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To Study the Impact of Blended Learning on the Academic Performance of Students at Higher Level

Yasha Pervaiz
Department of Education, University of Karachi, Pakistan.
Email: khanyashal423@gmail.com

Naveen Iqbal Khan
Department of Education, University of Karachi, Pakistan.
Email: naveeniqbal345@gmail.com

Dr Aziz un Nisa
Department of Education , University of Karachi, Pakistan.
Email: Msnisa 69@hotmail.com

Abstract
Blended learning is one of the new approach or pedagogy of education then has been adopted by many of the educationist and researchers particularly at higher education level. It is the approach which allow the synchronization of both online and physical learning and enhance the flexibility of learning opportunities. Through in-depth investigation it has been found that out impact of Blended learning on the Academic performance of students. The study was descriptive and Quantitative in nature. The population of this study was Faculty of Education Three departments was target in this study. Education, Special Education and Teachers Education. 60 Students of M.A was participated in this research. Female students participation was more than male students. Simple random sampling technique was used in this research. Data was analyzed through Chi square test and graphical representation of pie chart in SPSS Software. The results show that impact of blended learning on Academic performance of students in positive Therefore it concluded that Blended learning not only positively impact on Students academic performance but also enhance critical thinking skills and developed self confidence

Keywords: Blended learning, Academic performance, Higher Education, Impact

Introduction

Technology for education has undergone a significant transformation in the last ten year In the beginning, there were many different ways that technology was used in education These included the use of computers, the Internet, and eventually the concept of blende d learning, which combines traditional and online learning and relies on technology to d eliver educational content to students in an efficient and high-quality manner. Blended learning, also known as mixed learning or hybrid learning, emerged in the late 1 990s as a new approach to remote learning. It used technology and the internet to enhance students' learning and motivate teachers to modify their teaching strategies. As a result, the focus of learning shifted from being teacher-centered to being more student-centered (Taylor, 1995)

A learning environment that blends many delivery modalities in an effort to give the mos t effective and efficient training possible is referred to as blended learning (Harriman, 20 04). Blended learning is a teaching approach in which students receive online materials from the teacher in addition to inperson instruction.A learning environment that blends many delivery modalities in an effort to give the most effective efficient training possible is referred to as blended learning (Harriman, 2004). Blended l earning, according to the researcher, is a teaching approach in which students receive on

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line materials from the teacher in addition to in-person instruction.
There are many reasons these days to install a blended learning system in all educational institutions, particularly for higher education, given the system's effectiveness in doing so. Education experts appreciate it because it addresses curriculum personalization and flexibility while offering a range of students specialized instruction (Boelens et al., 2018). It also increases student engagement and enjoyment by offering a variety of learning resources (Mestan, 2019). A number of prior studies have identified and investigated the characteristics that influence the effective deployment of the blended learning system at the higher education level.
They encounter numerous hurdles while applying new teaching and technology abilities. Innovative and effective application of the system of blended learning at educational establishments, particularly at the higher educational level, needs teachers to develop new skills as well as adapt their teaching pedagogy. He also examines teachers' ideas and attitudes about technological and pedagogical advances.
Tsankoy and Damyanoy (2017) discovered that educators have emotional views about their practices, which requires a lot of practice to embrace new ways. Lack of learning and development reduces their confidence, and as a result, they resist the implementation of new instructional techniques. Teachers are responsible for the successful or failed adoption of new techniques, as According to Brown (2016), many higher education instructors have enthusiastically adopted blended learning systems and successfully redesigned their courses; however, many professors at universities fail to adopt this innovative approach due to both internal and external factors that motivate such as workload, limited time, and a lack of training. Personal beliefs, etc.

