Blended Modality: A Choice of the Students in Higher Education

Ambika Prasad Poudel*

Department of English Education, Dhankuta Multiple Campus, Dhankuta, Tribhuvan University, Nepal
poudelap@gmail.com

Abstract: The pedagogical approaches in this 21stcentury world have been modified in many ways with the rapid advancements and innovations in science and technology. The modes of teaching and learning such as distance learning (DL), online learning (OL), and blended learning (BL) are some of the modalities that are becoming popular at present. For some years now, blended modality (BM) of learning is spreading out rapidly and widely as a new pedagogical approach. In recent years, the use of BM is gradually increasing in Nepalese educational institutions too. This study has made an attempt to explore the students' perception towards blended modality of learning; and its benefits and challenges as a learning approach in the context of higher education in Nepal. Based on a survey-based questionnaire and semi-structured interview as research tools, it has been found in the study that the students had positive attitudes towards BM, and it was very useful to those learners in higher education, who needed to take family and job responsibilities together with their study. Besides, it was reported that though Internet connectivity was one of the main problems, the students were able to take the advantages of both F2F (face to face) and OL through BM.

Keywords: Blended learning, F2F learning, Interaction, Feedback, Exposure e

1. Introduction

Generally, blended learning refers to the integration of both classroom teaching and online learning. It is a style of education in which students learn through both traditional F2F teaching and online media. According to Keengwe and Kang [1], blended learning is an approach that integrates both F2F and online learning focusing on the use of Internet-

based technology. Bluic et al. [2] define, "Blended learning describes learning activities that involve a systematic combination of co-present interaction and technologically-mediated interaction between students, teachers, and learning resources" (p. 234). Likewise, Dziuban et al.[3] describe blended learning as mixing of pedagogical approaches, that consists of the advantages of the socialization opportunities of classroom learning, and the technological opportunities of online learning. Similarly, Kanuka et al.[4] view blended modality as a way of teaching that eliminates time, place, and situational barriers and it empowers high-quality interactions between teachers and students.

Literally, blending refers to mixing or combining different things or intermingling different varieties. Graham [5] defines blended learning as, "the combination of instruction form two historically separate models of teaching and learning: traditional F2F learning system and distributed learning systems, emphasizing distributed learning as the use of computer-based technologies outside the classroom"(p.5). It is an integrated amalgamation ofF2F instruction and computer mediated instruction (CMI) that combines methodologies and technologies in teaching and learning practices [5,6,7].

Integration of technology-based and F2F mode of teaching and learning is the most common characteristics in blended learning approach, though varieties of the forms of blended learning are found. Driscoll and Carliner [8] have discussed four types of the forms of blended learning: (i) a mix of web-based technology, (ii) a mix of various pedagogical approaches, (iii) combination of any forms of instructional technology with F2F instruction, and (iv) combination of instructional technology with actual job tasks to form an effective mix of learning and working. Whatever the forms, it can be understood that mixing or combination is the most requiring characteristic feature of blended modality.

Effective delivery of knowledge is one of the main concerns of current pedagogy. The pedagogical approaches F2F and OL were in practice before BL was introduced. In the past, F2F and OL remained separate and they targeted to address the needs of the learners of two different characteristics. F2F is in practice from long ago mainly with person to person interaction in high fidelity teacher-directed environment. F2F instruction provides the learners with human connectivity, social interaction, clarity and confidence, and spontaneity (chains of associated ideas and serendipitous discoveries) while its drawbacks are that there can be low participation of the learners, and there is no flexibility of time and place [5].

Technology integrated OL is a new approach that emphasizes learner-material interaction in low fidelity and self-paced learning [5]. The main benefits of OL are that

there is relatively more participation, flexibility, and depth of reflection. However, it lacks human connectivity and spontaneity, and that there might be procrastination in learning. It is also that the quality and quantity of learning might suffer in asynchronous online technology-based learning because of the factors like delayed feedback, challenges in adjusting new technologies, low motivation of the learners to read online materials, and a burden of a large amount of information available to the learners to be absorbed independently.

