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Attitude of University Students Towards Blended Learning in Southern Punjab

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ABSTRACT

The research paper examines the perception of the students in the university of Southern Punjab on blended learning which is pedagogical method that combines face to face teaching with digital learning platforms. As technology-enhanced learning steadily gains traction, especially due to the COVID-19 pandemic and unofficial disasters such as earthquakes and floods, the perception of blended learning in students has become essential to Pakistani higher education (Adnan and Anwar, 2020; Graham, 2019). The descriptive quantitative research design was used, where a stratified random sample of the university students of various disciplines was used. The structured questionnaire was used to gather data on the attitudes of students on the dimensions like accessibility, flexibility, interactivity, technological preparedness, and the effectiveness as perceived. The SPSS v.25 was the statistical program used. The findings showed that the students had a positive attitude towards blended learning, with their favorite feature being flexibility and accessibility (Rasheed et al., 2020). Nevertheless, difficulties in the form of technological barriers, the absence of training, and the unstable internet connectivity were identified (Ali, 2021).

Keywords: *blended learning, higher education, student attitudes, Southern Punjab, technology integration.*

INTRODUCTION

Background of the Study

The 21st century has seen the transformation of teaching and learning practices characterized by the adoption of technology in education. Although face to face learning can be effective in establishing one-on-one contact between the teacher and the student, the method can be very inflexible in the fast paced world. One of the innovative approaches that have been developed in pedagogy and extends the advantages of each of the two approaches is blended learning, which is a type of instruction that integrates classroom-based learning with online learning elements (Garrison and Vaughan, 2013; Graham, 2019). Blended learning has been known worldwide to improve student interaction, facilitate self-regulated learning, and permit increased access to resources (Means et al., 2014).

The application of the concept of blended learning became popular in Pakistan, especially in Southern Punjab, when the institutions were compelled to implement digital platforms to ensure education continuity during the COVID-19 pandemic. Although students and faculty might have come across blended learning previously, most universities were exposed to e-learning systems, either the first, or first time (Adnan and Anwar, 2020). The change identified opportunities and challenges. The advantages of the online accessibility of material were coupled with poor digital literacy, inadequate infrastructure, and connection problems (Ali, 2021; Farooq et al., 2022). Since institutions of higher learning shift to the formalization of

blended learning in their teaching systems, the issue of student attitudes will be paramount in making it successful in the long run.

Statement of the Problem

In spite of the fact that the concept of blended learning is popularly addressed in the framework of developed nations (Bernard et al., 2014; Graham, 2019), it is not evenly spread in Pakistan. Southern Punjab where most students have semi-urban and rural backgrounds, access differences to digital technologies affect their learning experiences. On the one hand, other students emphasize the freedom provided by blended learning, and on the other hand, they are frustrated by poor internet connection, the absence of appropriate instructions, and personal contact with teachers (Rasheed et al., 2020).

The main issue that the present study tries to answer is that there is no empirical data on students who have attended blended learning in Southern Punjab. In the absence of such evidence, policymakers, educators, and administrators will find it hard to design and implement blended learning model, which are responsive to the needs and expectations of students.

Objectives of the Study

The primary goals of the study are:

1 To determine the attitude of university students towards blended learning in Southern Punjab.

2 To investigate the disparity in attitudes due to demographics like gender, academic discipline and locality.

3 To determine the problems that students experience in adopting blended learning.

4 To offer suggestions to make in enhancing blended learning in institutions of higher learning.

Significance of the Study

It is important to various stakeholders in the higher education system in Pakistan since it gives them an avenue to raise their voice and issues, and their concerns are taken into consideration in the curriculum and policy changes. This research will inform educators to embrace the pedagogical methodology which incorporates both online and face-to-face teaching. The results will aid in crafting curriculums that utilize blended learning to the fullest potential in motivating students (Means et al., 2014). The study can be implemented in policy frameworks to enhance equity, access, and quality in blended learning in the region because it draws evidence-based recommendations grounded in localized experiences of students in Southern Punjab (Ali, 2021).

Delimitations of the Study

This study was limited to the university students within Southern Punjab. Though the results offer some invaluable information, they might not apply to other regions of Pakistan because of the disparity in infrastructure, institutional policies, and demographics of students. Also, the research was mainly on the attitude towards blended learning and not the actual outcomes of academic performance.

