

Experiences and Perceptions of Postgraduate Students about a Blended Learning Program in Pakistan

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Abstract: *The current age is recognized for its rapid technological advancements in every field. This study adopts a qualitative exploratory methodology to investigate the experiences and perceptions of the students of one department of a public sector university in Lahore, Pakistan, which used blended learning for better student access and ease in communication. It looks at the technological challenges faced by the students, and factors which provide insight to improve the blended learning program and help replicate the model for other departments. A sample of 11 postgraduate students was selected for semi structured interviews; the results showed both negative and positive perceptions towards blended learning classrooms. The positive side highlighted the ease of access, cost efficiency, flexible environment and less commute time for the learners, while the negative aspects pointed out issues such as repeated technical issues, lack of transparency in student performance and lack of opportunity for student participation*

Key Words: Blended Learning, Postgraduate Education, Public Sector University, Purposive Sampling, Qualitative Research.

Introduction

Classroom instruction has undergone a lot of change in the past few decades. Innovation is an integral part of every student's life; similarly, educational institutions have come to recognize that only classroom-based teaching is not enough in today's day and age. instruction alone. Blended learning offers physical, personal and online direction by incorporating innovation into educational programs. The need for blended learning has particularly increased in the wake of the coronavirus pandemic of the year 2020. In the scenario of the lockdown, web- based and online education has become a necessity in graduate and post graduate university programs.

According to [Hartman et al. \(2007\)](#) blended learning involves face-to-face classroom instruction accompanied with online learning and less class/seat time. It conveys an adaptable experience and supports learning by permitting students to learn in their own time and at the speed they want. Blended Learning refers to a mixture of various methods of delivery, educating models and styles of comprehending which are practiced in an intelligently significant learning environment. Blended Learning courses join online and classroom learning exercises and use assets in an ideal path, keeping in mind the end goal, to enhance student learning results and to address essential institutional issues ([Garrison & Kanuka, 2004](#)).

In a research conducted by [Means et.al \(2010\)](#), elucidated that according to their study any combination of face to face and online teaching/learning was known as 'blended learning'. Other researchers have defined blended learning as any kind of blend of virtual and actual face-to-face learning ([Uzun & Senturk, 2010](#)). [Ashby, Sadera and McNary \(2011\)](#) presented a model of blended learning which proposed that students be given all content online, and gave them the option to replace one class in a week with a direct physical contact instruction.

Researchers have sometimes referred to blended learning as "mixed" or "hybrid" learning; "hybrid" learning is defined in literature as a combination of online and traditional teaching which is often face

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to face or direct ([Martinucci, Stein, Wittmann, & Morote, 2015](#)). Another set of researchers further defined and narrowed it down to say that hybrid teaching or instruction was that teaching in which 30% to 74 % of instruction was online or virtual and the rest was real direct face to face instruction ([Xin, Kempland, and Blankson, 2015](#)).

The utilization of this model boosts teacher's productivity, expanding engagement inside the classroom while at the same time empowering them to reach out to the students. Online teaching makes use of different sound devices, video channels, apps and computer operating systems to convey educational modules to students ([Tanner, 2007](#)). Online instruction "gives nontraditional grown-up students, who are juggling full time job and family obligations, a chance to influence the new innovations of the internet to accomplish the abilities they have to stay aggressive in an inexorably computerized work market" (Marty, 2003, as cited in [Collopy & Arnold, 2009](#)).

Generally, research suggests that Blended Learning has positive effects on student achievement and satisfaction ([Dziuban, et.al, 2018](#)). [Akkoyunlu and Soylyu \(2006\)](#) researched students' perspective with respect to the Blended Learning environment and found that most of the students took part in the online dialog discussions, and the more they accomplished, the more positive perspectives they created towards Blended Learning. [Hew & Cheung](#) assert that both face to face dialogue and online interaction, add to the learning procedure (2014). [López-Pérez, Pérez-López and Rodríguez-Ariza, \(2011\)](#) in their study of 1431 students found that dropout rates reduced and exam results improved.

A student's state of mind toward e-learning and choice to utilize e-learning are the utmost essential variables in deciding learner's perceptions towards utilizing e-learning, i.e impact of the critical individuals around them. [Badawi \(2009\)](#) explored that the model of blended learning was more powerful than the conventional model. [Ja'ashan \(2015\)](#) conducted a research on 130 students in which he found their perceptions and attitudes with regards to blended learning to be encouraging. Students found it to be as effective as regular classroom interaction, preferred the self-regulation and pace of learning. Similarly, [Behjat, Yamini and Bagheri \(2012\)](#) demonstrated that in the tertiary Iranian education contexts blended learning classroom direction and innovation can help learners go above the expectations in their reading ability.