Literature review
Education has seen considerable changes in recent decades as technology has advanced at a rapid pace. Until recently, conventional learning was an extremely common classroom arrangement (Patricia Schaber, 2010). Traditional learning is the learning environment design that means teaching and learning take place in a physical classroom with teachers as well as pupils present (Anne-Mette Nortvig 2018). Line learning originally appeared in the 1990s, according to Patricia Schaber (2010). Compare this to with more traditional learning, online learning refers to the classes that take place entirely online, with no physical classroom present and teachers and students able to engage in the course simultaneously.
Sir Isaac Pitman pioneered primary distance education in the 1840s. However there have been other versions on the principle prior to Pitman's. His course concentrated on shorthand. Pitman provided abbreviated writings to the students via addressed postcards, requiring them to return their work to be evaluated and corrected. While not the same as Blended Learning, this is an early example of the shift in focus, the idea of bringing studying out of the traditional classroom and bringing it to the learner wherever they are (Nicholson, 2019). Modem computer-based training may be traced back to minicomputer and mainframe training in the 1960s and 1970s.It was the first time that education could be delivered to a large number of employees within a corporation without the use of printed materials or in-person instruction. Trainees might simply log into their character-based terminals to obtain the knowledge.
Despite its flaws, the traditional way of teaching adds a much-needed personal touch to the teaching-learning process. Teachers' personalities and behaviors have a direct impact on their students' developing personalities. Only face-to-face interaction can achieve the emotive, cognitive, and psychomotor objectives. The face-to-face traditional approach aids in the development of a strong value system.
Traditional teaching methods facilitate the development of social skills such as cooperation, sharing, expression, and respect for others' points of view (Lalima, 2017). Pupils learn not just from books or teachers in the classroom, but also from their peers. They learn various skills in the playground and through little social encounters in

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canteens, lounges, and so on. All of this is important for optimal personality development. As old and online learning evolved, a third form of teaching emerged by combining old and online learning approaches. Thus, blended learning emerged as a strategy for combining the strengths of many theories, technology, and applications. The evaluation for the two the traditional method of teaching and learning and the online accepted teaching learning process reveals that both have few advantages and disadvantages, and they cater to different needs, demands, and requirements from the system of education, so the best option is to create and design a system of this kind that depends on an integrated strategy, a method incorporating the main features of both the traditional approach to teaching as well as ICT support teaching. The current desire is for a strategy that combines the benefits of both modalities of learning for students, known as blended learning (Lalima, 2017).

The purpose of blended learning should be to combine the best aspects of in-person teaching with the finest aspects of electronic training; to promote active learning and self-directed learning possibilities for pupils (Garnham, 2002). Driscoll (2002) believes that blended learning is the result of mixing four aspects. These components involve integrating different internet-based tools (on a live virtual classes, individual learning, cooperative learning, video, voice and text) to achieve educational goals, gathering various approaches to teaching (behavioral, cognitive) by using educational technologies to achieve the best learning outcome, mixing a teacher-centered in person learning environment with any educational technology (videotape, CD-ROM, web-based learning, movie,etc).Researchers have proposed a number of arguments in favor of employing blended instruction. (osguthorpe, 2003) It was discovered that blended instruction approaches improved teaching methods, improved access to knowledge, stimulated interaction among students, increased the presence of teachers during gaining knowledge, improved efficiency and affordability, and boosted ease of revision.

Blended methods are used at various levels

Blended learning methodologies employed in the method of instruction and learning have been found to have a direct impact on and improve student learning outcomes. Blended learning, which is typically defined as a blend of both traditional and virtual delivery modalities, influences students' impressions of the learning environment, as well as their investigation inspiration, learning outcomes, and overall academic accomplishment. An investigation by (Najeh Rajeh Alsalhi, 2019) investigates the impact of blended learning on ninth-grade students' scientific achievement and attitudes about adopting it. The findings of this study indicate that the use of blended learning has a favorable Impact on student achievement. There is significant proof that blended education can improve student learning results. According to research, blended learning can reduce student attrition and boost exam passing rates (López-Pérez, 2011). Other research, however, emphasize the importance of better understanding how blended delivery influences student learning. (Ginn, 2007) investigated the relationship between students' impressions with the e-learning environment, study methods, and academic success. They discovered that students' impressions varied greatly, resulting in differences in study techniques and grades. Students who had positive emotions of the online learning setting tended to get higher scores, and vice versa. Toole's (2003) study sought to determine whether delivering instructional materials upon an educational institution intranet had a favorable influence on students' achievement of the desired results. Their analysis indicated that providing the contents in electronic format has limited benefits; in fact, it can have a negative impact on pupil achievement due to misguided confidence in the medium through which the instruction is provided. Educational institutions are seeking a balanced hybrid setting that combines modern technology for communication and information (ICT) support with conventional education methods. The use that technology provides is not a conclusion, but rather a means of facilitating learning that must align with the educational objectives in each circumstance (Kirkwood & Price, 2006).This