Thus, as discussed above, both F2F and OL have pros and cons. BM as an educational approach was introduced in the field of teaching and learning after experiencing these pros and cons of F2F and BL. Therefore, BM enables the learners to take advantage, and eliminate the limitations of both F2F and OL modalities. Blended learning has been significantly widespread in English language teaching (ELT), both in English for Academic Purposes (EAP), and in English for Specific Purposes (ESP) over the last decade, mainly in the countries such as Canada, Australia, Germany, Russia, China, and UK [9](p.98).

Many research studies carried out based on the developed world have disclosed that BM provides learners with lots of opportunities for enhancing learning outcomes creating learning spaces. However, less attention has been paid to focus the study in the contexts of developing countries. This study is hoped to be one of the research works that characterizes the use of blended learning modality in the developing countries. Moreover, as BM has been recently introduced in Nepalese educational system, it still requires research studies for developing the stakeholders' cognizance. Besides, empirical research works regarding the utilization of blended approach in Nepalese educational contexts are lagging behind. Therefore, there is a need of research studies on blended approach to explore its role in the field of teaching and learning in Nepal. This study makes an attempt at exploring the students' perception towards blended modality of learning; and its challenges as a learning approach in Nepalese higher education context. The research questions raised in this study are:

    i. How do the students perceive blended learning approach?
    ii. What are the benefits of BM?
    iii. What are the challenges that the students encounter while learning with BM?

2. Review of Previous Works

The advancement in technology has caused many social and educational modifications in this 21st-century world. The new approaches like distance learning and online learning are increasingly spreading and that the trend of teaching and learning is changing gradually

from face to face to distributed, live synchronous to asynchronous, high fidelity to low fidelity, and high human to high machine [5]. Another fact is that the rapid emergence of technological innovations has caused world globalization and it has created many complexities in the society [10]. Particularly, the globalization has caused socio-cultural diversities, which has created both opportunities and challenges. People need to have abilities to cope such complexities and challenges. Erstad [11] believes that the educational use of the digital tools can play a significant role in the development of an educational system that makes learners able to face the challenges.

Chung and Davis [12] discussed that blended instruction can enable learners in controlling the pace of learning and flow of instruction, selecting resources, and in making better time management. Poon [13] listed the benefits that blended learning: enhances student learning outcomes, provides greater flexibility for students and teachers, improves autonomy, reflection, and resources skills; reduces the students' withdrawal rate, fosters professional learning environment, and saves potential cost and resources.

Graham et al. [14] have discussed three reasons that influence the spread of BL: (i) improved pedagogy: in BL pedagogy, firstly the learners acquire background knowledge through online self-paced learning, secondly, they are involved in active learning and application of their experiences in F2F learning lab instead of lecture, and lastly, they are involved in transferring the learning to the workplace with online learning support (ii) increased access and flexibility: in BL there is flexibility of taking advantages of both OL and F2F; the learners can be benefitted with the convenience offered by DL and OL and at the same time they are benefitted with the social interaction of F2F classroom, and (iii) increased cost effectiveness: in BL system there is delivery of consistent semi-personal content to be received by a large audience in a short period of time.

Mixing or combining is the usual characteristics of blended learning. However, the proportion of time of mixing the approaches may vary a great deal and that different scholars have different opinions about it. Allen et al. [15] view blended instruction to have more flexibility that a range of 30 to 79 percent of the content should be delivered online. While on the other hand, Bernard et al. [16] opine that in blending instruction there should be at least 50% of a total course time for face-to-face classroom instruction, and the remainder of time for working outside of the classroom. They discussed that in some cases there is an equal blend of classroom instruction and online delivery, while in most of the cases, the blended learning could accrue from as little as 25% online work and 75% F2F instruction. The proportional ratio of the F2F and OL is generally determined by the educational

environment or the teaching-learning context of the learners. According to Hockly [9], "There is no one right blend because BL can take place in a wide range of contexts" (p.99). Whittaker (2013, as cited in Hockly [9]) has suggested consideration of a four-step approach in designing the BL course: (i) teaching-learning context, (ii) lead mode and timetabling, (iii) teachers' and learners' role, and the interaction pattern, and (iv) feedback and evaluation.