In the previous two decades, there have been a wide assortment of online instruments that have facilitated electronic learning (e-learning) around the world. E-learning also provides many different chances to students who may not have had the opportunity to participate in such a program; e-learning is thus overcoming the constraints of area and time. Research suggests that "an individual's computer self-efficacy has a significant influence on the use of technology for learning" ([Hsiao, Tu & Chung, 2012](#)).

[Tinio \(2002\)](#), states the possibilities of ICTs in escalating access and improving relatedness and nature of instruction in creating nations. He further expresses the potentials of ICT to encourage the achievement and assimilation of learning, contributing in creating nations' exceptional chances to upgrade instructive frameworks, enhance approach plans, and include the students from remote access areas.

Online instruction, partly or completely is provided by several institutions of higher education ([Hartley, 2007](#)). Although e-learning environments are gaining popularity, their success needs to be established, particularly the areas and attributes that render them successful ([Oliver and Trigwell 2005](#)). Blended learning at a women university in Lahore was introduced with the aim to assist female students and teachers, reduce wastage of time due to unforeseen closures, allow flexibility and help in keeping pace with creating the world and new educating systems. The core purpose of the blended learning program was to reach out to students who were unable to attend regular classes due to certain reasons, and also to eliminate wastage of time due to sudden closures. Training for the online platform was held with the relevant faculty and students of one of the departments, which initiated the program for its post graduate students.

Research Objective

The current article focuses on the following research objective:

- What are the experiences and perceptions of postgraduate students enrolled in a Blended Learning program in a woman university of Pakistan?

Research Methodology

The population of the study were all Pakistani Postgraduate students currently engaged in studying through blended learning programs. Out of these, an intact group of 11 postgraduate students from a public sector women university in Lahore, Pakistan, was purposely selected. The participants were assigned the numbers P₁, P₂, P₃,..., P₁₁, for anonymity, and they will be referred to by these numbers throughout this article. The experiences and perceptions of these students were studied through utilizing a qualitative semi structured interview protocol. The collected data was transcribed and translated to English; and after coding, themes were derived inductively ([Miles and Huberman, 1994](#)).

Results

The participants gave mixed responses regarding their initial teaching learning perception about the blended learning program. At the beginning, one participant had anxiety (P₂), while some participants had great expectations which were met (P₁, P₄, P₅, & P₈). A few participants didn't have any expectations rather they were waiting to experience something new (P₆ & P₁₀). "My expectation was that I'll be able to communicate with other students, I'll be able to learn from them." said P₆.

A few of the participants were working women and they had joined the course to balance their professional and educational life easily and were very satisfied with the Blended Learning mode (P₄, P₇ and P₁₁); "the weekend program is just fantastic for our kind of women who are doing jobs," commented P₄. A few of the participants said the course needs improvement (P₃ and P₅). As the course progressed, only one participant wasn't satisfied with the course experience because she already had an experience of this kind of learning from a University of California, USA.

The following themes emerged regarding the experiences and perceptions related to Blended Learning course and environment at the postgraduate level; the themes have been separated into positive and negative aspects of blended learning.

Table 1. Positive Aspects of Blended Learning Course and Environment

S. No	Theme	Testimonials
1	Cost Effective	All Participants agreed that this method proved to be extremely cost effective, with no cost of getting printouts and handouts. They said that all the teachers have uploaded the course material assignments quizzes etc.
2	Accessibility of teaching learning materials	P ₉ and P ₁₁ said: The material is online and always accessible on a phone, tablet or PC
3	Technology Incorporation	P ₁ found research expansion in blended learning courses. She said: "blended learning is incorporating technology; we found that there is much more to research. So research expansion was there." P ₄ feels the difference between both sessions. She said: "it is very much different. As I told you it had provided us with a lot of extra technological skills."
4	Less commute	P ₇ feels that blended learning involves less travelling. She said: of course, in blended learning there is less need to commute. So it is a little bit different from a traditional classroom." P ₈ feels it is beneficent for job oriented people. She said: "I think the seat availability is the top priority, because in weekend programs most of the students are doing jobs. They cannot come on daily bases or they are family oriented people".

