

ORIGINAL ARTICLE

Factors Influencing the Student's Learning and Motivation in a Blended Learning Approach Used in MHPE Program: A Qualitative Analysis

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ABSTRACT

Objective: To explore the factors that influence the postgraduate students' learning and motivation in a blended learning approach used in MHPE program.

Study Design: It was a Qualitative, Phenomenology study.

Place and Duration of Study: This study was conducted at three different institutions of Pakistan who are running their Masters in Health Professions Education Program (MHPE) and duration was from March 2017 to August, 2017.

Study Population: Sampling technique was purposive homogenous sampling, and the interviews were taken from 10 postgraduate (MHPE) students from three institutions of Pakistan.

Materials and Methods: Qualitative data was collected through one on one semi structured interviews. Interview questionnaire was formulated after going through extensive literature research and expert validation. All interviews were audio recorded, transcribed, coded, analyzed manually as well as by importing it into NVivo software version 11 and thematic analysis was done.

Results: Thematic analysis revealed many factors which influenced students' learning in a meaningful way. These factor were clustered into six major areas which are; 'Active learning environment', 'Role of course design and educational psychology', 'Role of teachers', 'Role of assessments', 'Learners satisfaction and motivation for learning' and 'learning hampering factors' on the basis of similarities with each other.

Conclusion: Students hold a positive perception of Blended Learning Approach being offered in the MHPE program. New learning skills were acquired by the students and motivation was maintained throughout the course. Students were also able to transfer these learning skills to their undergraduate students. Research findings suggests that a Blended learning approach course design can be successfully used in postgraduate education. This study provides guidance for faculty members, educators and curriculum planners to effectively plan their modules while incorporating a Blended learning approach in medical education.

Key Words: *Blended Learning Approach, Postgraduate Programs, Student Learning and Motivation.*

Introduction

In recent years, medical education has undergone an exceptional change with more focus on interactive

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and student-centered learning. As students became more computer literate, and the demand for technology-based learning at a time convenient to the learner increased, it led to technological modernization and the use of e-learning tools which has become a key component of medical education.¹

While these virtual learning opportunities have enhanced the prospects, they have also posed challenges to education. Key limitations included limited interactions with peer and teachers, communication problems, and insufficient sense of bonding between the teacher and student. This has led to the adoption of "blended learning (BL)", by combining the strengths of computer-mediated instruction and face-to-face class, blended-learning environments can produce improved student outcomes and facilitate acquisition of competencies

that may not otherwise be achieved. This approach increases student engagement, enhance critical-thinking development, and improve learning outcomes.² Blended learning approach supports learners' needs for cognitive and social presence and rely on a strong teaching presence by instructor.³ The main idea behind this approach is that the design should be focused on learner directed activities.⁴

Faculty make use of “blended” virtual and physical resources to welcome different learning styles and speed of cognitive learning. Learning material can be presented in a variety of formats, each reinforcing another and can utilize subject experts for delivery of each unit. This variety in delivery methods, ranging from experiential to instructional and structured to unstructured, can revitalize subjects that have lost their appeal or are emerging in our country, like Health Professions Education.⁵ This nontraditional format allows professionals especially from out of state, to pursue their degrees while keeping full time jobs. Blended learning is effective in the field of medical education as it can fill the gap between theory and practice so encourage the learner to solve problems and exchange experiences.⁶

However, attention should be paid to the andragogy used, and not just the technology because the expectations of students and the methods they use to benefit from can differ.^{5,7}

This study gives an idea of the extent to which students are developing in a professionally meaningful way, how their learning journey in this blended environment was, and how they acquired self-directed, and lifelong learning skills.

Materials and Methods

The qualitative phenomenology study was conducted in three universities of Pakistan from March 2017 to August 2017. It comprises of 10 Masters' students from Health Professions Education Program who were selected after purposive homogenous sampling. They underwent one to one interviews for which semi structured, open ended questionnaire was used, which was formulated after going through literature search. Primary areas of interest related to our research question were identified and questions were formulated around those areas to explore them into more details, to find out the answer to our research question. This questionnaire was sent to 5 different

subject specialists in medical education for validation to improve the validity and credibility.

A pilot interview was conducted with one of the student, using validated questionnaire comprising of 9 open ended questions before actual interviews, to improve the quality and sequence of questions. This interview lasted for 20-25 mins.

The research question and the tool were aligned. Data was transcribed and deductive coding was done^{8,9} followed by thematic analysis^{10,11} of the data and common categories were identified. They were grouped into six major areas based upon similarities which highlighted the factors that influenced students' learning and motivation in a Blended Learning Approach Master's Program, and answered our research question.