There is a significant role of the integration of the technological and pedagogical tools in blended learning. Some of the important pedagogical tools used in BL as mentioned in Keengwe and Kang [1] are cooperative learning, constructive theory, interaction, problem-based learning, and experiential learning. Similarly, the technological tools such as CD-ROM, Blackboard, web-based site, wiki, online lecture, online discussion, and chat are more commonly used in BM. The technological tools contribute a lot in BM, they can: (i) provide spaces for learning to integrate into learning communities, (ii) integrate the creative ideas of the learners into practical skills, and (iii) help the learners for the classroom integration of their technological skills [1].

Wai and Seng [17] in a case study investigated the students' perception and the effectiveness of BL tools used in the teaching and learning process. They found that the students were satisfied with BL and that the tools enhanced the students' learning outcomes and learning experiences. BM allowed the learners more freedom to choose their learning environment. Frantz et al. [18] carried out an action-based research in order to highlight the challenges and identify the opportunities encountered by an evidence-based practice (EBP) postgraduate class who used blended modality of learning. They got into the conclusion that though blended modality was proved to be appropriate in higher education institutions, it had both opportunities and challenges. In blended modality, there was easy interaction between the instructors and the learners, and it reduced instructor dependence. BM made the learners more responsible for their work and that the timely feedback involving problem solving improved communication skills between and among the students. The main challenges of BM in their study were that the Internet connection was not reliable because of which some students were unable to access Blog that was used to function as media and that some resources uploaded were inaccessible. They concluded that if the challenges could be addressed, BL could be effective in building students' engagement and relieving of overcrowded classroom in higher education.

The review of literature has given an insight that BM can be of different forms and can have different combinations. It is spreading out with improved pedagogy and technology to create learning communities and learning spaces. If some attempts are made to address

the challenges, it can provide several benefits.

3. Theoretical Framework

The theoretical framework guiding this study is the theory of social constructivism. According to social constructivist approach, learning is a social and active process [19], and the concepts of learning such as self-governed learning, problem-based learning, and collaboration process are derived from a social constructivist approach [20]. Social constructivism emphasizes the construction of knowledge by means of student-centred collaborative learning approach. Within the framework of social constructivist pedagogy, learners are provided with an environment in which they are directed at solving problems through self-controlled learning platforms.

The adoption of technology in social constructivism is a process that involves the social groups in learning and innovations. The constructivists view technology implementation as 'an enacted, dynamic, changeable and situated process'. They view 'people as active enablers of technology implementation, and therefore, as individuals, who may use the same technology differently, which can result in a range of implementation outcomes' [21](p. 42). The social software tools such as blog, wiki, video conferences, file sharing, discussion forum can support a social constructivist approach to e-learning by providing the learners with personal tools and engaging them in different kinds of social networks [20](p.1). To Daslgaard [20], self-governed and problem-based activities which develop on the basis of learners' own problem solving are considered to be the focal point of a learning process. And for such development, it needs an open-ended learning environment, the constructivists' learning environment, which provides the learners with multiple possibilities for various activities [22, 23]. In social constructivist learning environment, the learners are surrounded by the tools and resources that provide opportunities for learning, interaction and collaboration, where the learners' activities are initiated by several problem-based tasks. In BM, the learners have an environment to utilize such tools and resources; and make highly qualitative interaction between the teacher and students and that help enhance their knowledge construction.

4. Data and Models

The participants in this study were 32 students of master's degree in English education at Dhankuta multiple campus, Dhankuta, Nepal. The students were from the second year and were involved in the blended modality of the teaching and learning process. Most of them were part-time students mainly due to different reasons such as campuses/colleges located

in far distance from their home, family and job responsibilities, and business. In the process of sampling, a list of the students who were involved in blended modality was made, and the random sampling method was used in the selection of the participants for more objectivity in the study. Random sampling method is relatively more bias-freer and is useful to improve the degree of generalization [24]. It is also that probability/random sampling enables the researchers to ensure that the sample has the same composition and characteristics of the universe [25].