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blended learning strategy has the potential to improve the effectiveness and performance of student instructors, as there is proof that it is feasible to apply in terms of academic accomplishment or satisfaction among pupils (Alvarez, 2005). However, such information is based on research conducted in various situations and nations, which is likely to differ from the situation in Pakistan.

Research Objectives

1. To examine the impact of blended learning on student's academic performance.
2. To explore the impact of blended learning on student's motivation and self-directed Learning.
3. To find out the effectiveness of blended learning in enhancing student engagement.
4. To explore student's perception and attitudes towards blended learning.

Research questions

1- How does blended learning influence students' academic performance compared to traditional learning methods?
2- What is the relationship between students' motivation and their academic performance in a blended learning environment?
3- How effective is blended learning in increasing student engagement during academic activities?
4- What are students' perceptions and attitudes towards the use of technology and online resources in a blended learning environment?

Research Hypothesis

1- There is a relationship between students' self-directed learning abilities in a blended Learning environment and their academic performance.
2- There is a relationship between the accessibility of online resources in blended learning and students' academic performance.
3- There is a relationship between students' motivation in blended learning and their Academic performance.
4- There is a relationship between the integration of technology in blended learning and Students' academic performance.

Research Methodology

The study is descriptive in nature and quantitative, non-experimental survey design was used to carry out the research. The students of faculty of education were the population for the research. Simple random sampling was used for data collection. A self-administered questionnaire has been used as a research instrument. The data was collected through form and personal contact and data has been analyzed through Chi Square.

Population

Population of the study was contain the Masters male and female students enrolled in the department of education, department of special education and department of teacher education in university of Karachi.

Sample size

Simple random sampling technique has been used. The sample size of this study comprised of 60 Masters students from the three departments of faculty of education.

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Those students were selected who willingly agreed to participate.

Data Collection Tool
The study used a self-administered close ended questionnaire comprised of 20 items as its instrument to collect the data.

Data analysis
The study was analyzed the results using the SPSS software Chi Square. In the current study research predict 4 hypothesis and according to this make questionnaire divided into 4 parts and each hypothesis have 5 questions each.

Hypothesis no 1:
H_0: There is no relationship between students' self-directed learning abilities in a blended Learning environment and their academic performance.
H_A: : There is relationship between students' self-directed learning abilities in a blended Learning environment and their academic performance.

S.NO	ITEM	CHI SQUARE VALUE	P VALUE
1	Blended learning enables me to get more involved in the learning process	51.33^a	0.00
2	Blended learning creates a good learning environment	68.833^a	0.00
3	Blended learning improves the communication and the interaction between students and teachers	47.833^a	0.00
4	Blended learning gives me more opportunity to actively participate in the class discussion	32.167^a	0.00
5	Blended learning enables me to do my assignments and presentation and properly	35.333^a	0.00

According to the above table no 1 shows the (p value 0.00 is less than level of significance 0.05) so according to rule if p value is less than level of significance null hypothesis is reject. In hypothesis no 1 null hypothesis is rejected and alternative hypothesis is accepted its means There is relationship between students' self-directed learning abilities in a blended Learning environment and their academic performance

