Pakistan Journal of Distance and Online Learning
Volume: IV, Issue II, 2018, 143-156

Challenges and Successes of Blended Learning in Directorate of Distance Education, IIIUI

Nabi Bux Jumani[*]
Samina Malik[**]
Humaira Akram[***]

Abstract

This article presents challenges and successes of Blended Learning experienced by students and faculty members of Directorate of Distance Education, International Islamic University Islamabad. The study has followed mixed method approach including sequential explanatory design. A survey was conducted to probe the experiences of (126) students enrolled in (FALL 2016) distance education programs, while interviews were conducted from (20) faculty members. Quantitative data were analyzed by using mean scores and percentages, while the interviews were analyzed by utilizing thematic approach. In the view of teachers, BL has enhanced their pedagogical practice. Similarly, e-assessments and feedback via LMS also improved students' understanding of the content. Students' satisfaction with BL technology, BL activities, provision of sufficient resources on LMS, use of WhatsApp for interactive communication, LMS training sessions and quality of support services provided to resolve technical issues were also regarded as predictor of success. Challenges of BL included technical problems hindering internet access, technological competency gap, teachers' workload and weak audio/video connectivity during Skype sessions. The study has recommended to; organize an advance level of LMS training session(s) for the faculty and students, improve the grading and feedback practice on the part of teachers and enhance audio/video connectivity of Skype sessions.

Keywords: challenges, successes, blended learning, distance education, pakistan

---

[*] Professor, Faculty of Social Sciences, International Islamic University, Islamabad, Pakistan. Email: nb.jumani@iiu.edu.pk
[**] Professor, Faculty of Social Sciences, International Islamic University, Islamabad, Pakistan. Email: nb.jumani@iiu.edu.pk
[***] Teaching/ Research Associate, Department of Education, International Islamic University Islamabad, Pakistan. Email: humaira.phdedu95@iiu.edu.pk

Introduction

Blended Learning deals with the blend of different; web oriented technologies; pedagogical methods and instructional technologies with F2F teaching (Driscoll, 2002). The concept of Blended Learning (BL) has been used synonymously with "mixed mode learning, "hybrid instruction" and "technology-mediated/enhanced learning". The success of BL is termed as "practice(s) which stimulates attainment of high-quality learning outcomes and progressive students' learning experiences with greater teachers' contentment" (Stacey & Gerbric, 2008). Asynchronous and synchronous are the two modes of distance education. Synchronous method requires F2F interaction of the student. The interaction is held in "real time" whereas asynchronous does not need concurrent participation. The need for instructors and learners to be present is exempted and students select their own timeframe for interaction. More specifically, online learning is asynchronous and based on learner-centered strategy that stresses the significance of peer collaborations (Wu, Bieber & Hiltz, 2008). In an asynchronous format, students log onto the class or discussion forum any time wherever they may be. Asynchronous environment supports increased flexibility, but lessen F2F interaction, which can impede motivation. Synchronous environment supports spontaneous and instant verbal and non-verbal communication between instructors and students, but lacks time flexibility due to space and travel problems (Graham, 2006). Merging the two learning situations preserve the possibility for the instant response students value while enabling better involvement on the part of students who need more flexible timetables (McDonald, 2012).

In the context of distance education, blended learning offers flexibility in terms of assessment methods, group based work, assignment submission, marking, grading, feedback and communication between teachers and learners. The supreme prevalent blended learning tools employed by universities worldwide include Learning Management System (LMS), MOOCs, Moodle, Open Educational Resources (OERs), twitter, blogs, discussion forums, e-portfolios, e-assessment, live internet streaming, video conferencing and mobile applications. All of these tools supplement the students' learning experience and enhance students' engagement, as well as refine the course management and administration with the use of information and communication technologies (ICTs). Generally, the BL approach has unlocked infinite learning opportunities for the internet generation (Bo Tso, 2015).