The data collected for the study was related to the students' experience of blended learning. As a tool of data collection, a survey-based questionnaire was developed with two close-ended questions, and three five-point Likert type questions; and was distributed to the students. Altogether 28 students' responses were received (16 male, and 12 female), and they were named participant 1 to 28 as participant 1, participant 2, participant 3, and so on for data analysis purposes. The data collected through the Likert type and closed-ended questions were analyzed and interpreted in terms of average and the percentage using descriptive statistics. In addition to the survey-based questionnaire, semi-structured interviews as the research tools were conducted with randomly selected three students to understand their in-depth experiences of BM. The responses to the interview questions were coded, segmented, and categorized into themes adopting a category construction approach [26]; and were analyzed and interpreted using qualitative content analysis methods [27].

5. Results and Discussion

The results of the facts and information collected have been shown below in the charts and tables. The figures in decimal have been rounded to their whole numbers. The results of the data have been analyzed, discussed, and interpreted in the following paragraphs.

5.1. Students' Perception towards Blended Learning

The results of the data analysis show that blending learning was a relatively more appropriate modality of learning for the students. Among F2F, BL, DL, and OL; 57% of the students preferred BL. The results in Fig.1 illustrate that 32% of the students had their preference to F2F. Only 7% and 4% of the students chose OL and DL respectively. Similarly, the results indicate that the maximum number of the students were generally satisfied with BM. As Fig. 2 shows 71% of the students were generally satisfied, and 18% were very satisfied with the modality of blended learning.
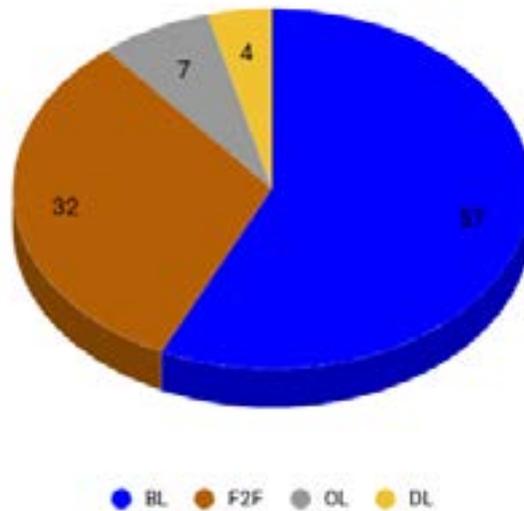
Fig.1: Students' preference of learning modality

The results indicate that the students showed positive attitudes towards blended learning modality. BL was the first choice of the majority of the students. They perceived BM as a useful and appropriate approach to their learning due to its modality of flexibility and combinatorial features. The results were consistent with the study carried out by Wai and Seng [17] that most of the students had their satisfaction with the learning process of blended modality as it could combine the features of both F2F and OL. Most of the students shared their satisfaction that they could take advantages of both F2F interaction with their teacher
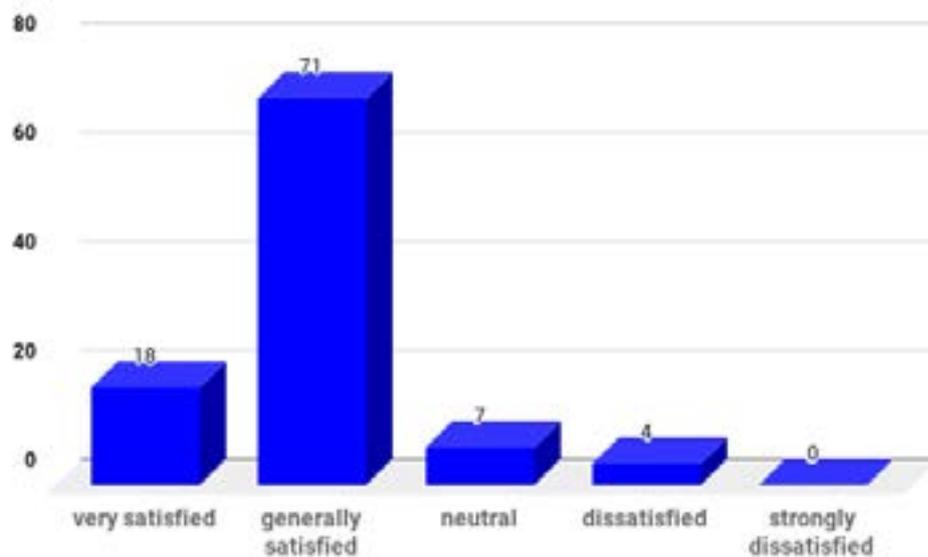

Fig.2: Level of students' satisfaction with BM

and new educational tools. As Dalsgaard [20] viewed, BM could include different technological tools that help create social constructivist learning environment in which the students could be engaged in learning.

