

Supplementary Student Support Services for a Blended Learning Environment; A PANT Model

Fouzia Sultana¹, Shabana Ali², Zainab Furrukh³

¹ Deputy Director Department of Medical Education Shaheed Zulfiqar Ali Bhutto Medical University G 8/3 Islamabad.

² Professor Dr. Shabana Ali HOD Anatomy, Assistant Dean Riphah International University Al- Mizan Campus

Rawalpindi ³ Dr. Zainab Furrukh FCPS-Part I Trainee Shifa International Hospital

Author's Contribution

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Address of Correspondent

Dr Fouzia Sultana

Deputy Director Department of Medical Education Shaheed Zulfiqar Ali Bhutto Medical University G 8/3 Islamabad

ABSTRACT

Objective: To explore the expectations of the medical students regarding the support services in the blended learning environment.

Methodology: the qualitative exploratory study was conducted at four institutes where blended learning was adopted during the covid-19 Pandemic. The participants were selected through convenience sampling while both male and female students from second-year MBBS to final year MBBS were included. Five Focus Group discussions were conducted with ten students in each group. The discussion was recorded and written by a note-taker. The recorded data was transcribed. Thematic data analysis was done manually.

Results: Themes were encapsulated under four main categories based on commonalities across the observations. In Psychological support, the themes were personalized support for teachers and learners, social support, supportive strategies, e-mentoring, and professional therapy. For academic Support the themes identified were the identification and division of course for both face and online, more student centered online session, on campus skill labs role of teachers in teaching and learning, modified assessment methods, the company of peers for motivation, and the role of parents and family. In Non-academic Support, the themes were online recreational activities, online gaming gadgets, and support for differently-abled students. In Technological Support the themes identified were online interface for teaching, use of social media group for sharing, training of senior teachers and students in information technology, and accessible digital e-resources.

Conclusion: Students need additional support while learning in a blended program which is reflected by their demands to include support in four main categories. The study highlighted the role of peers for online discussions sessions along with family support for a personalized space to study. E-resources must be provided while proper technological assistance is mandatory for smooth learning journey. Furthermore, need for psychological support was also emphasized.

Key Words: Student support services, Blended learning

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Introduction

Support is fundamental to human existence in today's world. The medical education system is designed to equip future doctors with knowledge, skill and attitude. Medical students coming from different socio-cultural background face academic, personal and financial challenges creating a stressful situation(Student support system for medical undergraduates)that was further inflamed by adding

blended learning system during pandemic. there has been a paradigm shift in medical education after COVID-19 pandemic, as education is now imparted by blending face-to-face and online methods. An all-encompassing and efficient student support system is required to reduce the probability of getting frustrated and demoralized (Medical school attrition-beyond the statistics a ten year retrospective study. BMC) Krishnan defines student support services (SSS) as a set of facilities and activities to

make learning processes easier and more interesting for learners.¹

The growing sense of isolation due to reduced social interaction, limited clinical experience, technological problems, and the inherent inefficacy of blended learning has put tremendous stress on medical students. In wake of the Covid-19 pandemic, establishing a blended learning program was challenging as it entails forethought, flexibility, and availability of both human, physical as well as technological resources. Provision of good digital technology, effective learning strategy and accessible digital resources are three prerequisites for an effective e-learning support system.⁵ Maintaining an efficient learning environment is one of the basic challenges of blended learning. Inclusion of technology into instruction adds unease to students, teachers and educational institutions as self-regulation skills and technological competence becomes more important for students while it demands techno friendly teachers and institutions need to provide more opportunities for training and support to both teachers and students. (Challenges in the online component of blended learning: A systematic review). Isolation, inequality in technology access, internet issues, lack of motivation, poor communication skills, anxiety are big challenges for students in blended learning. While making early detection of issues more feasible, SSS provides a mean to help students from different backgrounds. Tait's framework reinforces supporting the student's whole academic journey (Folake Ruth Aluko).

Literature has mentioned a gap between the conception of student support system in a blended learning and expectations of medical students.⁸

In Pakistan, blended learning was adopted during pandemic while SSS was in place, but students went through this experience facing many problems. Exploring their experience with an aim to highlight the deficiencies felt will create an understanding of possible modifications in SSS for blended learning in future. The objective of the study was to explore the experience of medical students learning in blended learning program to highlight their expectations from the student support services.