Blended Learning (BL) has attained popularity not just in Pakistan where more than 13 universities are offering different degree programs through open and distance learning mode yet very highly reputed international universities around the globe are successfully offering programs through distance education. Though, adjusting to new instructional pedagogies has always been tedious and challenging tasks that necessitate greater struggles (Akbulut, 2009) yet, it induces novelty in the arena of education and supports learners to involve in educational process. There is an increased focus on students' engagement and blended learning approaches at higher education. Nevertheless, there are various challenges for institutions, faculty and instruction related to delivering blended learning with online components. In specific, problems such as faculty motivation, instructional support and technological issues have been considered as challenges in designing online instruction in many organizations. International Islamic University Islamabad (IIUI) is one of the distinctive institutions, which is having unique status in educational institutions of Pakistan. Directorate of Distance Education, IIUI started the first session in the semester Fall 2015 with MA Pakistan Studies, MA Education and M.Ed Programs. Blended Learning is catered through on-campus classes in terms of F2F interaction/ synchronous mode, while Skype classes, Learning Management System (LMS) and WhatsApp as asynchronous mode. In this line of thinking, this study aimed to probe challenges and successes in terms of experiences of the students and the faculty members involved in Distance Education programs regarding the usage of blended learning approach.

Findings of the study would be helpful for teachers, students and administrators to analyze benefits/ successes and challenges of blended learning in distance education approach. This would further help teachers in enlightening BL activity schedule, content, instruction and assessment approaches in their courses. In particular, this piece of research would provide baseline to administration (DDE, IIUI) in order to develop strategy for resolving challenges of Blended Learning.

Objectives of the Study

Objectives of the study were to:

i. Explore challenges and successes of blended learning experienced by students at Directorate of Distance Education, IIUI-Pakistan
ii. Analyze challenges and successes of blended learning experienced by faculty members at Directorate of Distance Education, IIUI-Pakistan

Research Questions

Following research questions were framed to address the afore mentioned objectives;

i. What are challenges and successes of blended learning experienced by students at Directorate of Distance Education, IIUI-Pakistan?
ii. What are challenges and successes of blended learning experienced by faculty members at Directorate of Distance Education, IIUI-Pakistan?

Literature Review

Blended Learning System followed by Directorate of Distance Education, IIUI includes eight F2F on-campus classes, eight Skype meetings, LMS, WhatsApp, Sessional/Mid Term Exam and Terminal/ Final Term Exam. Moreover, orientation sessions regarding usage of LMS are organized twice a semester i.e. start of semester and mid of semester. Students are provided feedback and grades on their assignments via LMS.

Numerous research studies have reported that the use of BL approach enhanced pupils' participation and learning experience as it generates a positive effect on learners' opinions of the learning situation and their study method (Poon, 2012). BL transfers the focus from "Teaching" to "Learning", which empowers the learners to become more engaged in the learning procedure and more encouraged (Donnelly, 2010; Yen & Lee, 2011). Students' contentment has also been described to be greater in blended learning courses as compared to F2F courses. Moreover, online components of blended learning encouraged the expansion of critical thinking skills among students (Dziuban et al., 2006; Owston et al., 2006). Another success of blended learning is flexibility of access to learning, which can be credited to the addition of online constituents. This layout allows distant learners and even other pupils, permitting them to work and access the internet at their convenience (Owston et al., 2006).

In the view of Motteram (2006), BL not only supports educators in developing significant skills through F2F sessions, but also offers an opportunity to reflect on an online forum about their pedagogy. Young and Lewis (2008) studied the opinions of teachers in blended teacher education programs and reported that they had positive concept about blended education in terms of general contentment. In an another research study, Owston et al. (2008) explored that blended program for middle school mathematics and science teachers positively inclined towards content

knowledge, teachers' attitudes and encouraged many teachers to alter their classroom strategies.