Triangulation was done by taking Field notes, Member checking, and Inter interviewee comparisons.

Ethical Considerations

Informed consent was obtained from all participants. They were informed about the voluntary nature of participation. The participants were assured of anonymity, confidentiality and security of information. They were also assured of information about the results of the study if so desired by anyone. No reward or payment was assured to any of the participants.

Table I: Interview Questions

Student expectations and satisfaction with the course

Why have you joined this course, what were your expectations with this course?

Educational psychology and principles of adult learning

How do you find this course design relevant to your need as a learner? If no why?

Students' Learning

How this program (f2f or online) enhanced your learning and in what way?

PROBE: What type of learning is promoted and how? Deep, superficial, strategic

Student Motivation

How the blended learning approach in this course influenced your motivation to learn the subject matter?

Influence of Educational Environment on Students Motivation to Learn

How educational environment created in this course

influenced your motivation to learn?
 PROBE: Is the environment conducive to your learning?
 Does it promote collaborative learning? Does this promote peer to peer learning?
 Which type of learning does this educational environment promotes? (deep, superficial, strategic)
Role of Teachers
 How teachers played their roles in students learning?
 PROBE: What is the student teacher relationship in this blended learning environment?
Role of Assessments
 How assessment methods used in this BLA postgraduate program influenced your learning?
 PROBE: Which assessment methodology enhanced your learning more and in what way?
Strength and Weaknesses of the Blended Learning Environment
 What was the overall strength of the blended learning environment?
 How this blended learning environment hampered your learning?

Results

Themes/factors identified were grouped under 6 major areas, each area comprising the factors which influenced students' learning in blended postgraduate program, as shown in figure below:

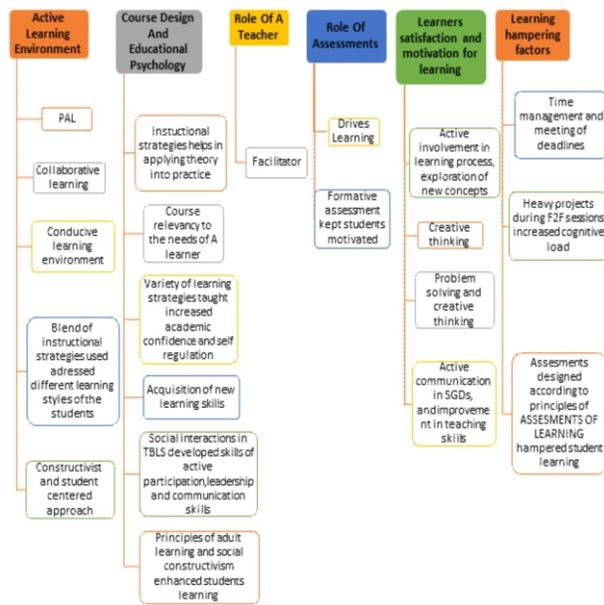


Fig 1: Major Areas and the Factors Influencing Students' Learning and Motivation in a Blended Learning Approach Master's Program

Given below in table are the themes along with quotes from the participants:

Table II: Factors Influencing Students' Learning and Motivation in a Blended Learning Approach Post Graduate (MHPE) Program

Major area	Active learning environment	Participants Quotes
Themes	1. P2P learning and experiential learning enhanced students learning	"This course promoted peer to peer learning a lot, I think it is the only beauty of this course and it makes us easy to learn from each other's experiences"
	2. Collaborative learning and social interactions enhanced interest and motivation	"Our group was very good we used to discuss things, there was a good collaborative learning environment each one of us has his own strength and learning style in this way we learned lot and this kept us motivated throughout"
	3. Conducive and social constructivist learning environment kept them motivated	"Learning environment was very conducive all physical, teachers and group dynamics were very good, this educational environment has a major role in keeping us motivated"
	4. Blend of instructional strategies addressed different learning styles of students and kept them engaged	"there was diversity of teaching style, and blend of instructional strategies, which addressed different learning style of the students, this change of flavor in the teaching sessions kept us engaged and maintained our interest in the sessions throughout"
	5. Constructivist and student centered approach in this blended program addressed learners' needs	"Most of the adult learning principles are followed in this course. Constructivist approach, relevance, participation, student centered learning, students autonomy all were there and I find them as very much relevant to my need as learner, we were trained how to apply that knowledge in practical scenario and Because of this course the traits of lifelong learner has been acquired by me"