Methodology

A Qualitative Exploratory (Grounded Theory) study was conducted at five medical colleges of private sector in Pakistan. Duration of the study was 06 months i.e., January 2022 - June 2022

fifty students included in the study, were divided into five homogenous groups to ensure the collection of shared information. Non- probability convenience sampling technique was used to select the students from 2nd – 5th - year MBBS. First-year students were not included in the study as they had no experience with blended learning. One group was selected from each college having two students from each year. There were no deviant cases. The approval was taken from the university's Institutional Review Board (IRB)

Focus groups discussion

The aim of the focus group discussion was to explore the subjective insight, judgment and expectations of students regarding an effective student support system in a blended learning program. As focus group discussion is appropriate for exploring participant's views and notions therefore, ten students were selected from first medical college for first focus group after taking consent. Five focus group discussions were conducted till saturation point of data was achieved.

About 16 open ended research questions based on three domains of COI were validated and scrutinized by three medical educationists who reduced questions to 06 after deletion and correction. The open- ended questions removed the participant bias while researchers bias was controlled by ensuring the awareness and negation of all pre-existing assumptions. A discussion guide was prepared for the moderator to carry on smoothly with questions during discussion.

Questions
1. What possible role can teachers and parents play in your learning?
2. In your opinion, How do peers help in your academic journey?
3. What facilitation is required for better performance in exams?
4. In your opinion, what role administration can play to provide technological aid for this system of learning?
5. How do well being of students be assured in the blended learning environment?
6. What motivated you putting continuous effort in blended mode ?

The community of inquiry (COI) model (figure1) outlines the educational experience that takes place at the nexus of social, cognitive, and teaching presence to explain how learning occurs for a group of individual learners. Garrison contends that the effective coordination of these presences is what enables online academic staff and students to work together to create a fruitful online learning environment where knowledge is created.⁹

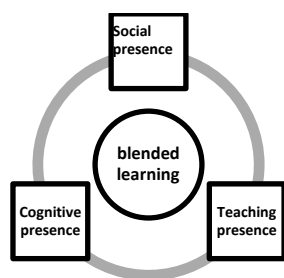


Figure 1. Theoretical Framework for Student Support Services in Blended Learning

Five FGDs of 1 and half hour each were conducted in different colleges at a comfortable venue. The discussions were moderated by author (FS) and assisted by two notetaker who recorded the discussion on a mobile phone. The interview was conducted in English, but 8 students were not well conversant in the English language they replied in Urdu and the data was translated during verbatims transcription. All participants were given numbers to avoid any confusion during data analysis.

Before discussion, a brief explanation of the study's goals and objectives were informed, and ground rules were set. A total of 6 questions were asked and some probing questions were added.

During FGDs, the students from different medical colleges shared their notion as per the facilities and resources provided by their institutions. This led to the modification of some questions in the next round till the saturation point of data. During the discussion, the researcher (FS) used a probe whenever there was difficulty in getting answer. Saturation was found during fifth session.

After every session, the audios were transcribed verbatim while ensuring the inclusion of the order of speakers (by participant number). The transcribed data was read carefully for familiarization and modification of questions if required for next focus group, data was sent back to participants for their confirmation

A constant comparison of transcribed data was done inductively in which two cycles of coding were used to create understanding of participants expectation of student support service. During first coding cycle, sorting of data was done to reduce the data while during second cycle, broader categories were formed with the help of codes. Final assignment of particular codes to a theme was decided by author FS and two associate researcher SA and ZF.

Themes were characterized under four domains: academic

support, technological support, non-academic support, and psychological support. (Table I)

Results

After data analysis four main categories, Psychological, Academic, non, academic, technological support (PANT model) and nine themes were generated while some themes also had subthemes.

Category I. Psychological

Self-directed learning for peer-assisted learning. The shift in the educational context is critical to determine if students' basic psychological needs are being met and satisfied more effectively.

Theme 1: Teachers as counselors for motivation

The students indicated additional responsibilities of teachers in a blended system. their need for having counselor. One student said, *“Senior teachers who have good communication skills can play a role by providing counseling.”* It also elaborated possible use of counselling in increasing their motivation.