LITERATURE REVIEW

Hybrid learning, also known as blended learning, has become one of the most important pedagogical novelties in the field of higher education during the last 20 years. Broadly, blended learning is a combination of traditional face-to-face classroom-based approaches combined with online learning experiences to form

a unified approach to instruction that uses the best practices of both methodologies. The influx of the interest in the blended learning all over the world has been predetermined by various factors, such as the development of information and communication technologies, the need to have the flexibility in the process of learning, and the understanding that students learn most effectively when the learning process is diversified and interactive (Garrison and Vaughan, 2013; Graham, 2019).

Research conducted all over the world has pointed to the fact that blended learning does not only increase access to education but it also leads to improved academic performance and consumer satisfaction. In a meta-analysis by Bernard et al. (2014), learners in blended learning programs also tended to perform better as compared to those in the face-to-face or fully online classes. Equally, Means et al. (2014) in a review of the literature of the U.S. Department of Education affirmed that blended instruction is in most cases more effective as it offers the chance of self-paced learning without losing the advantage of in-person communication. Such results have motivated higher institutions of learning across the globe to implement blended learning models as a long term plan of achieving curricula modernization and enhanced student engagement.

Blended learning has received interest in the South Asian context because it can provide more access to higher education, particularly among the students in rural or underserved regions. In a number of studies, it has been shown that when well constructed, the blended learning can enable students to gain more responsibility about their learning, enhance their self-regulation, and develop their ability to think critically (Rasheed, Kamsin, and Abdullah, 2020). These advantages however rely heavily on the preparedness of the students, the institutional support and the infrastructural provisions. The success of the blended learning is uneven in such countries as Pakistan, where inequalities in accessing technologies are significant and where it is necessary to consider the context using a first-mover advantage.

Blended and online education across the globe became a paradigm shift due to the COVID-19 pandemic. Blended learning has been transformed into a mandatory tool of teaching when the institutions were compelled to close campuses, thus becoming not an innovation but a need (Adnan and Anwar, 2020). This was the initial massive experience of online teaching and learning to many institutions in Pakistan. Some of the issues faced by students across the country, including those in Southern Punjab, were the issues of the absence of internet connections, the lack of electricity, the scarcity of devices, and a lack of digital literacy. According to Adnan and Anwar (2020), Pakistani students who admitted that online elements were significant during the pandemic were not satisfied with the quality of their teaching, and many admitted their unpreparedness to study using technologies. This shows that the attitude to blended learning is not only determined by the pedagogical conditions but also by socioeconomic and infrastructural conditions.

The evidence of other countries also highlights that the attitude of the students is a key factor in determining the effectiveness of the blended learning. When students understand that blended learning is flexible, available, and adept to their learning requirements, they will be attentive and succeed more (Lim and Wang, 2016). On the other hand, negative attitudes by students occur due to technical problems, poor course design, and decrease in teacher interaction that makes them disengaged (Bliuc et al., 2011). In this respect the student opinion is critical in formulating institutional policies. Blended learning is not a blanket model and it should be tailored to the setting and the students that it applies.

Pakistani studies of blended learning have been growing, especially in line with the pandemic-induced digital shift. In their survey of Punjab university students, Farooq et al. (2022) discovered that most students appreciated the convenience of blended learning, however, they did not appreciate untrustworthy internet

connectivity and the unpreparedness of the teacher. Ali (2021) also discovered that digital disparities in Pakistan increase the frustration of students, particularly in rural regions whereby blended learning opportunities are compromised due to technological disparities. These results indicate that blended learning has potential but to be effective in Pakistan, it is necessary to provide not only the technological infrastructure but also the training of teachers as well as the redesign of the curriculum and support systems to students.

The blended learning theoretical bases also underline the use of social constructivism where learning is regarded as a dynamic process that is facilitated by the process of interaction and reflection. The community of inquiry model developed by Garrison and Vaughan (2013) emphasizes such dimensions of effective blended learning as cognitive presence, social presence, and teaching presence. The balance of these presences determines the attitude of the students in this framework. In case of the low teaching presence, a student might feel unassisted; in case of the absence of social presence, a student might feel isolated. The mentioned insights are especially applicable to the Pakistani context, where the expectations of the cultural interaction between a teacher and a student are still quite high, and the communication via the Internet may be perceived as inadequate in many situations.