5.2 Reasons for Choosing Blended Modality

The study has made an attempt to find out the reasons for choosing the blended modality in their learning process. The results indicate that the main reason of choosing BM was that the students needed to take the responsibility of their family and/or job by helping the family being involved in the household work or working in their jobs. As the data shows, 79% of the students had strong agreement that they chose BM due to their responsibility of their family and/or job. Similarly, 64% of the students had strong agreement that the availability of resources was the main attraction of BL model that contributed to increasing the amount of exposure to the contents. In the same way, altogether 46% of the students strongly agreed that they chose BL because of quality of interaction, and 25% of the students had strong agreement that the quality of feedback they received attracted them towards BM. Fig. 3 illustrates it.

The students shared their experiences in the interview that BM was practically useful to proceed their study. Many of the participants opined that they needed to take their family and job responsibilities, and they were not fully free to proceed their study; and BM was most appropriate to give the right solution. Some of the most impressive responses to the question related to the reason behind choosing BM were:

"I need to take some responsibilities for my family together with my study. I want both of these go ahead together." (participant 3)

"I have got a job with a great difficulty after a tough competition. Due to my job, I am not fully free to invest all my time in my study." (participant 21)

"BM is more convenient to make my own time management. I can do my business and can study as well in my leisure time." (participant 3)
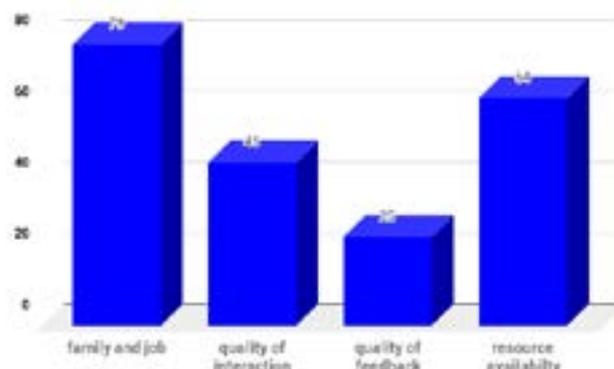

Fig.3: Reasons for choosing BM

It can be interpreted from the responses above that BM was the target modality of the learners, particularly in higher education. The fact was that in addition to their study, most of the learners in higher education needed to take other responsibilities as well. BM could be the best choice in such educational contexts, mainly due to its flexible modality that allowed them to adjust their own appropriate time schedule. The results are very similar to the discussions that Graham et al. [5] made about the reasons that influenced the spread of BL. As Allen et al. [15] viewed, the students could be benefitted with both F2F interaction with their teacher; and printed text materials and online resources in blended modality.

5.3 Benefits of Blended Modality

The results of the data show that there were many types benefits of blended modality to the students. Most of the students (89%) had their strong agreement that they could take the advantages of both F2F and OL with BM. Similarly, another important advantage was that BM provided the students with a freedom or flexibility learning-time management in such that the learners could choose learning time and learning places that are appropriate to them (79 % of the students had strong agreement on it). Likewise, 25% showed their strong agreement, and 46% of the students agreed that they found BM beneficial from cost effectiveness point of view as well. The students were able to take the responsibility of their family in addition to their learning in BM. Majority of the students agreed that BM was useful for resources availability and for providing an environment for clarifying their confusions. Table1 shows the benefits of BM for the learners.