Theme 2: E-mentoring

In some of medical colleges mentoring programs are started but are not streamlined so some hiccups come in their implementation, in the blended format, it has yet not seen the light. Although students meet their facilitators but still indicated the incorporation of e- mentoring which highlights their increasing demand of mentors, such as a participant said, *“E-mentoring programs should be fully implemented in the blended system of education.”*

Theme 3: Safeguarding mental health

Subtheme a. Need-Based checkup

The abrupt change of teaching medium created anxiety in students which later on reflected in motivation dip, as one student indicated *“we could feel demotivation to attend these online sessions”* while another participants said, *“it is important to have a regular check-up by a psychologist to rule out any mental health*

Subtheme b. Activities for mental health awareness

Another participant said, *“Role plays, videos, and discussion, webinars should be arranged to highlight the importance of mental health.”*

Category II: Academic

Theme 1. Role of teachers in teaching and learning

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Psychological support			
Codes	Statements	Subthemes	Themes(11)
Stress, Anxiety, Depression, Teacher Motivation, Awareness drives, Speakers	<i>A participant said, "Senior teachers who have good communication skills can play a role by providing counseling."</i>		Teachers as counselors for motivation
Mentors, cybermentoring, tele mentoring	<i>Another participant said, "E-mentoring programs should be fully implemented in the blended system of education."</i>		E-mentoring
Health examination, problems, checkups	<i>One of the participants said, "it is important to have a regular check-up by a psychologist to rule out any mental health"</i>	Need-Based checkup	Supportive Strategies
Help, guidance, interaction, videos, webinars, emotional	<i>Another participant said, "Role plays, videos, and discussion, webinars should be arranged to highlight the importance of mental health."</i>	Activities for mental health awareness	
Academic Support			
Codes	Statements	Subthemes	Themes
Interactive session, Collaboration, small group, demonstrations, teachers, participation	<i>One participant said, "With such a large number of students attending one class, it is very difficult to get each and everyone involved."</i>	Small group discussions	Role of teachers in teaching and learning
Regular Intervals, Breaks, Time out, free time, relax, rest	<i>A participant said " continuous classes create boredom, we need breaks"</i>	Frequent breaks	
Guidance, Instruction, Direction, videos, animations, E-Library, digital resources, E-learning, e-books	<i>A participant said " guidance is important for us especially during online session, they should share e books, web links for preparation"</i>	Accessible digital resource	
Companionship, Competitiveness, Book sharing ,Inspiration, Incentives	<i>One participant said, "Peers can read the mind and understand you properly so online interactions with peers should be promoted more."</i>		Online self-directed learning for peer-assisted learning
Personalized Support, Conducive environment, Understanding attitude	<i>One participant said " I live in small house and online sessions are burden for my family"</i>		Provision of proper physical space
<ul style="list-style-type: none"> Extra-curricular activities Personal development Healthy activities Competition Role-plays 	<i>One participant said. "Only few teachers use modern tools for learning ,...hm.. these are good"</i>		Online gamification for teaching activities

Subtheme a: Small group discussions

One participant said, "With such a large number of students attending one class, it is very difficult to get each, and everyone involved."

Subtheme b: Frequent breaks

A participant said "continuous classes create boredom, we need breaks"

Subtheme c: Accessible digital resource

A participant said "guidance is important for us especially during online session, they should share e books, web links for preparation"

Theme 2: Isolation, absence of physical presence of colleagues, and indifferent attitudes of administration resulted in different psychological problems for students. One participant said, "Peers can read the mind and understand you properly so online interactions with peers should be promoted more."

Theme 3: Provision of proper physical space

One participant said " I live in small house and online sessions are burden for my family".

Another participant said " I need separate space to focus during lectures"

Theme 4: Online gamification for teaching activities

One participant said. "Only few teachers use modern tools for learning, hm. these are good"

Category III: Nonacademic

Students' expectations add new dimensions to the non-academic support. Students expect a lot of modern activities during the online sessions which reflects their needs.

Theme 1: Support for differently abled students

Participant 10 said, "I think teachers should arrange extra classes for differently-abled students."

Category IV: Technological

Most of the colleges did not have a Learning Management System installed so they resorted to Zoom, Microsoft teams, Google classroom, etc. Students expect a lot more to be done in this area.