One of the trends in international and Pakistani literature is the interaction of blended learning and self regulation. In blended environments, students with high metacognitive and self-regulatory abilities have better chances to succeed since they will be able to control their time, pay attention to their progress, and ask other students to assist them (Broadbent, 2017). On the other hand, the students who do not possess such skills will have problems with the autonomy of the blended learning. With the move to blended learning in Pakistan where educational practices are traditionally teacher-centered, the new requirements of the students to engage in new learning behaviors, which may not be natural, are anticipated. The shift highlights the value of scaffold and institutional assistance in order to ensure that students acquire the required competencies.

The other element of the literature is the role of attitudes in influencing the adoption of technology. Technology Acceptance Model (TAM), is a model put forward by Davis (1989), which proposes that the most important predictors of the willingness of students to learn using new technologies are their perceptions about usefulness and ease of use. When it comes to blended learning, students who feel that online elements are useful and convenient to use have higher chances to develop positive attitudes. Some Pakistani studies prove the applicability of TAM. As an illustration, the study conducted by Khan et al. (2021) revealed that the perceptions of usefulness had a great impact on the acceptability of learning management systems among Pakistani students. This is consistent with the present study, which aims at gauging the attitude of students as a sign of the success of blended learning.

While the literature highlights many benefits of blended learning, it also points to consistent challenges. Internationally, these challenges include lack of faculty readiness, poor instructional design, and insufficient institutional investment (Porter et al., 2016). In Pakistan, these issues are compounded by infrastructural limitations. For students in Southern Punjab, where electricity load-shedding and weak internet infrastructure are common, the feasibility of blended learning is often questioned. Ali (2021) argued that unless systemic issues are addressed, students' frustrations may overshadow their potential to benefit from blended instruction. Thus, understanding students' lived experiences and attitudes becomes crucial for bridging the gap between theoretical potential and practical implementation.

In spite of such challenges, blended learning is being seen as a future of higher education in Pakistan. The increasing awareness of the role played by technology in transforming education is evidenced by the government programs like the push to be digital by the Higher Education Commission. However, these initiatives will eventually be successful upon the feedback of students who will be ready to accept them. According to Farooq et al. (2022), blended learning depends on the alignment between the expectations of students, the practice of a teacher, and the institution to be sustainable. The best systems are likely to fail in case of poor student attitudes.

Overall, the literature indicates that although blended learning has multiple opportunities to improve the learning outcomes of students, the outcome greatly depends on the student attitudes, infrastructural preparedness, and support by the institution. It has been shown that in Pakistan, students are both optimistic and worried about blended learning, as they see both the potential of the learning method and the challenges that hinder its successful implementation. The above empirical research gap in the Southern Punjab indicates the significance of the current study, which aims to generate localized evidence that would be used to inform educational policy and practices.

METHODOLOGY

This research involved quantitative descriptive research design in order to investigate the attitude of the university students towards blended learning in Southern Punjab. Such a design was suitable, as the research was aimed at obtaining quantifiable data regarding perceptions of students on various dimensions to conduct statistical analysis and define trends, patterns, and associations (Creswell & Creswell, 2018). The study was more concerned with the experiences and views of the students and not with controlling the variables hence the descriptive survey design was especially suitable.

Population and Sample

This study was based on all the students of the university in the Southern Punjab in the public sector institutions. The stratified random sampling method was selected because a large number of students in the region has to be represented through gender, academic disciplines, and locality. The demographic diversity of the population had to be taken care of through stratification to ensure that the attitude of students towards blended learning was not affected by the demographical differences (Fraenkel and Wallen, 2009). Krejcie and Morgan (1970) sample size table was used to determine the sample size.

A sample population of 393 students was chosen out of the entire population. The gender, academic program, and locality distribution of the respondents is displayed below.