Various research studies have documented greater students' satisfaction rates with the incorporation of technology in instruction and learning (Akbulut, 2009; Banerjee, 2011; Uzun & Senturk, 2010). Blended Learning provides better accessibility to the learners, more accessibility towards content and knowledge; improved time management between work, studies and easy communication with their fellows (Banerjee, 2011; Uzun & Senturk, 2010). Furthermore, pace of learning is in accordance with the level of learners that provide them a kind of satisfaction for their own learning and their self-confidence is also improved (Vaughan, 2007). Students' satisfaction is an essential element in determining the worth of blended learning. More specifically, students' satisfaction is influenced by diverse factors i.e. instructor, technology, interaction, teaching and class management (Naaj et al., 2012). Skill based training is among one of the precursors of success. According to Beadle and Scanty (2008); Harris et al., (2009), learners should be trained to direct the Information & Communication Technology used in blended learning and implementers must be qualified to use the technology from the user-end, in order to enable delivery. Certain other key challenges learners face with BL are: independent learning, self-efficacy, academic training, time management and though some may face difficulties in managing even simpler web-oriented technologies (Vaughan, 2007; Sheehy, 2008).

Attitude of faculty members towards the use of BL approach is catered as one of the prevalent challenges along with teachers' workload and lack of free time and support by the university administration (Tabata & Johnsrud, 2008). Now a day, more and more organizations of higher education are instigating blended learning approach in their academic programs. Also, in terms of learners' inclination, blended mode of learning is becoming more and more desirable (Vaughan, 2007). As a matter of consequence, ensuring students' satisfaction and maintaining quality among various components of Blended Learning format is becoming challenging. In sum, the diverse application of blended learning revealed by literature review motivated researchers to probe allied challenges and successes experienced by the students and faculty members of Directorate of Distance Education, International Islamic University Islamabad, Pakistan during the execution of blended learning in distance education programs**.**

Research Methodology

Research Design

This study has followed mixed methods approach involving Sequential Explanatory Design which is characterized by the collection and analysis of quantitative data followed by the collection and analysis of qualitative data. The priority is given to the quantitative data, and the two methods are assimilated during the interpretation stage of the study (Creswell, 2014).

Population & Sampling

Population of study included all the students enrolled in FALL 2016 programs of M.A (Education), B.Ed, ADE, M.Ed, M.A (Pakistan Studies) and their respective teachers. Hence, target sample included 126 students and 20 teachers.

Research Instruments

i. After intensive literature study, a self-developed questionnaire on 3-point Likert scale was designed to gather students' responses about their experience of Blended Learning. The options included *Disagree, Neutral and Agree*. The students were instructed to mark the most relevant option according to their personal experience. The last question of this survey tool was an open-ended question for students to mention any related comment or suggestion.
ii. A semi-structured interview of teaching faculty was also conducted to find out more about their experience of blended learning. Interview questions included: what was the format of training sessions provided for Blended Learning Technology?, what was nature of students' interaction in Blended Learning?, what were successes in Blended Learning and challenges in Blended Learning in terms of strengths and limitations respectively?.

Data Collection

Researchers personally visited Directorate of Distance Education, IIUI to approach students for gathering their responses through questionnaire. Interviews were conducted in the interviewees' offices, which lasted from 10-12 minutes. The interviews were recorded, transcribed and coded and similar themes were identified.

Data Analysis

The quantitative data collected through Likert scale were tabulated and analysed using descriptive statistical measure (percentage) whereas qualitative data conducted through interviews were analysed using descriptive explanations under relevant themes.

