. The data gathered is analyzed using Statistical Package of Social

Sciences (SPSS) version 23.0. Descriptive Statistical Analysis using frequencies and percentages were used. ANOVA test is carried out to find the relations between students' satisfaction and blended and distance learning.

Reliability and Validity of the Questionnaire. The questionnaire was handed over to some senior lecturers from different programs. They were requested to examine the questionnaire regarding accuracy, language, relevancy and clarity. They made minor corrections to the questionnaire and made the instrument reliable and capable of providing accurate results. Based on the experts' recommendations, all the questions remained unchanged. Then, the Cronbach alpha coefficient was calculated, which proved to be (0.910), proving that the instrument is highly reliable and capable of meeting the study's goals.

Ethical Consideration. An ethical approval was taken from the ethical Also, a written consent form was obtained from all the participants of the study and were assured that their data will be kept confidential at all levels.

Results

Table 1 shows the demographic profile of the students. According to the table, the sample constituted 42.5% male students of the total sample, and 57.5% consisted of female students. Their profile shows that they belonged to the age group ranging from 18-to 24 and were undergraduate, comprising 45% of the sample; high school students made up 42.5% of the sample and graduate (10%) and less than high school made up 2.5% of the sample.

T a b l e 1. **Demographics of the sample**

Gender	N	%
Male	85	42.5
Female	115	57.5
Age		
18–24	175	87.5
25–35	25	12.5
Academic Program		
Less than High school	5	2.5
High School or GED	85	42.5
College	90	45.0
Graduate	20	10.0
Total sample size (n) = 200		

Source: Hereinafter in this article all tables was made by the author.

Table 2 shows 10 questions related to their satisfaction with the blended learning course. At the same time, the remaining two questions were different in terms of their options. The respondents had to either state yes, no or don't know the number of blended learning courses they might have done before. The above table shows that the percentages reflect that most of the students were either satisfied or very satisfied with the blended learning course they opted to do. In contrast, a very insignificant percentage reflected dissatisfaction and dissatisfaction with the course.

T a b l e 2. **Key factors for determining student's blended course satisfaction**

Student-Course Satisfaction	S, %	VS, %	SD, %	D, %	N, %	DN, %
1	2	3	4	5	6	7
Q1 Overall, how satisfied or dissatisfied were you with the blended learning course?	80 (40.0%)	50 (25.0%)	15 (7.5%)	15 (7.5%)	25 (12.5%)	15 (7.5%)
Q2 How satisfied or dissatisfied were you with the content of the blended learning course?	95 (47.5%)	60 (30.0%)	20 (10.0%)	10 (5.0%)	08 (4.0%)	07 (3.5%)
Q3 How satisfied or dissatisfied were you with the format of the blended learning course? (Format, Assignments, Testing, etc.)	97 (48.5%)	75 (37.5%)	08 (3.8%)	10 (4.0%)	5 (2.5%)	5 (2.5%)
Q4 How satisfied or dissatisfied were you with the ability to navigate through the blended learning course?	80 (40.0%)	50 (25.0%)	0 (0.0%)	10 (5.0%)	50 (25.0%)	10 (5.0%)
Q5 How satisfied or dissatisfied were you with the online help features of the blended learning course?	75 (37.5%)	25 (12.5%)	0 (0.0%)	35 (17.5%)	55 (27.5%)	10 (5.0%)
Q6 How satisfied or dissatisfied were you with the download time for the blended learning course pages?	88 (44.0%)	20 (10.0%)	15 (7.5%)	12 (6.0%)	55 (27.5%)	10 (5.0%)

End of table 2

1	2	3	4	5	6	7
Q7 The presentation of blended learning course topics was clear.	95 (47.5%)	70 (35.0%)	00 (0.0%)	20 (10.0%)	15 (7.5%)	00 (0.00%)
Q8 The requirements for completion of the blended learning course were clearly outlined.	92 (46.0%)	10 (5.0%)	00 (0.0%)	18 (9.0%)	80 (40.0%)	00 (0.00%)
Description about courses	1	2	3	4	5	
Q9 How many blended learning courses have you participated in, including this one?	20 (10.0%)	30 (15.0%)	25 (12.5%)	45 (22.5%)	80 (40.0%)	
	Yes	No	DN	–	–	–
Q10 Do you plan to participate in another blended learning course the next year?	55 (27.5%)	70 (35.0%)	75 (37.5%)			

Notes: * S – Satisfied, VS – Very Satisfied, SD – Strongly Dissatisfied, D – Dissatisfied, N – Neutral, DN – Don't Know.

Table 3 consists of two questions related to students' online interaction with their instructor and peers. The result shows that 46.2% of the sample were satisfied students, 40% were very satisfied, 7.5% were strongly dissatisfied, 8% were dissatisfied, and 7.5% were neutral in their interaction with the instructor. On the other hand, 43% of the students were satisfied, 30% were very satisfied, 0.00% were strongly dissatisfied, 10% were dissatisfied, 7% were neutral, and 5.66% did not know how they felt about the online interaction with their peers.

Table 4 result states that 47.5% of the students agree, 37.5% of the students strongly agree that the instructor was very much accessible to reply to their queries and concerns of the students, whereas 0.00% and 10% of the students did not agree, and 5% of the students were not sure about it or remained neutral. The result depicts that the instructor's performance in terms of availability was upright.

Table 5 shows that 7.5% of the students used their home computers, 20% of the students used laptops and 60% used smartphones to take online classes of the course they participated in. On the other hand, 30% of the students were satisfied with the internet connectivity, 10% were very satisfied, 37.5% were strongly dissatisfied, 12.5% were dissatisfied, and 25% remained neutral when asked about the internet connectivity. The overall result reflects that internet connectivity remained an issue.