Table 1
Demographic Distribution of Respondents (N = 393)

Variable	Category	Frequency	Percentage
Gender	Male	210	53.4%
	Female	183	46.6%
Program	Social Sciences	178	45.3%

Variable	Category	Frequency	Percentage
	Natural Sciences	135	34.4%
	Management Sciences	80	20.3%
Locality	Urban	225	57.3%
	Rural	168	42.7%

The demographic information is that male and female students were relatively equal in the sample as well as all large disciplines were represented correctly. In the same way, both urban and rural students were represented to be able to generalise the findings in the Southern Punjab area

Instrumentation

A structured questionnaire that was specifically developed to determine the attitudes of students towards blended learning was used to collect the data. The tool comprised 50 questions that were placed in a number of dimensions:

- Accessibility and flexibility
- Interactivity and collaboration
- Technological readiness
- Perceived effectiveness
- Overall attitude toward blended learning

The items were formulated out of the existing literature on blended learning (Garrison and Vaughan, 2013; Rasheed et al., 2020) and customized to the Pakistani university setting. The respondents were asked to give a five-point Likert scale of agreement with 1 (strongly disagree) to 5 (strongly agree).

Reliability and Validity

To achieve the reliability of the instrument, a pilot study was run on 50 students of non-main sample universities. Internal consistency was calculated with the help of Cronbach. The findings indicated that the values of all subscales were above the acceptable threshold of 0.70 and thus the reliability was confirmed (Nunnally and Bernstein, 1994). Expert review was used to determine the content validity, whereby three faculty members in education departments assessed the questionnaire in terms of clarity, relevance and comprehensiveness. The values are high in terms of the internal consistency in all of the dimensions and show that the instrument was dependable in measuring the attitudes of students towards blended learning.

Table 2
Reliability Statistics of the Questionnaire

Dimension	Number of Items	Cronbach's Alpha
Accessibility & Flexibility	12	.83
Interactivity & Collaboration	10	.81
Technological Readiness	10	.79
Perceived Effectiveness	10	.85
Overall Attitude	8	.87
Total Scale	**50**	**.89**

The values indicate strong internal consistency across all dimensions, demonstrating that the instrument was reliable for measuring students' attitudes toward blended learning.

Data Collection Procédure

The sample population was subjected to the questionnaire after receiving the required permissions with the university administrations and in a way that ethical standards were met. It was done voluntarily and signed informed consent was made by all respondents. Anonymity and confidentiality were guaranteed to students to help them be honest. The data was collected within the four-week span and both online and paper-based questionnaires were administered to allow the students to select a method of accessing the questionnaire that suits their convenience.

DATA ANALYSIS

The data collected were coded and put into SPSS v.25 to be statistically analyzed. The answers of the students were summarized using descriptive statistics, such as frequencies, percentages, means and standard deviations. Inferential statistical tests were used to analyze the differences in attitude according to demographic factors, namely: gender, academic discipline and locality by applying t-tests and ANOVA. Also, the correlation was calculated to test the relationships between various dimensions of the blended learning attitudes.

This methodology framework was a good basis in answering the research objectives and made it possible to ensure that results were based on credible and valid information.

Data Analysis

This section aims at providing the findings of the statistical tests that are to be done to investigate the attitude of the university students towards blended learning in Southern Punjab. The descriptive statistics were initially used to provide a summary of the attitudes of the students on various dimensions of blended learning, and then the inferential tests (t-tests and ANOVAs) were performed to analyze the differences in attitudes based on the demographic variables. Correlation analyses were also performed in order to examine the relationship between dimensions measured.

Attitudes of students Descriptive statistics.

Table 3 shows the description statistics of the responses of students on the major dimensions of blended learning.

Table 3
Descriptive Statistics of Students' Attitudes Toward Blended Learning (N = 393)

Dimension	M	SD
Accessibility & Flexibility	3.87	0.74
Interactivity & Collaboration	3.62	0.79
Technological Readiness	3.55	0.82
Perceived Effectiveness	3.76	0.77
Overall Attitude	3.84	0.71

The descriptive results indicate that students generally held positive attitudes toward blended learning, as the mean values across all dimensions were above the midpoint (3.00) of the five-point Likert scale. The highest mean was observed for Accessibility and Flexibility (M = 3.87, SD = 0.74), suggesting that students particularly valued the freedom to access learning materials at their own pace and convenience. Technological Readiness (M = 3.55, SD = 0.82) received the lowest mean score, highlighting challenges in terms of digital infrastructure and student preparedness.