ITEM NO 1

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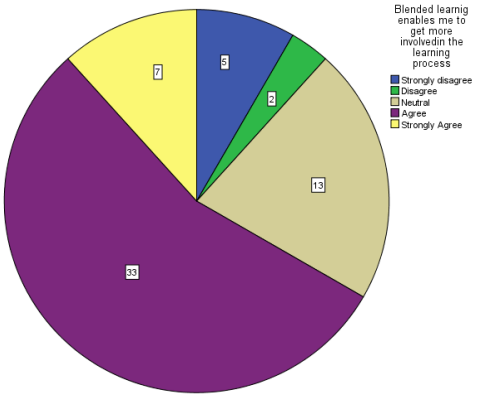
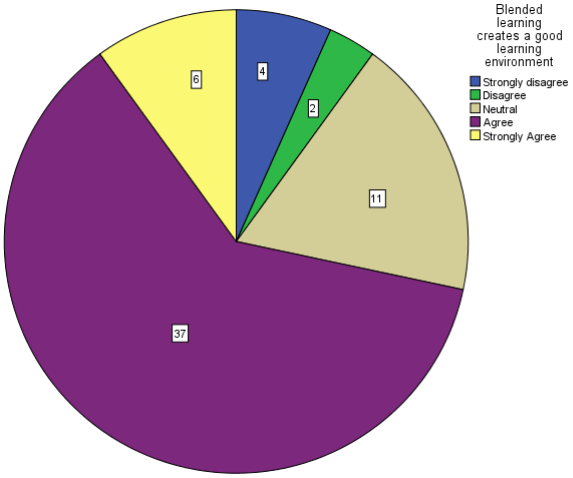
In item no 1 pie chart also show the results of hypothesis 4% participant strongly disagree, 2% participant was disagree, 11% neutral, 37% agree and 6% strongly agree it means Blended learning creates a good environment.

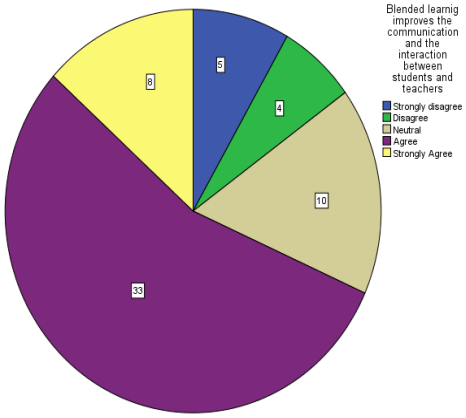


ITEM NO 2

In item no 2 Pie chart also show the results of hypothesis no 1; 5% participant strongly



disagree, 2% participant was disagree, 13% neutral, 33% agree and 7% strongly agree it means Blended learning enables to get more involved in learning process.



ITEM NO 3

In item no 3 Pie chart also show the results of hypothesis no 1; 5% participant strongly

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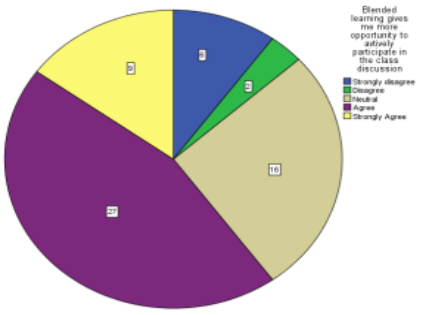
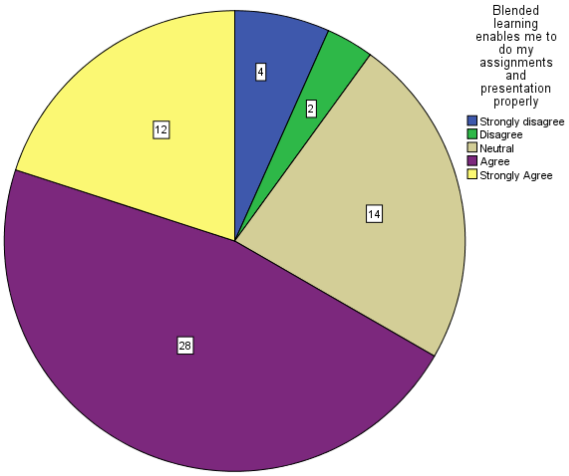
disagree, 4% participant was disagree, 10% neutral, 33% agree and 8% strongly agree it means Blended learning improves the communication and the interaction between students and teachers.