5	Enhances self-confidence and gives learner autonomy	P5 found it as an efficient way for building confidence levels. She said: It permits us to gain a variety of resources, learning opportunities and I must say it enhances a student's confidence level.
6	Flexible Environment	P2 considers a blended learning course more flexible as compared to a traditional classroom. She said: "I would say Flexibility...Flexibility in terms of time and place in which you don't have to move out of your own environment."

Hence the many positive aspects of the blended learning environment include many benefits to the learners, due to their unique circumstances, and many in-built design benefits of blended learning, which are available for all kinds of learners.

Conversely, the participants pointed out several negative aspects which they did not find conducive to learning. These are listed as follows:

Table 2. Negative Aspects of Blended Learning Course and Environment

S. No	Theme	Testimonials
1	Repeated technical issues	All Participants faced this issue: One technical issue was connectivity and another was distortion.
2	Lack of response to Questions	Majority (9 out of 11) of the participants said they had to wait for the end of the lecture so that they could ask their questions and in the meantime the question was skipped, or the teacher never answered the question.
3	Lack of transparency in student performance	Four participants (P2, P4, P5 and P8) said that in face-to-face sessions, individual student contributions can be more transparent. P6 reported that instead of cramming, discussion is more efficient. She didn't mix these two methodologies. According to her, "through discussion the learned thing never goes out of the student's head."
4	Lack of Opportunity for Student Participation	Out of the 11 participants, 6 believed it depended on the student motivation. P7 reported it was depend on student's interest. She said: "Again I told you that if I turn on the computer and just listen it would not help. The teacher would not be able to know my presence unless I put up a question. So it all depends on your interest."
5	Lack of respect for assigned time	6 out of the 11 participants felt there was a lack of respect for time. One participant said: "In our course I never had an experience that there was a time frame. The students got late often and the instructors were also late. There was a fixed time, but I never had the experience that, ok the class will be at 9 o'clock, so we should be there on time."

The negative aspects of the blended learning environment highlighted implementation and assessment issues, which are explained in Table 3 below.

Table 3. Perceptions about blended Learning Being A Major Contributor for the Education of The 21st Century

Perceptions	Testimonials
Major demand of technology in blended classrooms	P1 said "It is somewhat now turning to be the major aspect of education and the 21st century because education should be accessible for all; it should not be made difficult to access, but it should be made easier to access." P2 said: "Yes! I think now it has become a major aspect of our 21st century education because we cannot survive without technology."

Dependence of higher studies	P8 said: "We cannot just confine ourselves to classroom settings but yes we have to. Now we live in a global village, we have to introduce the latest technologies. We should move forward." P5 thought education of today would not have been possible without blended learning. She said: "It is now the most important part of our education. I think higher studies are now totally dependent on such kinds of techniques." P7 said: "Yes it is a very important ingredient for education as education would not have been possible without such advanced technology."
Room for improvement	P3 felt it is an interesting as well as improving tool of education. She said: Blended learning is very interesting. I really enjoyed it but not here.. As a 21st century education model there is room for the improvement. P4 felt for survival in the technological world, it is a major aspect of learning. She said: It enables us to somehow educate ourselves through different resources, handouts, online soft copies. So I must say it in an effective as well sustainable teaching and learning style. I think we should apply it to other disciplines as well."
Efficient and sustainable learning tool	

Discussion of Results

The research reveals that blended learning is one of the most efficient and vigilant ways of learning. [Akkoyunlu and Soylu \(2006\)](#) researched students' perspective with respect to the Blended Learning environment. Results reveal that most of the students took part in the online dialog discussions, as they accomplished, they created more positive perspectives towards Blended Learning. [Hew & Cheung, \(2010\)](#) said both face to face and online interaction added to the learning procedure. [Badawi \(2009\)](#) uniformity, explored that the model of blended learning was more powerful than the conventional model in creating forthcoming instructors' pedagogic information.

[Behjat, Yamini and Bagheri \(2012\)](#) demonstrated that in the tertiary Iranian education contexts, blended learning classroom direction and innovation can help learners go above the expectations in their learning ability. E-learning is overcoming the hindrances of area and time and opening new ways for students who are working, who have incapacities, or who may not be named as conventional students in some way ([Yu, Yu & Lin, 2010](#)).

One participant was totally dissatisfied with the course as she already had the same course form the University of California. Pakistan doesn't have more advanced ICTs than European universities; still Pakistan is striving hard to make their education system habitual of using technology in an optimistic manner.