Gender-Based Differences in Attitudes

To investigate whether male and female students differed significantly in their attitudes toward blended learning, an independent samples t-test was conducted.

Table 4
Independent Samples t-Test for Gender Differences in Attitudes Toward Blended Learning

Dimension	Gender	M	SD	t	p
Accessibility & Flexibility	Male	3.92	0.72	1.58	.115
	Female	3.81	0.75		
Interactivity & Collaboration	Male	3.67	0.78	1.22	.222
	Female	3.56	0.81		
Technological Readiness	Male	3.61	0.80	2.10	.036*

Dimension	Gender	M	SD	t	p
	Female	3.47	0.84		
Perceived Effectiveness	Male	3.79	0.76	0.94	.348
	Female	3.72	0.78		
Overall Attitude	Male	3.87	0.70	1.08	.281
	Female	3.80	0.73		

- $p < .05$

The t-test results reveal that male and female students did not differ significantly in most dimensions, except for Technological Readiness ($t = 2.10$, $p < .05$), where male students ($M = 3.61$) reported significantly higher readiness compared to female students ($M = 3.47$). This finding suggests that gender disparities in digital literacy and technology use persist, which may influence students' experiences of blended learning.

Differences by Academic Discipline

To examine whether attitudes varied across students from social sciences, natural sciences, and management sciences, a one-way ANOVA was conducted.

Table 5
ANOVA Results for Differences by Academic Discipline

Dimension	Source	SS	Df	MS	F	p
Accessibility & Flexibility	Between Groups	3.82	2	1.91	3.46	.033*
	Within Groups	214.73	390	0.55		
Interactivity & Collaboration	Between Groups	2.67	2	1.34	2.15	.118
Technological Readiness	Between Groups	5.23	2	2.62	3.89	.021*
Perceived Effectiveness	Between Groups	1.86	2	0.93	1.56	.212
Overall Attitude	Between Groups	2.94	2	1.47	2.91	.056

- $p < .05$

The ANOVA results indicate significant differences across disciplines in Accessibility and Flexibility ($F = 3.46$, $p < .05$) and Technological Readiness ($F = 3.89$, $p < .05$). Post-hoc tests (not shown here) revealed that students in management sciences reported higher scores in accessibility and readiness compared to students in social sciences. This finding may be attributed to the greater emphasis on technology in management programs.

Differences by Locality

An independent samples t-test was conducted to determine whether locality (urban vs. rural) influenced students' attitudes.

Table 6
Independent Samples t-Test for Locality Differences in Attitudes

Dimension	Locality	M	SD	t	p
Accessibility & Flexibility	Urban	3.92	0.70	2.32	.021*
	Rural	3.79	0.78		
Interactivity & Collaboration	Urban	3.65	0.76	1.18	.239
	Rural	3.58	0.82		
Technological Readiness	Urban	3.62	0.79	2.54	.011*
	Rural	3.46	0.85		
Perceived Effectiveness	Urban	3.78	0.76	1.14	.254
	Rural	3.73	0.78		
Overall Attitude	Urban	3.87	0.69	1.73	.085
	Rural	3.79	0.73		

- $p < .05$

The results demonstrate significant differences between urban and rural students in Accessibility and Flexibility ($t = 2.32$, $p < .05$) and Technological Readiness ($t = 2.54$, $p < .05$), with urban students reporting higher scores. This reflects the persistent digital divide in Pakistan, where rural areas often lack adequate internet infrastructure, thereby affecting students' blended learning experiences.

Correlation Among Dimensions

To further explore the relationships between different dimensions of blended learning, Pearson correlation coefficients were calculated.

Table 7
Correlation Matrix of Blended Learning Dimensions

Dimension	1	2	3	4	5
1. Accessibility & Flexibility	1				
2. Interactivity & Collaboration	.48**	1			
3. Technological Readiness	.52**	.44**	1		
4. Perceived Effectiveness	.55**	.50**	.46**	1	
5. Overall Attitude	.62**	.58**	.54**	.66**	1

Note. $p < .01$.