Theme 1: Online interface for teaching: In a blended learning environment, a learning management system, or LMS, is frequently the key technology component. *One Participant said, "Sometimes our class is on Zoom, sometimes google classroom. I wish our medical college has an LMS system installed permanently".*

Theme2: Training of senior teachers and students in technology: technological support plays a very important part in the blended learning environment. Training managers can simplify and streamline tasks by deploying LMS in blended learning. *Another Participant said, "I expect that there should be training sessions for the students before the online sessions are planned".*

Theme 3: Social media platforms

One of the participants said, "Access to the e-library and e- books should be made available to every student." Another participant," we had what's app groups for sharing reading materials before exam"

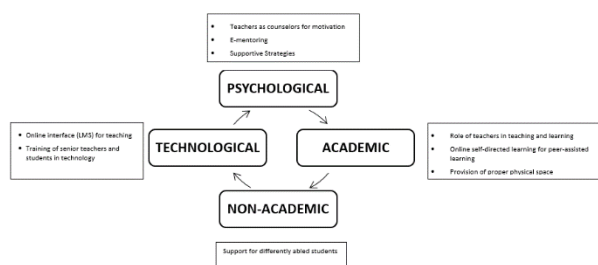


Figure 2. A PANT model formed by four categories of student support services

Non-academic support			
Special needs, learning disabilities, language barriers	Participant 10 said, “I think teachers should arrange extra classes for differently-abled students.”	Support for differently-abled students	
Technological Support			
Codes	Quotations	Subthemes	Themes
LMS, Technical staff presence in class, Separate IT staff	One Participant said, “Sometimes our class is on Zoom, sometimes google classroom. I wish our medical college has an LMS system installed permanently”.	Well-established LMS	Online interface for teaching
Trained IT staff, aggressive training of students	Another Participant said, “I expect that there should be training sessions for the students before the online sessions are planned”.		Training of senior teachers and students in technology
	One of the participants said, “Access to the e-library and e- books should be made available to every student.” Another participant,” we had what’s app groups for sharing reading materials before exam”	Social media platforms	

Discussion

The study was conducted to explore the possible modifications required in student support services to augment the present practices with a view to support student learning in a blended learning program. The four main categories are Psychological, Academic Support, Non-Academic and Technical support.

The study Student Support System in Virtual Learning Environment for Medical Education: McKenna Content Analysis Method focused its research on student support in virtual learning environments. The study's results showed that this kind of learning can foster favorable learning environments for the students with greater learning initiative in self-learning and academic achievements but unfortunately, the student support system is not being paid enough attention by even seasoned virtual educational institutions. The limited research that has been done in this area has only addressed the timing of student assistance system activation. No study has demonstrated that does support meets students' needs.

The second study Student support system for medical Undergraduates: A qualitative exploration of stakeholder perspectives by Mourougessine Vimal concentrated on situational analysis to pinpoint and categorize learners' issues and create a model for a system of student support. The study highlighted different personal, interpersonal, and family problems faced by students and focused on the progress of a student support model for medical students that was for the F2F education. The study involved parents, teachers, administration, and students. But it paid no attention to the blended system of learning. A missing link identified through the studies is that although the

system of student support is there but the expectation of the students about the support systems is seldom explored.

Now that the students have experienced the blended learning environment and the support system for a couple of years, they are better positioned to comment on the efficacy of the modified support system. The discussion with students revealed a considerable gap between their expectations and support system. It appears that online classes were monotonous and least interactive with an obvious effect on students learning. Online learning is inherently dull as compared to face-to-face learning and especially so in a country like ours where online learning as has been limited hitherto fore. Broadly speaking Student Support System has three constituents with distinct functions namely cognitive, affective and administrative.¹⁰

In students' opinion to make it more interactive, the students should be divided into small groups. The student's suggestion is very logical and merits consideration in devising any support system. It will also give students the opportunity to develop better peer relationships which are so important for medical students. The students showed serious reservations regarding skill practice during online sessions. Acquisition of skills gives real confidence in any profession. Online practicals cannot substitute face-to-face. It is therefore essential that even in a blended environment practical's should be conducted in traditional F2F mode.¹¹ Since frequent hospital rounds could not be conducted, the students expected virtual hospital rounds to be arranged to meet this deficiency to the extent possible (Zakaria, 2021)¹² Virtual rounds supported by advanced technology can be very useful for better learning outcomes.