Findings

Table 1

Students' responses about their experience of Blended Learning

S.No	Statements	D	N	A
1.	The use of blended learning technology encouraged me to learn independently.	34 (27%)	17 (14%)	75 (59%)
2.	The instructor used blended learning technology appropriately.	37 (29%)	20 (16%)	69 (55%)
3.	The technology used for blended instruction is reliable.	28 (22%)	21 (17%)	77 (61%)
4.	Blended Learning can overcome the limitations of F2F instruction.	28 (22%)	16 (13%)	82 (65%)
5.	The instructor provided sufficient resources for the blended course(s).	48 (38%)	12 (10%)	66 (52%)
6.	Blended Learning activities were interesting.	27 (21%)	11 (9%)	88 (70%)
7.	The instructor provided feedback on assignments and other tasks in a timely manner.	45 (36%)	22 (17%)	59 (47%)
8.	Online discussion helped me to develop a sense of collaboration.	26 (21%)	16 (13%)	84 (66%)
9.	The online component encouraged peer learning and reflective thinking.	35 (28%)	18 (14%)	73 (58%)
10.	The online content enriched my comprehension of key concepts.	56 (44%)	10 (8%)	60 (48%)
11.	The peer-discussion and instant feedback on LMS improved my understanding of the content.	21 (16%)	16 (13%)	89 (71%)
12.	Communicating with the instructor and peers on Skype class was smooth.	65 (51%)	15 (12%)	46 (37%)
13.	I have experienced difficulty in using online component due to internet problem/access	23 (19%)	13 (10%)	90 (71%)
14.	LMS training sessions were held throughout the semester.	38 (30%)	26 (21%)	62 (49%)
15.	Participating in chats or discussions on LMS was easy.	86 (69%)	08 (6%)	32 (25%)
16.	Technical support was available to students and faculty.	31 (25%)	14 (11%)	81 (64%)
17.	Use of WhatsApp enriched communication between peers and course instructor.	31 (25%)	18 (14%)	77 (61%)

Findings of Table 1 indicate descriptive statistical analysis of students' responses about their experience of Blended Learning and their percentages. Responses revealed that majority of students (59%) viewed BL technology encouraging towards independent learning whereas 41% disagreed. Similarly, 55% respondents seemed satisfied with the BL technology managed by their instructor while 45% seemed dissatisfied. Likewise, 61% considered BL technology reliable whereas 39% disagree with it. Majority (65%) of students viewed that Blended Learning can overcome limitations of F2F instruction whereas 35% did not agree with it. Furthermore, 52% students agreed with the view that their instructor provided sufficient resources for blended course while 48% disagreed with it. 70% students viewed BL activities interesting and 30%.did not consider these interesting. Owing to the timely feedback on assignments and other tasks 47%, students seemed satisfied while majority (53%) dissatisfied.

With reference to the online component of BL, 66%, 58% and 48% students agreed and 34%, 42% and 52% disagreed with the view that it helped in developing sense of collaboration, peer learning & reflective thinking and comprehension of key concepts respectively. Moreover, highest response (71%) revealed peer-discussion and instant feedback on LMS improved students' comprehension of the content while 29% dissatisfied with this view. However, 63% students viewed communication on Skype class was difficult while 37% did not agree with this view. Likewise, 71% students experienced difficulty in using online component due to internet problem/access and 29% did not. Most of the students (51%) disagreed with the view that LMS training sessions were held throughout the semester, 49% agreed but 75% students considered participating in chats or discussions on LMS hard while minority of students (25%) did not consider it difficult. Furthermore, 64% & 61% students seemed satisfied with the availability of technical support and use of WhatsApp in supporting communication between peers and course instructor whereas 36% & 39% seemed dissatisfied. Overall, findings revealed students satisfaction towards BL approach where as they were dissatisfied with participating in chats or discussions on LMS, delay in feedback on their assignments and other tasks, quality of online content and LMS training sessions not held throughout the semester.

In response to the open-ended question, majority (75%) of students suggested to improve the assignment grading and feedback practice on the part of teachers. Furthermore, they also recommended to improve the efficiency of Skype sessions for maximizing student-teacher interaction and learning as well.