ITEM NO 4

In item no 4 Pie chart also show the results of hypothesis no 1; 6% participant strongly disagree, 2% participant was disagree, 16% neutral, 27% agree and 9% strongly agree it means Blended learning gives more opportunity to actively participate in the class discussion.



ITEM NO 5

In item no 5 Pie chart also show the results of hypothesis no 1; 4% participant strongly disagree, 2% participant was disagree, 14% neutral, 28% agree and 12% strongly agree it means Blended learning enables to do assignments and presentations properly.

Hypothesis no 2:

H_0: There is no relationship between the accessibility of online resources in blended learning and students' academic performance.
H_A: There is a relationship between the accessibility of online resources in blended learning and students' academic performance.

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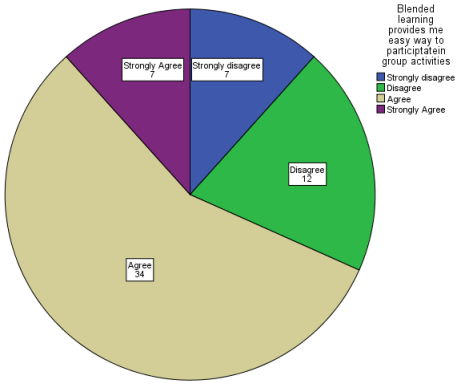
TABLE NO 2

S.NO	ITEM	CHI SQUARE VALUE	P VALUE
1	Blended learning provides me easy way to participate in group activities	33.200[a]	0.00
2	It is easy for me to work together with other students involved in blended learning class	48.167[a]	0.00
3	I get equal chance to ask my teacher what I don't understand	49.000[a]	0.00
4	My critical thinking and problem solving skills increased more as compare to traditional learning	23.667[a]	0.00
5	A collaborative and cooperative learning is done through blended approach	41.667[a]	0.00

According to the above table no 2 shows the (p value 0.00 is less than level of significance 0.05) so according to rule if p value is less than level of significance null hypothesis is reject. In hypothesis no 2 null hypothesis is rejected and alternative hypothesis is accepted its means there is relationship between the accessibility of online resources in blended learning and students' academic performance.

FIGURE 2



ITEM NO 1

In item no 1 Pie chart also show the results of hypothesis no 2; 7 participant strongly disagree, 12participant was disagree, 0 neutral, 34 agree and 7 strongly agree it means Blended learning provides easy way to participate in group activities

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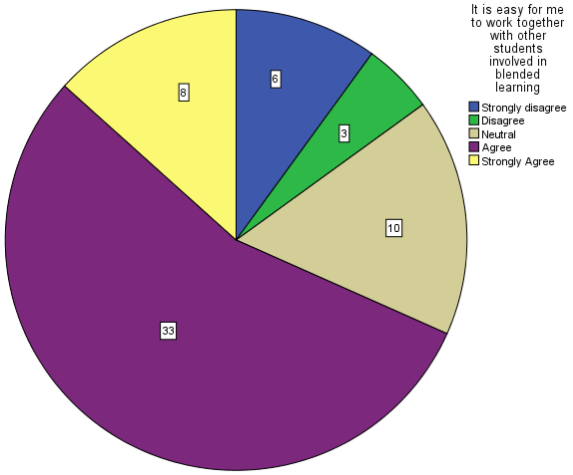
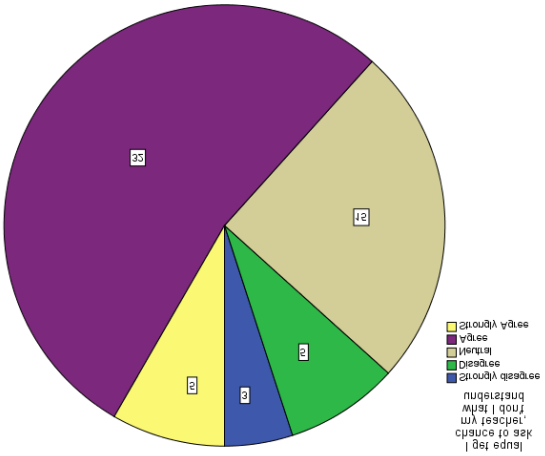