Major area	Course design and educational psychology in BLA	Participant Quotes
Themes	6.instructional strategies helps in applying theory into practice at workplace	"I liked this blended course design because all the tools used for the instructional strategies were applied on us and we had fair enough idea how to apply them on our student and how they will be perceived by the students. It has improved my teaching a lot and I really enjoyed the course a lot"
	7.Course relevancy to the needs of a learner as self-directed learner, and learning through collaboration and social interaction	"this courses design is relevant to my need as learner because it give me a chance to learn both in campus activities from teacher and peer as well as to involve self-directed learning while we are off campus"
	8. variety of learning strategies taught in F2F and off campus increased academic confidence and self-regulation	"It promotes all sort of learning, deep, superficial and strategic. We learned which strategy is to be applied when according to the type of learning relevant to us, we learned how to self-regulate our learning and this variety in the teaching sessions increased our academic confidence"
	9. Acquisition of new learning skills helps in achieving the trait of lifelong and active learner.	In this blended course we learned metacognitive skills interactive teaching, critical thinking so we were able to deliver a more interactive lecture rather than a simple lecture and we developed the traits of life long learner"
	10. Social interaction in small group activities developed skills of active participation, leadership and communication	"In task based group learning we used to learn from each other by participating, we developed leadership qualities and improved communication skills. small group learning is the main strength of this course"
	11. Principals of adult learning and theory of social constructivism followed in this blended course facilitated students' learning	"Feasibility, time management cost effectiveness, and Promotion of adult learning in both aspect of this blended program are the main strengths of this program"

Major areas	Role of a teacher	Participants Quotes
Themes	12. Teachers as facilitators helped to develop the traits of independent and lifelong learners	"Role of teachers is like a facilitators, we had a very cordial relationship with our teachers, scaffolding is always there They guide us whenever we need them, it is an adult learning environment and we have to move on with our own journey as a lifelong learner"
Major areas	Role of assessments	Participant Quotes
Themes	13. Assessment drives learning through incorporation of formative assessments and constructive feedback by the teachers	"Assessments drives our learning and especially the formative assessment and feedback given by the teacher improved our learning"
Major areas	Learners satisfaction and motivation for learning	Participant Quotes
Themes	14. Learners' satisfaction achieved through active involvement in the learning process, exploration of the concepts, creative thinking, active communication in SGs, and improvement in teaching skills	"I am very much satisfied with this program because I gained more than what I expected from this program as it is student centered, active learning process, and more exploratory. Creative thinking, communication skills, teaching skills improved, we get a chance to learn from our facilitators along with a chance to be more self-directed and active learner"
Major areas	Learning hampering factors in BLA	Participant Quotes
Themes	15. Time management, meeting of deadlines, and Heavy projects increased the cognitive load, due to detachment of teacher in distant sessions.	"limitation is the time management , we fought through out with the time, deadlines do not let you learn freely as there was a cognitive overload too much information in short period of time, This was disturbing for us"
	16. Assessments designed according to principle of ASSESSMENT OF LEARNING hampers the students' learning	"summative assessment need a revision whether there should be summative exams or not, and new assessment methodologies should be employed rather than those traditional ones"

Discussion

Various factors influencing the students' learning identified through this study are presented in a form of a model in which various theories of teaching and learning are also imbedded. This schema can be used at level of curriculum planning, and individual teaching and learning. The role of the institution is to ensure that the time and resources are available for effective learning to happen. (See below fig 2).

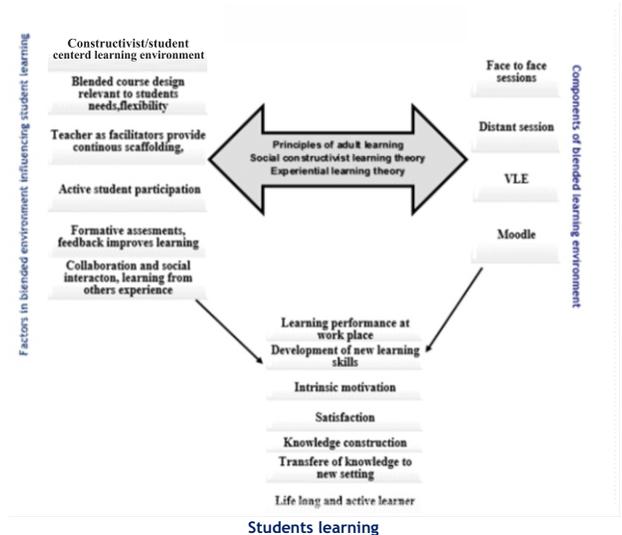


Fig 2: Conceptual Model of the Study

Participants of this study were satisfied and thought that this blended learning strategy helped them to learn new skills like problem solving strategies, metacognition, critical thinking, reflection, creative thinking, and deep as well as strategic learning, which improved their learning and helped them as an active and lifelong learner. The feedback from the study was mainly positive and the factors which enhanced students learning were the blended course design, and students' autonomy. Student in our studies were professionals and they considered this blended course relevant to their needs as a learner as it allowed them to learn with more freedom and autonomy, as supported by Knowles theory of adult learning.¹² Other factors include variety of teaching and learning strategies, acquisition of new learning skills like metacognition and reflection, role of a teacher as a facilitators, constructivist, student centered, collaborative, and conducive learning environment. Continuous scaffolding was provided by teachers, and student learnt by active participation. Peer to peer learning,