60% students also suggested that discussion forums should not be graded. Furthermore, 72% students suggested to minimize number of discussion forums on LMS. 40% students recommended that course instructors

should ask creative questions to boost critical thinking skills. 75% students also suggested that an orientation on blended learning tools and technologies as well as continuing support for them should be provided before the start of semester.

Analysis of Interview

Following is the descriptive analysis of faculty responses under identified themes;

1. Training sessions to use Blended Learning Technology

Majority (80%) of teachers viewed their experience of using LMS applications at good level. They further mentioned the importance of continuous training sessions and support services provided in this regard. Majority (75%) of the teachers had attended pre-training sessions regarding LMS and viewed it informative and supportive. They said that these pre-training sessions enabled them to apply various LMS applications such as discussion forums, quiz, assignment grading and feedback to facilitate semester activities. However, one faculty member suggested to improve the standard of these training sessions at some advanced level.

2. Students' interaction in Blended Learning

Nearly all teachers viewed students' interaction in BL mode via LMS, Skype, WhatsApp & F2F classes as most significant as compared to traditional methods of instruction. They said that LMS helped them to keep a track of all the work done during the semester, offered course management, provided access to content, served as a communication tool regarding class schedules, meeting timings and formative assessments. Skype sessions and WhatsApp also proved as vigorous catalysts for interactive communication.

3. Successes in Blended Learning

All the faculty members seemed satisfied with the BL approach. They said that BL has motivated students towards independent learning. Moreover, it helped in developing sense of collaboration, peer learning & reflective thinking among students. BL has made learning more interesting and engaging as it covers all learning styles. They further expressed that BL has enhanced their pedagogical experience and made their instruction more efficient and effective. More specifically, in the view of teachers, BL has fostered student-centered environment, which in turn encouraged

individualization. Faculty members also appreciated the quality of support services provided to them when they faced any technical error.

4. Challenges in Blended Learning

Pertaining to the challenges in BL, teachers shared that in the beginning, it was quite difficult for the students to grasp the technicalities of LMS software, as it was their first experience in online environment also some students were reluctant to use this technology. However, with the help of assisted practice and training sessions, students enhanced their learning. Majority of teachers viewed technical problems as the sole reason. Just few teachers analyzed technological competency gap as the cause of such problems. Teachers also viewed workload and weak audio/video connectivity during Skype sessions as major challenges in Blended Learning.

Discussion

Findings of the study revealed successes and challenges of Blended Learning experienced by students and faculty members of DDE, IIUI. Both groups of respondents have reflected their satisfactory experience with BL technology which can be considered as success. This overall finding is in line with the results of Young and Lewis (2008) and Motteram (2006) who surveyed the opinion of teachers in blended teacher education programs and concluded that they had optimistic ideas about blended learning approach in terms of overall satisfaction. Study conducted by Naaj et al. (2012) considered students' satisfaction an essential aspect in gauging the value of blended learning. Their study suggested that learners' satisfaction is affected by a mixture of causes, which include the teacher, the technology, class management, interaction and teaching. In this respect, this study has also considered these factors while determining students' satisfaction.

Owing to the importance of training(s) to use BL technology, results have shown that continuous training sessions and support services regarding LMS applications were provided to teachers and faculty. More specifically, these training sessions were organized twice a semester focusing on features of LMS and creating discussion forums, uploading study material & assignment, providing feedback and grade on students' work etc. The results are also according to the findings of Beadle and Scanty (2008) and Harris et al., (2009) that "learners should be trained to direct the Information & Communication Technology used in blended learning and implementers must be qualified to use the technology from the user-end, in order to expedite delivery". Furthermore, findings of this study indicated teaching workload as one of challenges in the planning of BL activities. This may be due to the fact that during the semester, it is difficult for teachers to find free time as well since they have to take the

class while keep posted their online instructional resources at the same time. Similar finding was advocated by Tabata and Johnsrud (2008).