Burge 1994 (as cited in [Schwier & DyKes, 2004](#)) found participants using an e learning program for the first time in their study year to be more anxious. Similarly, few studies have informed that students have their nervousness and dismay when associating with online materials (Burgess, 2008; Baharun and Porter, 2009, as cited in [Thang et.al. 2013](#)).

Through surveys it has been found that blended learning is the most suitable and innovative way of teaching and learning as well. According to (Frese, 2006) new teaching methods, such as smart network multimedia and synchronization of course, be lifted to make up for this lack of eye to eye contact; however, these require certain investment and preparation, both of which lack periodic reports through online employees. Similarly, [Hartley \(2007\)](#) suggests, if we make online examinations a more prominent bit of evaluation, learners will put more noteworthiness on supporting, in this way affecting them to do sincerely. Students are awakened by what they are surveyed on. [Dwaik, Jweiless and Shrouf \(2016\)](#) recognized the benefits of e learning which "stimulates the learners' activity, facilitates acquisition of knowledge, and helps in keeping and employing this knowledge in real life situations. All those contributions can lead to more learning, and give learning additional meaning and significance."

In the 21st century, it has been proved that the education system is now not relying on the traditional method of "one size fixed all". Now every individual has different attitudes, perspectives and beliefs. It has been investigated that the instructor has to encounter different problems, challenges and

issues like ever-changing standards, varied students, keep students engaged, creating activities in reduced capital and so on.

This research work was carried out in order to understand students' perceptions and experiences with respect to a blended learning course. This exploratory study was conducted with 11 postgraduate students taking a blended course on the weekends, introduced by the one department of a public sector women university of Pakistan. The interviews were conducted with the students to understand their perspectives, perceptions and experiences while studying in the blended learning environment.

Most of the students were job oriented and they had different experiences. 90% of the students are satisfied with the course. 10% were dissatisfied because they had a background of such kinds of courses. One participant had experienced blended learning from the University of California and she wanted to have the same systematic situations. As the university is in the initial phases of introducing blended learning, it requires more planning, training and more advanced technologies.

Some teachers had used Skype as a substitute for LMS for video class rooms because at that time the BIG BLUE button was not originated for video class rooms on LMS. Entire teachers felt the positive change in their strategy of teaching. As we are turning towards classes without walls, technology is a pivotal key for advancement. Many teachers of the university are not taking their teaching methodology beyond the whiteboard classroom.

Suggestions and Implications for future Blended Learning Courses

Blended learning allows flexibility, as well as self-paced learning. This can be synchronous, that is real time, as well as asynchronous, which is also online, but not real time. [Martin and Bolliger. \(2018\)](#) assert that if students are involved in some discussion or engaged in collaborative activities, which motivates them to learn more and also decreases a sense of social isolation, these activities help in improving the students' results in e learning. In this study as well the participants have expressed the need to be engaged with each other for better clarification of concepts. These can be managed by training teachers and acquainting them with the platforms where they can watch video clips, working on critical issues as a group, through discussions and other active learning strategies.

Social isolation as a drawback has also been pointed out by [Ja'ashan \(2015\)](#). Students need to be more interactive so as not to become indifferent towards each other. He further asserts that Blended learning provides opportunities to shy students to participate, and express their views on different platforms. Reflections and blogs help keep them engaged.

For students to be actively engaged, courses need to be adapted and designed to cater to online learning ([Roblyer & Ekhaml, 2000](#)). Merely uploading existing handouts, e-books, slides and sharing lectures does not engage students and is not suitable for online learning. [Moore \(1993\)](#) has pointed out three basic types of interaction which are indicators of effective online courses: (1) learner-to-learner interaction, (2) learner-to-instructor interaction, and (3) learner-to-content interaction.

The most important factor in online learning is the instructor ([Bolliger & Martindale, 2004](#)), although in some cases it is difficult to separate course material and instructional technology from the instructor. Instructors who wish to teach online or improve their online teaching effectiveness, instructional designers who want to build engaging online courses, and administrators who support staff and faculty working in successful online programs need to be aware of the importance of this fact. This has also been pointed out by the participants of this research. The instructor needs to be tech savvy, and comfortable using a variety of learning platforms to keep the students actively engaged. They are the mediators and the facilitators. Moreover, it is the instructors who have content knowledge and pedagogical knowledge who are most effective.

Time management is an important part of the learning environment. Students must learn new skills in the online environment. Punctuality in submission of tasks must be maintained. In our context where power outages and internet issues pose an issue in connectivity, deadlines need to be realistic, and adhered to. Also, asynchronous learning would be more suitable in this scenario. In the light of diverse expectations and experiences, there provision should be made for refresher workshops for the students.