TEM NO 2

In item no 2 Pie chart also show the results of hypothesis no 2; 6 participant strongly disagree, 3participant was disagree, 10 neutral, 33agree and 8 strongly agree it means It is easy for to work together with other students involved in blended learning class



ITEM NO 3

In item no 3 Pie chart also show the results of hypothesis no 2; 3 participant strongly disagree, 5 participant was disagree, 15 neutral, 32 agree and 5 strongly agree it means get equal chance to ask teacher what I don't understand

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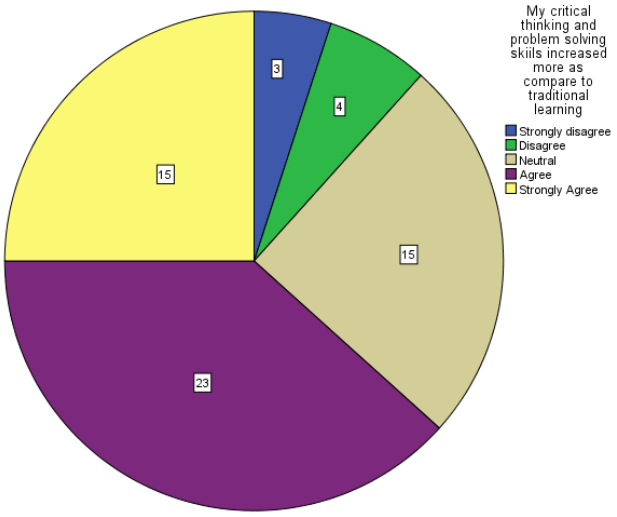
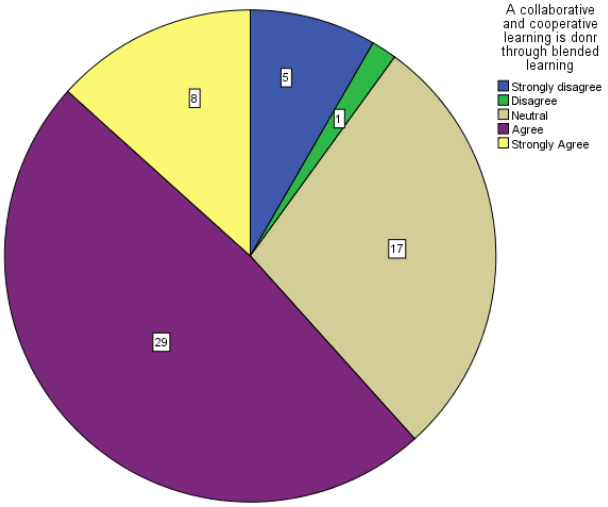


ITEM NO 4

In item no 4 Pie chart also show the results of hypothesis no 2; 3 participant strongly disagree, 4 participant was disagree, 15 neutral, 23 agree and 15 strongly agree it means critical thinking and problem solving skills increased more as compare to traditional learning.



ITEM NO 5

In item no 5 Pie chart also show the results of hypothesis no 2; 5 participant strongly disagree, 1 participant was disagree, 17 neutral, 29 agree and 8 strongly agree it means a collaborative and cooperative learning is done through blended approach.

HYPOTHESIS NO 3:

H_0: There is no relationship between students' motivation in blended learning and their Academic performance.

H_A: There is a relationship between students' motivation in blended learning and their Academic performance.

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Table no 3

S.NO	ITEM	CHI SQUARE VALUE	P VALUE
1	Blended approach motivates me to focus on my learning	43.167^a	0.00
2	I find it more interesting to learn through blended learning	57.167^a	0.00
3	The use of blended learning encourages me to learn independently	66.167^a	0.00
4	Blended learning increases my self-confidence	53.500^a	0.00
5	Blended learning improves my positive attitude towards learning	31.833^a	0.00

According to the above table no 3 shows the (p value 0.00 is less than level of significance 0.05) so according to rule if p value is less than level of significance null hypothesis is reject. In hypothesis no 3 null hypothesis is rejected and alternative hypothesis is accepted it means there is relationship between students' motivation in blended learning and their Academic performance.