As the reply to the open-ended question in the interview 'what are the advantages of BM?', some of the most touching responses of the participants were as follows:

> "*I cannot be a regular student at the campus. However, I can take benefits of both F2F and OL; taking part in the interaction, and flexibility of time and space.*" (participant 3)
>
> "*It is possible for doing F2F discussion with the class teacher. I can be clear in many of my confusions in BM can increase confidence in learning.*" (participant 7)
>
> "*BM is more fruitful from the points of view of economy. I can adjust my time for my study, according to my context, while at the same time, I can help my family member*" (participant 18)

Table 1: Benefits of Blended Modality

S.N	Benefits of blended modality	SA %	A %	N%	D%	SD%
01	BM has benefits of both F2F and OL	89	7	4		
02	Quality of interaction is better in BM		46	39	14	
03	Quality of feedback is better in BM		46	39	14	
04	BM provides environment for clarifying confusion[Inserted: an]		50	39	11	
05	BM provides flexibility of time and space	79	14	7		
06	BM is more economic that saves potential cost	25	46	25	4	
07	BM increases availability[Inserted: or] of the resources[Deleted:o]		54	39	7	

SA=strong agreement, A= agreement, N= neither agree nor disagree, D=disagreement SD= strong disagreement

Similar to the discussion made by Poon [13] and Keengwe and Kang [1], the responses above can be interpreted that BM has many advantages, it can give right solutions to many of the problems of the students in higher education. BM helps eliminate the main drawbacks of F2F modality that it requires regular participation of the learners and the weakness of OL that it lacked socialization skills. Likewise, the students can be benefitted with the cost-effectiveness and availability of the resource materials. It can combine both technology and pedagogy to provide spaces for learning. As Jonnasen [23] view, BL provides the learners with multiple possibilities to create constructivists' open-ended learning environment.

5.2 Reasons for Choosing Blended Modality

There were several challenges in blended modality. Most of the students (71%) reported that Internet connectivity was the main problem that they encountered while learning with

BM (see Fig. 4). They could have Internet access in the educational institutions, but most of the students were from village area where there was no Internet access and the facilities could not have been used. They needed to depend on their mobile data most of the time, and it sometimes created problems in downloading the resources, and/or opening the web pages. Another problem was the difficulty in their time management. 64% of the students reported that because they had family and/or job responsibility, they could not manage adequate time for their studies. The problem also occurred there when they needed to participate the F2F session of the course. In total, 43% of the students shared that sometimes problems occurred due to the teacher's skills and experiences. The participants reported that newly appointed teachers were usually more active, but generally, they lacked practical experiences. On the other hand, some of the old teachers did not have adequate skills of new technologies and online teaching. Some 25% of the students viewed that problems could also be created due to the design of the course, and time schedule. Generally, the course design and the time schedule were set by the teacher, and some of the students could not attend the F2F sessions due to their engagement in their jobs and in household work.
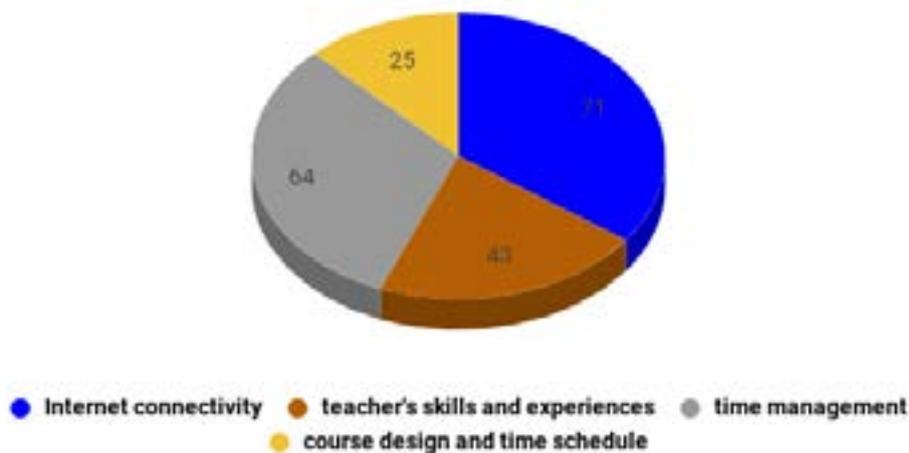
Fig.4: Problems of blended modality

Fig.4 summarizes the main problems of the students while being involved in blended modality of learning. The results are consistent with the study carried out by Frantz et al. [18] that access to the Internet was the main obstacle for the students. Participant 21 in the interview expressed, *"I do not have Internet access at my home and I need to use the mobile phone data package, which takes long time to download some documents while some files cannot be downloaded."* Similarly, although there was flexibility of learning time management in BM, the students reported that they were not able to give adequate time to

their study due to their own busy schedule. Participant 5reported, *"My office does not allow me many leaves. I am too tired of my day work to make my study in the evenings. Time management to attend even the F2F classes is not easy for me."*

These problems in the paragraphs above generally represent the social contexts or environment of the students in higher education in Nepalese societies. The internet is costly to afford for many of the students due to their economic status and that in many of the rural areas it is inaccessible. Moreover, many of the students are compelled to do their job and take their family responsibility that they have little time for their study.