If face to face meeting is not possible, then clear video guidelines should be shared, in which they are instructed on how to use the different features of the online learning portal.

One delimitation of the current study was that it was qualitative in nature, and conducted with a limited number of students of only one department. Similar studies on larger scales should be conducted in many different institutions, to see whether the results are replicated or not.

Conclusion

Blended learning can be used as a useful tool to help mitigate the challenges of technology use in higher education. Based on the experiences and perceptions of the participants of this research, it was concluded that through a combination of traditional classroom learning with online platforms, students can have access to quality education for gaining knowledge and improving technical, practical and professional skills. The most appropriate methods should be selected according to the need of the subject to improve teaching and to develop student learning.

Furthermore, blended learning components as flipped classes and collaborative learning are appropriate to increase student's participation in learning. Many higher education institutions are already in transition from traditional classrooms to blended learning courses by increasing the use of online learning.

Now the education system of the world is turning toward boundaryless classes. The curriculum of the 21st century, also lays emphasis on the use of technology, technological expertise as well as learning competency, and varying sources of course content. It is significant for educational modules design that it refocuses the decision of the selection and use of technologies back on the learner and the learning process, instead of on the popularity of the technology itself. As technologies turn out to be more sophisticated, and the instruction and educational settings become increasingly varied, educators have been assigned the difficult task of monitoring ways to deal with incorporating technologies into the educational modules, especially in connection to aim, purpose, level of information, and modes of assessment.

It is felt by the researchers that knowledge of e- learning platforms should be made mandatory for teachers of higher education, not just to facilitate student learning, but also to allow the uninterrupted continuity of the process of education. It is particularly important in the Pakistani context, where political disturbances, vagaries of nature and security threats lead to unscheduled holidays. Also in the current scenario of the Covid 19 pandemic, it has become even more crucial to be prepared in advance to deal with any such contingencies.

References

- Akkoyunlu, B., & Soylu, M. Y. (2006). A study on students' views on blended learning environment. *Turkish Online Journal of Distance Education*, 7(3), 43-56.
- Ashby, J., Sadera, W. A., & McNary, S. W. (2011). Comparing student success between developmental math courses offered online, blended, and face-to-face. *Journal of Interactive Online Learning*, 10(3).
- Badawi, M. F. (2009). Using Blended Learning for Enhancing EFL Prospective Teachers' Pedagogical Knowledge and Performance. *Online Submission*.
- Behjat, F., Yamini, M., & Bagheri, M. S. (2012). Blended learning: A ubiquitous learning environment for reading comprehension. *International Journal of English Linguistics*, 2(1), 97.
- Bolliger, D. U., & Martindale, T. (2004). Key factors influencing student satisfaction with online courses. *International Journal on E-Learning*, 3(1), 61-67.
- Collopy, R., & Arnold, J. M. (2009). To blend or not to blend: Online-only and blended learning environments. *Issues in teacher education*, 18(2).
- Dwaik, R., Jweiless, A., & Shrouf, S. (2016). Using Blended Learning to Enhance Student Learning in American Literature Courses. *Turkish Online Journal of Educational Technology-TOJET*, 15(2), 126-137.
- Dziuban, C., Graham, C. R., Moskal, P. D., Norberg, A., & Sicilia, N. (2018). Blended learning: the new normal and emerging technologies. *International Journal of Educational Technology in Higher Education*, 15(1), 3.
- Flexner, A. (1994). *Universities: American, english, german*. Transaction publishers.
- Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The internet and higher education*, 7(2), 95-105.
- Graham, C. R. (2013). Emerging practice and research in blended learning. *Handbook of distance education*, 3, 333-350.
- Hartley, J. (2007). Teaching, learning and new technology: a review for teachers. *British Journal of Educational Technology*, 38(1), 42-62.
- Hartman, J., Dziuban, C., & Moskal, P. (2007). Strategic initiatives in the online environment: opportunities and challenges, 15(3), 157-168.
- Hew, K. F., & Cheung, W. S. (2010). Use of three-dimensional (3-D) immersive virtual worlds in K-12 and higher education settings: A review of the research. *British journal of educational technology*, 41(1), 33-55.
- Hew, K. F., & Cheung, W. S. (2014). *Using blended learning: Evidence-based practices* (Vol. 20). Singapore: Springer.
- Hsiao, H. C., Tu, Y. L., & Chung, H. N. (2012). Perceived social supports, TOJET: The Turkish Online Journal of Educational Technology, 11(2).
- Hung, M. L., & Chou, C. (2015). Students' perceptions of instructors' roles in blended and online learning environments: A comparative study. *Computers & Education*, 81, 315-325.
- Ja'ashan, M. M. N. H. (2015). Perceptions and Attitudes Towards Blended Learning for English Courses: A Case Study of Students at University of Bisha. *English Language Teaching*, 8(9), 40-50.
- Jones, N., Chew, E., Jones, C., & Lau, A. (2009). Over the worst or at the eye of the storm?. *Education+ Training*.
- Kaur, M. (2013). Blended learning-its challenges and future. *Procedia-Social and Behavioral Sciences*, 93, 612-617.
- Kenney, J., & Newcombe, E. (2011). Adopting a blended learning approach: Challenges encountered and lessons learned in an action research study. *Journal of Asynchronous Learning Networks*, 15(1), 45-57.
- López-Pérez, M. V., Pérez-López, M. C., & Rodríguez-Ariza, L. (2011). Blended learning in higher education: Students' perceptions and their relation to outcomes. *Computers & education*, 56(3), 818-826.
- Martin, F., & Bolliger, D. U. (2018). Engagement matters: Student perceptions on the importance of engagement strategies in the online learning environment. *Online Learning*, 22(1), 205-222.