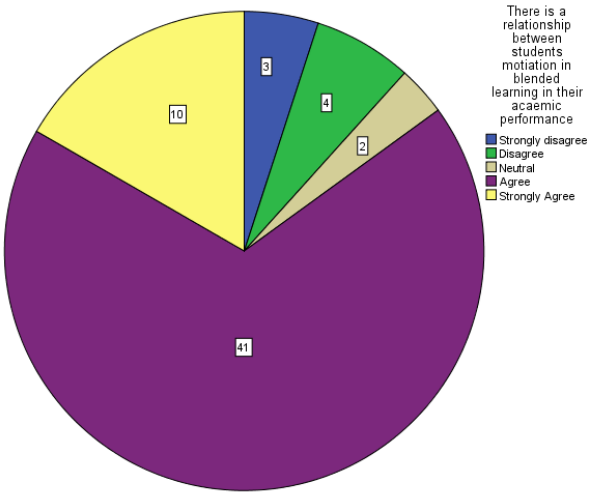

FIGURE 3

In figure 3 pie chart shows the results of hypothesis 3 there is a relationship between students' motivation in blended learning and their Academic performance 41 respondents were agree and 10 was strongly agree it conclude that there is strong relationship between motivation and academic performance of students.

Hypothesis no 4:
H_0: There is no relationship between the integration of technology in blended learning and Students' academic performance.
H_A: There is a relationship between the integration of technology in blended learning and Students' academic performance.

TABLE NO 4

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According to the above table no 4 shows the (p value 0.00 is less than level of significance

S.NO	ITEM	CHI SQUARE VALUE	P VALUE
1	I found the blended learning environment enjoyable	43.167[a]	0.00
2	My attention level increase in blended learning environment	57.167[a]	0.00
3	I feel more satisfied when I study through blended learning	66.167[a]	0.00
4	A persistence behavior for learning is developed through blended learning	53.500[a]	0.00
5	Using of digital tools in blended learning enhance my self-learning skills	31.833[a]	0.00

0.05) so according to rule if p value is less than level of significance null hypothesis is reject. In hypothesis no 4 null hypothesis is rejected and alternative hypothesis is accepted its means there is relationship between the integration of technology in blended learning and Students' academic performance.

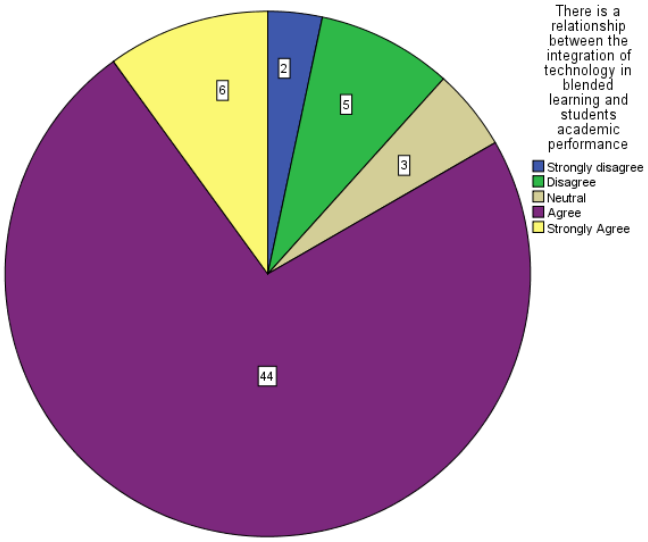

FIGURE NO 4

In figure 4 pie chart shows the results of hypothesis 3 there is a relationship between the integration of technology in blended learning and Students' academic performance.44 respondents were agree and 6 was strongly agree it conclude that there is strong relationship between Integration of technology in blended learning and students' academic performance.