6. Conclusion

Blended learning, a new pedagogical approach, is a combination of F2F and OL modalities. An ideal BM of teaching and learning includes the features of these two modalities with a skillful combination of technology and pedagogy. Therefore, the learners can take advantages of both F2F and OL in blended learning approach.

The process of convergence where the technologies are merged or blended for increasing the power of information and production content is an important cultural development in recent years [28]. Blended learning, an approach to integrating technologies in the educational system, is amalgamating of digital education/learning and traditional face-to-face classroom learning [16]. Therefore, it can address the issues related to both online and face-to-face learners. It can help overcome various limitations that experience in face to face and online learning and adopt the advantages of both types of learning approaches [16]. Blended learning can be used as a solution to many of the learning barriers, and to grapple with many of the problems and difficulties of the learners of the modern societies.

To conclude, BM can successfully address many of the challenges of the learners who have jobs and family responsibilities together with their studies. Some specific advantages are that in BM it is more convenient for the learners to make their own time management for their study, and unlike OL there is an environment for getting clarity of the confusions in synchronous F2F interaction and developing confidence in their learning. However, it is necessary to consider the factors such as the Internet connectivity, teachers' pedagogical skills, and appropriate design of the course for the productive utilization of BL. Due to its specific benefits of making the learners able to take advantages of the main modalities (i.e. F2F and OL) of teaching and learning, and it is spreading out more popularly among the learners.

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Appendix

Questionnaire

[A] Survey-based questions

1. Perception of BM

(a) Which type of modality do you prefer? Please tick () in the best answer.
   (i)Face-to-face (F2F) (ii) Blended modality (BM) (iii) Online learning (OL) (iv) Distance learning (DL)

(b) In general, how satisfied are you with BM? Please tick () in the best answer.
   (i) Very satisfied (ii) generally satisfied (iii) Neither satisfied nor dissatisfied (iv) Dissatisfied (v) strongly dissatisfied

(c) What are the reasons that made you to be involved in BM? Tick()in the box after the statements

S. N.	Reasons for choosing BM	SA	A	N	D	SD
01	Family and job responsibility					
02	Quality of interaction of BM					
03	Quality of feedback in BM					
04	Resource availability					

SA=strong agreement, A= agreement, N= neither agree nor disagree, D=disagreement SD= strong disagreement

2. Benefits of BM

Tick () in the box after the statements.

S. N.	Benefits of blended modality	SA	A	N	D	SD
01	BM has benefits of both F2F and OL					
02	BM saves potential costs and resources					
03	Quality of interaction is better in BM					
04	Quality of feedback is better in BM					
05	BM provides environment for clarifying confusions					
06	BM provides more flexibility of time and space					
07	BM is more economicalthat saves potential cost					
08	BM increases the availability of the resources					

SA=strong agreement, A= agreement, N= neither agree nor disagree, D=disagreement
SD= strong disagreement

2. Benefits of BM

Tick () in the box after the statements.

S. N.	Problems and challenges in BM	SA	A	N	D	SD
01	Course design and time schedule					
02	Teacher's skills and experiences					
03	Internet connectivity					
04	Time management					
05	Resources availability					

SA=strong agreement, A= agreement, N= neither agree nor disagree, D=disagreement
SD= strong disagreement

[B] Interview Questions

a. Why do you choose BM to other modalities? Please share your experiences to specify the important reasons.
b. How much are you satisfied with BM? Please justify.
c. In your opinion, what are the advantages of BM? Please share your experiences.
d. What are the problems that you face while learning with blended modality? Please specify major problems from most important to least important.