and learning from experience of others. Social interaction with teachers and other learners plays a fundamental role in the development of understanding¹³ which is supported by Vygotsky theory of social constructivism (1978)¹⁴ Social constructivists believes that the process of sharing individual perspectives called collaborative elaboration¹⁵ results in learners understanding and this construction cannot be achieved by individual learning. Feedback from peers and teachers followed by reflection helped to develop the skills of critical thinking and problem solving, consequently becoming a reflective learner. Hands on activities and learning by active participation in face to face sessions, small group activities and blended course design were considered as the main strength of this blended learning environment. Thus, all of the principles of adult learning were well incorporated in this learning approach. The blended learning format allowed participants to combine work, studies, and private life. Improved possibilities for anytime and anywhere freedom was considered as essential. Pahinis et al recorded a similar positive response among postgraduate dental students at the end of a blended learning course taught to different groups of learners in a dental school.¹⁶

Similarly, when the other studies were analyzed the great majority of the students were happy and wanted the blended approach to be more widespread.¹⁷

This study suggests that students prefer face-to-face interactions over online communication mechanisms. Students understood the course concepts better in face to face sessions than in virtual or eLearning environment. This is because they learn by interacting with facilitators and by experience, this finding is supported by Experiential learning theory (Kolb, 1974)¹⁸ It describes how learners learn from experience. Whereas, Contrary to this, in previous studies there were different perspectives of the students. In some of the studies it is found that the online components of blended cardiovascular pharmacotherapy course were well received by students and enhanced long term knowledge.¹⁹ Whereas, on the other hand Boje et al found that although students were enthusiastic about use of a virtual biotechnology laboratory in a blended pharmacy course, they preferred face to face

discussion over asynchronous discussion boards.^{20,13} Although online discussion forums are effective at promoting reflective activities, face to face discussions are better suited to situations where students are learning directly from each other or from an expert instructors.²¹

At last the limitations of this blended learning approach; Students' concerns about blended learning increases at times due to concerns of time management, meeting deadlines and pressures of completing online course components/assessments. Another factor is to get most out of campus course tutorials, and getting prepared for 'assessment of learning'. Moreover they showed criticism towards detached course during off campus sessions from facilitators which may be the main reason of cognitive overload, as teachers played a major role in keeping students motivated and facilitated them in their learning journey. They suggested that there is a need to divide information into chunks and deliver them in pieces or intervals with comfort breaks. A final issue worth mentioning was the student's access to online learning resource, articles and journals. They should be given full access to online data bases in order to improve their learning via best evidence based literature available on line.

Conclusion

Students showed both evidence of learning and enthusiasm for the blended programs as they learned in a cooperative way with their peers and thus outshined academically.

Study findings suggests that a blended learning format can be successfully integrated into postgraduate learning programs in Pakistan as it provides a favorable transition to an enhanced flexibility, location convenience, and time efficiency. There were many factors which helped students learning and maintained rather enhanced their motivation in this program like blended course design, constructivist and student centered learning environment, student autonomy, collaboration and interactive learning with peers and teachers, scaffolding from facilitators to make them self-regulated, active and lifelong learners. Their learning was driven by the formative assessments and timely feedback provided by the teachers, in face to face sessions. They learned self-regulation, active participation, communication, and leadership skills

both in distant and face to face sessions. Their learning was hands-on and based on experience. Variety of teaching tools used in this blended format and blend of this in campus and off campus learning activity kept them engaged, addressed various learning styles and theories, and satisfied their needs as a learner. In short, principles of adult learning were very well applied in this course both in off campus and in campus sessions and helped them not only to gather knowledge, but also to understand, apply, and transfer it to new settings. So acquisition, application and transfer of knowledge helped the future educators to develop academically in a more effective way.

Recommendations from the Study

Students' representations should be the policy of the program in curriculum renewal of postgraduate (MHPE) program.

Future Study

The opinions and satisfaction levels of the instructors using the blended learning environment could be also examined, so as to more fully optimize the potential benefits of new education technology.

Limitations

Population size may be increased in future studies. Very few participants could be approached as all of them were busy professionals and there were time limitations, and feasibility issues regarding approaching them.

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