Table 6 shows the relationship between students' satisfaction and blended and distance learning courses. The p-value given in the table below shows that there is a significantly strong relationship between students' satisfaction and blended learning (0.01) compared to distance learning course (0.04).

T a b l e 3. **Online interaction with instructor and peers**

Online Interaction with Instructor and Peers	S, %	VS, %	SD, %	D, %	N, %	Don't know%
Q1 How satisfied or dissatisfied were you with the online interaction you had with the instructor?	89 (40.0%)	65 (32.5%)	15 (7.5%)	16 (8.0%)	15 (7.5%)	0 (0.0%)
Q2 How satisfied or dissatisfied were you with the online interaction you had with other students in this course?	86 (43.0%)	60 (30.0%)	0 (0.0%)	20 (10.0%)	20 (10.0%)	14 (7.0%)

T a b l e 4. **Availability of the instructor**

Availability of the Instructor	SA, %	A, %	SD, %	D, %	N, %
Q1 The course instructor was accessible to answer questions or give feedback.	75 (37.5%)	95 (47.5%)	0 (0.0%)	20 (10.0%)	10 (5.0%)

Notes: SA – Strongly Agree, A – Agree, SD – Strongly Disagree, D – Disagree, N – Neutral.

T a b l e 5. **Internet connectivity**

Internet Connectivity	Home Computer	Laptop	Tablet	Smartphone	Other
Q1 Did you access the course from your home computer, laptop, tablet, smartphone, other?	15 (7.5%)	40 (20.0%)	25 (12.5%)	120 (60.0%)	0 (0.0%)
	S, %	VS, %	SD, %	D, %	N, %
Q2 Overall, how satisfied or dissatisfied were you with your technical issues (internet connection, load speakers, mic, etc.)?	30 (15.0%)	20 (10.0%)	75 (37.5%)	25 (12.5%)	50 (25.0%)

T a b l e 6. **ANOVA test for students' satisfaction and Blended and Distance Learning**

	Df	Sum of Squares	Mean value	F-Value	*P*-Value
Students' Satisfaction in Blended Learning Course	**1**	**1593.43**	**1593.44**	**17.74**	**0.01***
Students' Satisfaction in Distance Learning Course	2	1138.67	569.83	6.39	0.04

Note: * – *P*-Value should be less than 0.05 to be significant.

Discussion and Conclusion

This study aimed to examine the effectiveness of blended learning and distance learning on students' satisfaction. The study examined students' satisfaction with distance and blended learning course. The study shows that students' satisfaction had been greatly acknowledged as a significant factor in recognizing the course's effectiveness, especially the blended learning course. This finding of the study is in line with the findings of Lindsay [11], which states that students are more involved in the process of learning in blended courses as they take up ownership once they have the freedom in the online space, engagement and time with the learning outcomes. All of this leads to the satisfaction of the learning experience, which will help identify if the students will opt for a blended course again or not. However, students' achievement was not linked with their satisfaction, but satisfied students are more motivated and can accomplish their goals.

The respondents were positive in selecting the course and its evaluation, online interaction with the instructor and peers and availability of the instructor. In contrast, the internet connectivity issue remained a concern for them. The student's interaction with the instructor was the strongest variable in predicting students' satisfaction. They were asked about the course they opted for, feedback and interaction with the instructors, and the instructors' timely and prompt response about the respondents' progress and performance. The majority of the students agreed that the instructor motivated them to participate in the online course discussion. The students' remarks about the positive instructor's attitude show that the instructor's performance was upright. This reflects that the instructor's interaction in the distance learning platform surely affects the students' learning and achievements. This is in line with the findings of Abbas [10], which suggest that for the administrator, students' satisfaction is very important as it reflects that their course was functional and very much liked by them. It also shows that the teachers' input was commendable because of their efforts; the students thoroughly enjoyed their learning experience.

Moreover, they were inquired about their learning experiences, the assignment submissions, course formats and availability, the course targets achievement and the evaluation. The study results also showed that the students were satisfied with the selection of the course, the duration, the course material, targets, task, assignments, evaluation criteria, and workload. Hence, this shows that their overall distance and blended learning experience was very fruitful in acquiring knowledge.

The study findings hoped to bring in a positive change towards distance and blended learning programs for the people who think that distance and blended learning cannot be helpful in attaining student satisfaction and help them develop a better understanding and increase their knowledge. Therefore, distance and blended learning can play their role here, as education is everyone's birthright. Incorporating online learning and a classroom

learning environment can prove to be advantageous. But the educators and instructional designers need to offer more flexible options for delivering and providing more control to students by carefully designing distance learning courses to provide learners with meaningful opportunities. The study was about finding how students' satisfaction in blended learning programs is measured. The study results show that there were three magnitudes; distance and blended learning, which are course evaluation, instructor's performance, student interaction with the instructors and their peers, and, of course, students' satisfaction. Teachers will consider the importance of undertaking studies in ICT and online modes to up-skill their teaching abilities. The findings of this study will offer the higher educational institutions the essential insights of ICT integrated teaching, which will facilitate them in strengthening their programs for dealing with the diverse demands of the COVID-19 pandemic. Moreover, this study will make a significant contribution by identifying the difference between different groups and their attitudes towards implementing ICT in learning and teaching.

The findings of this study will be of significant interest to the teaching staff as they will be coordinating with the students and, therefore, will be able to facilitate their behavior and will be able to address the management issues politely to them. Simultaneously, it will further rebound essential information to education authorities regarding the advantages of ICT integrated into blended learning, allowing them to encompass them as pedagogical educational reforms. Particularly, they may have to revitalize their curriculum to encompass ICT knowledge in their text at both primary and secondary levels.

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