Discussion

Blended learning offers means to enhance in-person experiences in light of the expanding use of IT in education (Vaughan, 2010). Furthermore, blended learning offers students an engaging environment with flexibility in how they use resources. to enable educators to spend more time working one-on-one or in small groups with students (Watson, 2008). Additionally, according to Davis and Fill (2007), blended learning has the power to change students' experiences and results. The efficacy of e-learning in conjunction with traditional learning was examined by Hamed et al. (2008) in their study.

They came to the conclusion that the most adaptable e-learning strategy is a mixed learning approach. An additional benefit of a blended learning setting is that it offers more materials available to students. According to Hennessy et al. (2010), the usage of technology in the

In a physical classroom, students have access to more materials and are more confidence

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and skill, and is believed to raise the standard of education. Olapiriyakul and Scher (2006) list further advantages of integrated learning, like as create a thorough understanding of a subject by having students actively participate in class and apply online resources. Moreover, online learning engagement can promote collaborative activities outside of the classroom and offers an interactive framework for communication between professors and students inside the classroom (Hung & Yuen, 2010). The primary advantages of implementing blended learning have been outlined in the discussion above. to improve learning outcomes and raise learner satisfaction by addressing the drawbacks of online learning and utilizing different instructional techniques and delivery platforms.

Teaching and learning are continuous processes that are always changing. It has advanced from a time when it was totally reliant on instructors and classrooms to a largely online setting. The advent of computers and other technologies has greatly increased the dynamic nature of education and instruction. According to the study results, blended learning is superior to traditional e-learning and has several advantages for students, including building a sense of belonging and community. Blended learning, which delivers course content both in-person and online, has been demonstrated to be more effective than traditional face-to-face education alone.

Recommendation

- Create curriculum that effectively combine online and in-person instruction, making sure that one approach boosts learning and works in tandem with the other.
- Establish unambiguous learning goals for both virtual and in-person components to help both educators and pupils understand what is expected of them.
- Train educators on how to create and present blended learning activities in an efficient manner. The utilization of technology, instructional design, and pupil participation strategies should all be covered in this training.
- Provide instructors with continuous technical and pedagogical support to assist them in adjusting to blended learning environments and resolving any challenges.
- Launch student orientation activities to acquaint them with blended learning resources and methodologies. As a result, concern over novel teaching techniques is decreased and clear expectations are formed.
- Make certain that students have access to tools and services, such technical help desks and online tutoring, to aid with the blended learning components.
- Make an investment in dependable and sturdy technological platforms that facilitate both synchronous and asynchronous educational endeavors. Make sure that all students can easily access and operate these platforms.
- Maintaining and updating the IT infrastructure in a regular basis will help to reduce technical problems and disruptions.
- Assess student performance using a range of techniques in blended educational settings. Online tests, project-based evaluations, and conventional exams can all be examples of this.
- Promote active learning approaches that make use of the advantages of both online and in-person components, among them interactive simulations and problem-solving exercises.
- Utilize assessment findings to inform data-driven modifications to the blended learning framework, guaranteeing that it adapts to instructors' and students' demands.
- Give students freedom in scheduling online tasks so they can manage their studies alongside other obligations.
- Make that students are adept in using the tools and technologies needed for blended learning by incorporating digital literacy training into the curriculum.
- Keep in mind the concerns surrounding digital equity and strive to offer assistance and tools to pupils who might not have had much access to technology.

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Conclusion

The students of M.A from the education, special education and teacher education department were the primary respondents of the research. Female student's participation in the research was slightly more than the male students. Researcher has tested four hypothesis and all four hypotheses are accepted. Researcher used chi-square test for examine the relationship between dependent and dependent variables. The researcher found that blended learning impact on students' academic performance or students learning in the teaching learning process maximized when they are actively involved in their learning process. The above-mentioned findings showed that, there is a positive effect of blended learning in creating a good learning environment and made students academic performance better. A thorough investigation revealed that, in comparison to traditional learning, blended education improves between pupils and educators communication and interaction as well as students' critical thinking and problem-solving abilities. Because they were using a variety of digital tools, blended learning made the classroom more engaging for the pupils.

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