Blended Learning provides better accessibility to the learners, more accessibility towards content and knowledge; better time management between work and studies and easy communication with their fellows (Banerjee, 2011; Uzun & Senturk, 2010). This study has also reported similar context of findings under the notion of LMS benefits i.e. access to content, course management, communication tool regarding class schedules, meeting timings, formative assessments and feedback on assignments.

Conclusions

It can be concluded on the basis of findings that success of Blended Learning included student-centered environment, independent learning, peer learning, collaborative learning and reflective thinking. Furthermore, on the part of teachers, BL has enhanced pedagogical practice like personalized instruction catering diverse learning styles. Similarly, e-assessments and feedback via LMS also improved students' understanding of the content. Students' satisfaction with BL technology, BL activities, provision of sufficient resources on LMS, use of WhatsApp for interactive communication, LMS training sessions and quality of support services provided to resolve technical issues were also regarded as predictor of success in Blended Learning. Challenges of Blended Learning included technical problems hindering internet access, technological competency gap, teachers' workload, delay in feedback on students' assignments, weak audio/video connectivity during Skype sessions and participating in chats or discussions on LMS.

Recommendations

Directorate of Distance Education, IIUI may organize an advance level of LMS training session(s) to the teaching faculty and students. There is need to improve the assignment grading and feedback practice on the part of teachers. Enhanced audio/video connectivity of Skype sessions may be ensured for maximizing student-teacher interaction and communication. Based on open ended responses, number of discussion forums (via LMS) may be minimized and exempted from grading. Course instructors may include creative questions in discussion forums to improve critical thinking of learners. An orientation regarding blended learning tools and technologies may be arranged before the start of semester. Teachers' workload may be reduced for better time management in the planning of BL activities.

References

Akbulut, Y. (2009). Students' perception of change readiness of a Turkish Education Faculty regarding Information and Communication Technologies. *Turkish Online Journal of Distance Education*, *10*(1), 141-58

Banerjee, G. (2011). Blended Environments: Learning Effectiveness and Student Satisfaction at a Small College in Transition. *Online Learning*, *15*(1), 8-19. doi: 10.24059/olj.v15i1.190

Beadle, M., & Santy, J. (2008). The early benefits of a problem-based approach to teaching social inclusion using an online virtual town. *Nurse Education in Practice*, *8*(3), 190-196. http://dx.doi.org/10.1016/j.nepr.2007.07.004

Bo Tso, A. (2015). Reflections on Blended Learning: A Case Study at the Open University of Hong Kong. *Asian Association of Open Universities Journal*, *10*(1), 77-86. http://dx.doi.org/10.1108/aaouj-10-01-2015-b008

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches (*4th ed.). New York, USA: SAGE Publications, Inc.

Donnelly, R. (2010). Harmonizing technology with interaction in blended problem-based learning. *Journal of Computers & Education*, *54*(2), 350–359. doi:10.1016/j.compedu.2009.08.012.

Driscoll, M. (2002). Blended learning: Let's Get Beyond the Hype. *E-Learning*, *3*(3), 1-3.

Dziuban, C., Hartman, J., Juge, F., Moskal, P. and Sorg, S. (2006). Blended learning enters the mainstream. In C. J. Bonk & C. R. Graham, (Eds.), *The Handbook of Blended Learning: Global Perspectives* (pp. 195-206). San Francisco, CA: Local Designs, Pfeiffer.

Graham, C. R. (2006). Blended learning systems: Definition, current trends, and future directions. In C. J. Bonk & C. R. Graham, (Eds.), *The Handbook of Blended Learning: Global Perspectives*. San Francisco, CA: Local Designs, Pfeiffer.