Technological support has been deficient in blended learning environments for two reasons. Firstly, in F2F not much reliance was placed on technological support and therefore this support did not evolve and mature to cope with the needs of blended learning environment. Secondly, purchase of software/hardware and training of a technical staff in short time posed a major problem. Technical Support services can be sub-categorized in the two type of technical support required and additional technical support in blended learning.¹³ Another aspect deserving serious consideration is making E-Books and E-Libraries accessible to students.¹⁴ Accessibility to any support system is of utmost importance. It is generally observed that inaccessibility to any system significantly marginalizes its utility. Higher education institutions are observing an increased push toward the transition from traditional in-person education to online and distance

education due to the development of the Internet and the emergence of the capability for online communications.⁸

During discussion with students, the students emphasized the need for psychological well-being and role of colleges in providing psychological support in blended learning situations. Isolation, absence of physical presence of colleagues, and indifferent attitudes of administration resulted in different psychological problems for students. This environment created a feeling of loneliness, isolation which lead to anxiety and depression.¹⁵

Medical Students normally study in groups. It has two advantages. First, they get encouragement from each other and second they measure their progress in relation to their colleagues. Due to limited peer/friend interaction, denied both advantages which caused additional psychological stress. Students expected medical colleges to organize vast campaigns like seminars, discussion, and symposiums for mental health awareness. Student expected that in addition to creating awareness need based check-ups of the medical students by professional psychologist should be regularly planned by the medical college administration. They feel that regardless of the pandemic, taking care of and continuously monitoring the mental health of medical students should be a priority.¹⁶ Medical Colleges must assign mentors to students so that they speak their hearts out and can get guidance/counseling from their respective mentors.¹⁷ Effective learning is mostly fuelled by mentoring, coaching, consultation, counseling, in-depth discussion, and advice.

Comparison with Tait's model of virtual learning clearly shows that the Non-Academic portion is missing in this model.¹⁸ The students expected extracurricular activities to be included in blended learning. In a traditional method of learning non-academic support is as essential as other academic support if not more. It includes the extra-curricular activities planned by the institution for students. It creates a conducive environment for the physical and mental growth and satisfaction of the student. During the F-2-F session, the college administration arranges a lot of competitions and extracurricular activities for students' enjoyment and well-being to break their monotonous life. The student expects the same during the online session as the requirement of extra-curricular activities during online sessions rise three-fold.¹⁹ Students expect non-academic staff to arrange online tournaments for students like quizzes, and online games, and to hold inter-college debate competitions. In F2F learning faculty can conveniently identify strugglers and arrange extra classes and mentoring for them. In online mode it is very difficult for faculty to

identify such students, the online method is comparatively less efficient, and weak students get weaker as the course progresses.²⁰ The students were of the view that a sound system should be devised for the identification of differently-abled students and extra coaching classes should be organized for them.²¹ If blended learning is to continue these components will have to be included in the model to make it more wholesome.²²

Student support systems were essentially designed to meet the pre-Covid-19 environment. All systems designed by humans are efficacious for a set of environments and continuously evolve with changing environments.² There is a definite need for realigning the existing Support System to make it more responsive. It can only be done if we dispassionately and systematically examine the existing Support Systems in their entirety, and identify shortcomings in the relevant environment and expectations of medical students.³ Educational institutions need to lay correct emphasis to improve the utility of the student support systems in enhancing the experience of “being at university”. It needs to be designed to help students from diverse backgrounds to maximize their potential, intellectual personality, and academic development.⁴

Limitations of the Study

- The study was carried out in a public sector University with four affiliated Medical colleges in Islamabad. Due to a shortage of resources and time, the other medical Universities of Islamabad could not be involved.
- Teachers and administrators who play a very pivotal role in providing the students support services, especially during the blended environment were not involved in the study due to time and resource constraints

Conclusion

Students need additional support while learning in a blended program which is reflected by their demands to include support in four main categories. The study highlighted the role of peers for online discussions sessions along with family support for a personalized space to study. E-resources must be provided while proper technological assistance is mandatory for smooth learning journey. Furthermore, need for psychological support was also emphasized.

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