- Martinucci, K. P., Stein, D., Wittmann, H. C., & Morote, E. S. (2015). College Faculty Understanding of Hybrid Teaching Environments and Their Levels of Trainability by Departments. *Journal for Leadership and Instruction*, 14(1), 24-31.
- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning. *Center for Technology in Learning, US Department of Education*. Retrieved from <http://www.ed.gov/about/offices/list/opepd/ppss/reports.html>.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage
- Moore, M. J. (1993). Three types of interaction. In K. Harry, M. John, & D. Keegan (Eds.), *Distance education theory* (pp. 19–24). New York: Routledge.
- Oliver, M., & Trigwell, K. (2005). Can 'blended learning' be redeemed. *E-learning*, 2, 17–26. doi:10.2304/elea.2005.2.117.
- Passmore, D. (2000). Impediments to adoption of web-based course delivery among university faculty. *ALN Magazine*. [Online Serial], 4 (2). Accessed from the World Wide Web:<http://www.alr.org/alnweb/magazine/vol4issue2/passmore.html>
- Roblyer, M. D., & Ekhaml, L. (2000). How interactive are YOUR distance courses? A rubric for assessing interaction in distance learning. *Online Journal of Distance Learning Administration*, 3(2). Retrieved from <http://www.westga.edu/~distance/ojdl/summer32/roblyer32.html>
- Schwier, R., & DyKes, M. (2004). The struggle for community and content in virtual learning communities. In *EdMedia+ Innovate Learning* (pp. 2976-2982). Association for the Advancement of Computing in Education (AACE).
- Tanner, L. K. (2007). *Case study of the challenges faced by adult students enrolled in an online blended distance learning program* (Doctoral dissertation, Miami University).
- Thang, S. M., Mustaffa, R., Wong, F. F., Noor, N. M., Mahmud, N., Latif, H., & Aziz, M. (2013). A Quantitative Inquiry into the Effects of Blended Learning on English Language Learning: The Case of Malaysian Undergraduates. *International Education Studies*, 6(6), 1-7.
- Tinio, V. L. (2002). ICT in education: UN development programme. Accessed November, 12, 2014.
- Uzun, A., & Senturk, A. (2010). Blending makes the difference: Comparison of blended and traditional instruction on students' performance and attitudes in computer literacy. *Contemporary Educational Technology*, 1(3), 196-207.
- Xin, H., Kempland, M., & Blankson, F. H. (2015). Adaptability and replicability of web-facilitated, hybrid, and online learning in an undergraduate exercise psychology course. *Turkish Online Journal of Educational Technology-TOJET*, 14(1), 19-30.
- Yu, C., Yu, W. C. W., & Lin, C. F. (2010). Computer-Mediated Learning: What Have We Experienced and Where Do We Go Next?. In *Handbook of research on practices and outcomes in e-learning: Issues and Trends* (pp. 1-18). IGI Global.
- Zhang, P., & Bhattacharyya, S. (2008). Students' views of a learning management system: A longitudinal qualitative study. *Communications of the Association for Information Systems*, 23(1), 20.