The correlation matrix shows strong positive correlations among all dimensions of blended learning. The highest correlation was between Perceived Effectiveness and Overall Attitude ($r = .66$, $p < .01$), indicating that students' overall attitudes are strongly shaped by whether they perceive blended learning as effective. Similarly, Accessibility and Technological Readiness were moderately correlated, suggesting that ease of access is closely linked to students' comfort with technology.

FINDINGS AND DISCUSSION

The present study sought to examine university students' attitudes toward blended learning in Southern Punjab by addressing four major objectives: (a) to explore overall student attitudes, (b) to examine demographic differences in attitudes, (c) to identify challenges, and (d) to propose recommendations for practice. The findings are discussed below in relation to these objectives and situated within the broader literature.

The descriptive results demonstrated that students generally held positive attitudes toward blended learning, as evidenced by mean scores above 3.50 on a five-point Likert scale across all dimensions. Students rated Accessibility and Flexibility ($M = 3.87$, $SD = 0.74$) most positively, indicating strong appreciation for the opportunity to learn at their own pace and convenience. This is in line with the results of other studies in the world, where it is shown that flexibility is the most appreciated advantage of blended learning by students (Means et al., 2014; Graham, 2019). Similar studies conducted in Pakistan mention that flexibility will enable students, particularly those with rural or low income backgrounds, to juggle between school and personal life (Farooq et al., 2022). Nevertheless, Technological Readiness ($M = 3.55$, $SD = 0.82$) had the lowest mean score, indicating digital literacy and infrastructure issues. It is in line with the findings by Adnan and Anwar (2020), who found out that a high number of Pakistani students have little to no skills and resources to effectively use digital learning.

Gender differences showed that there was no significant difference between male and female students in most aspects of the blended learning with the exception of Technological Readiness where male students indicated higher scores. This implies that gender disparities of digital literacy and the use of technology are still relevant in Pakistani society, as Ali (2021) states that in many cases, female students have less access to personal gadgets and the internet. Gendered disparities in the use of technologies have been also reported in international literature albeit at a slowly decreasing rate in most of the situations (Lim & Wang, 2016). The fact that this disparity still exists in Southern Punjab indicates the need to implement specific measures

that would allow putting female students on equal footing in terms of access to resources and training opportunities.

Academic-disciplinary differences indicated that the students of management sciences had much higher attitudes regarding Accessibility and Flexibility and Technological Readiness than the students of social sciences. This result can be explained by the fact that management sciences are more oriented towards the curricula, as case studies, presentation, and digital media are more likely to enhance the integration of technology in learning (Porter et al., 2016). Social sciences students, on the contrary, are accustomed to the old system of lectures and their exposure can be minimal to blended methods. This pedagogical distinction highlights the role of customizing the blended learning models depending on the pedagogical requirements of individual disciplines, as opposed to implementing a similar model across the board.

Locality-based analysis also indicated that there are a lot of differences between urban and rural students and especially in Accessibility and Flexibility and Technological Readiness, the urban students were reporting their attitudes as more positive. This result shows that the digital divide in Pakistan remains active, with rural students still struggling with infrastructural factors, including poor internet, a lack of electricity, and poor access to devices (Farooq et al., 2022). Although blended learning can democratize higher education access, it cannot be successful in rural environments unless digital infrastructure is systemically invested in. Similar trends have been noted in developing regions that are internationalized, with students in the rural areas finding it difficult to connect in disproportions (Bliuc et al., 2011). Locality-based attitude difference thus contributes to the inequalities in structure that should be considered in order to implement blended learning fairly.

The correlation analysis also gave more insight in the interrelationship between dimensions of blended learning. There is also a strong positive relationship between Perceived Effectiveness and Overall Attitude ($r = .66$, $p = .01$) which means that how students tend to believe blended learning is really impacting their academic performance has a strong effect on their overall attitudes. This is in line with the Technology Acceptance Model (Davis, 1989), which holds that, perceived usefulness is one of the determinants of technology adoption. In the same vein, the high levels of correlation between the Accessibility, Interactivity and Technological Readiness are indicative of the fact that they act in an interdependent way; the higher the student feels in terms of his/her technological competences and the lower the likelihood of such student valuing the accessibility of a blended learning, the higher the opportunities of interactive interactions being incorporated into the learning process.