Halverson, L., Graham, C., Spring, K., Drysdale, J., & Henrie, C. (2014). A thematic analysis of the most highly cited scholarship in the first

decade of blended learning research. *The Internet and Higher Education*, *20*, 20-34. http://dx.doi.org/10.1016/j.iheduc.2013.09.004

Harris, P., Connolly, J., & Feeney, L. (2009). Blended learning: overview and recommendations for successful implementation. *Industrial and Commercial Training*, *41*(3), 155-163. http://dx.doi.org/10.1108/00197850910950961

McDonald, P. L. (2012). *Adult learners and blended learning: A phenomenographic study of variation in adult learners' experiences of blended learning in higher education* (Doctoral Dissertation). The George Washington University, USA.

Motteram, G. (2006). Blended' education and the transformation of teachers: a long-term case study in postgraduate UK Higher Education. *British Journal of Educational Technology*, *37*(1), 17-30. http://dx.doi.org/10.1111/j.1467-8535.2005.00511.x

Naaj, M.A., Nachouki, M. & Ankit, A. (2012). Evaluating Student Satisfaction with Blended Learning in a Gender-Segregated Environment. *Journal of Information Technology Education Research*, *11*, 185-200.

Owston, R. D., Garrison, D. R. & Cook, K. (2006), Blended learning at Canadian universities: issues and practices, In C. J. Bonk & C. R. Graham, (Eds.), *The Handbook of Blended Learning: Global Perspectives, Local Designs* (pp. 338-351). San Francisco, CA: Pfeiffer Publishing.

Owston, R. D., Sinclair, M., & Wideman, H. (2008). Blended learning for professional development: an evaluation of a program for middle school mathematics and science teachers. *Teachers College Record*, *110*(5), 1033–1064.

Poon, J. (2012). Use of blended learning to enhance the student learning experience and engagement in property education. *Property Management*, *30*(2), 129-156. http://dx.doi.org/10.1108/02637471211213398

Sheehy, G. (2008). The wiki as knowledge repository: Using a wiki in a community of practice to strengthen K-12 education. *Tech Trends Internet*, *52*(6), 55-60.

Stacey, E., & Gerbic, P. (2008). Success factors for blended learning. In *Conference of the Australasian Society for Computers in Learning in Tertiary Education (Deakin University, Victoria)* (pp. 964-968). Melbourne, Victoria: Deakin University: ASCILITE. Retrieved from http://dro.deakin.edu.au/view/DU:30018133

Tabata, L., & Johnsrud, L. (2008). The Impact of Faculty Attitudes Toward Technology, Distance Education, and Innovation. *Research in Higher Education*, *49*(7), 625-646. http://dx.doi.org/10.1007/s11162-008-9094-7

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

Vaughan, N. (2007). Perspectives on Blended Learning in Higher Education. *International Journal on E-Learning*, *6*(1), 81-94.

Wu, D., Bieber, M., & Hiltz, S. (2009). Asynchronous Participatory Exams: Internet Innovation for Engaging Students. *IEEE Internet Computing*, *13*(2), 44-50. http://dx.doi.org/10.1109/mic.2009.27

Woltering, V., Herrler, A., Spitzer, K., & Spreckelsen, C. (2009). Blended learning positively affects students' satisfaction and the role of the tutor in the problem-based learning process: results of a mixed-method evaluation. *Advances in Health Sciences Education*, *14*(5), 725-738. http://dx.doi.org/10.1007/s10459-009-9154-6

Yen, J., & Lee, C. (2011). Exploring problem solving patterns and their impact on learning achievement in a blended learning environment. *Computers & Education*, *56*(1), 138-145. http://dx.doi.org/10.1016/j.compedu.2010.08.012

Young, A., & Lewis, C. (2008). Teacher education programmes delivered at a distance: An examination of distance student perceptions. *Teaching and Teacher Education*, *24*(3), 601-609. http://dx.doi.org/10.1016/j.tate.2007.03.003

Citation of this Article:
Jumani, N.B., Malik, S. & Akram, H.(2018). Challenges and successes of blended learning in directorate of distance education, IIUI. *Pakistan Journal of Distance and Online Learning, 4*(2), 143-156.