The results support the national and domestic trends when compared with the past studies. Indicatively, the importance attached by the high value students to the aspect of accessibility echoes the view of Graham (2019) that flexibility is the pillar of blended learning. Meanwhile, the technological obstacles that were mentioned by students in Southern Punjab find reflection in Adnan and Anwar (2020) report about the displeasure of Pakistani students with online education in the COVID-19 crisis. The importance of the perceived effectiveness also echoes Rasheed et al. (2020) who stipulated that the attitude of students is conditional on the belief that blended learning can help to achieve the actual learning results.

The findings can be summarized to demonstrate a complex picture. On the one hand, students in Southern Punjab are aware of the potential of the blended learning in order to become flexible, interactive, and academic. Structural barriers on the other hand, which include poor infrastructure, lack of technology preparedness, and gender inequality will limit the full benefits of blended learning. The study thus

highlights the need to deal with the issue of pedagogy as well as system that will foster a sustainable positive attitude towards blended learning.

CONCLUSION

The working paper examined perceptions of students of universities in Southern Punjab, Pakistan towards blended learning. Findings of this study indicated that the learners have a tendency of positively perceiving blended learning in which they view it as advantageous in accessibility, flexibility and the opportunity to interact. However, the aspect of technological readiness was also doubted, and disparities were discovered according to gender, academic major, and destination of residence. The male students reported that they were more technologically prepared and as compared to the female students, students of management sciences reported to have more positive attitude as compared to social sciences and students of urban areas reported to be more positive as compared to students of rural areas. Correlation analysis also reported that the perceived effectiveness was the greatest predictor of overall attitudes, which is why it can be accepted that the acceptance of blended learning among students is grounded on the assumption that it enhances academic achievement.

It can thus be concluded that blended learning can revolutionize higher education in Pakistan, but it can only be successful when the infrastructural, pedagogical and equity related problems are sorted out. It will also not reduce the disparities but only expand them in blended learning without investments in digital infrastructure, training of teachers and supporting systems to students.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS.

The work is rather informative and restricted in several aspects. Firstly, the research was isolated in the Southern Punjab universities that are of government, and this restricts the extrapolation of the findings to the other parts of the Pakistan, and also other privately owned institutions. Second, the research design applied was cross-sectional that would just capture the attitudes of the students at a given time. Future research could apply longitudinal approaches to examine the shifts in the attitudes as problem learners keep receiving blended learning. Third, the study used the self-administered questionnaire results, which may be influenced by the social desirability bias. To further this understanding, a bit of qualitative research such as the interviews or focus group would be right to obtain the richness of the experience of the students.

The role of teacher practices, curriculum design and institutional policies in influencing student attitudes should also be examined in future studies. Also, comparative studies in the rural and urban areas and between the privately and publicly run universities would give a better overview of blended learning in Pakistan.

RECOMMENDATIONS

In the light of this research, a number of suggestions are provided to support the efficacy of blended learning in Southern Punjab and other parts as well. Universities and administrators are encouraged to invest in a stable internet infrastructure and make sure that they have avenues to access digital devices or subsidize them to reduce the obstacles between them, specifically students, especially in rural communities. On the institutional level, centres of blended learning support can be instituted to provide both technical and systematic training to both the students and the faculty and thus make technology-integrated education implementation easier. As the first-line facilitators, teachers must be able to inculcate the interactive aspect of their pedagogy like peer work, discussion groups, and frequent formative assessment to encourage student engagement. They must also offer scaffolding to the limited digital learners and develop their

competence and confidence in using blended platforms gradually. At the larger basis, the policymakers and the Higher Education Commission have to assume a fundamental role by creating national standards of the implementation of blended learning with the focus on quality, accessibility, and equity. Besides that teacher training programs need to be compulsory, it is important to emphasize blended pedagogy, the application of digital tools, student-centered learning, and inclusive practices. Students themselves must also play a significant role in ensuring that blended learning is successful. This would require them to maintain self-directed learning through scheduling their learning, tracking their progress, and taking initiative to obtain feedback by instructors. They can also be empowered to take part in digital literacy workshops and peer mentoring programs to enhance their preparedness in technological aspects so that they can take advantage of what blended learning presents to them to the fullest extent.

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