BLENDED MODALITY: A CHOICE OF THE STUDENTS IN HIGHER EDUCATION

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Abstract

The pedagogical approaches in the field of education have been modified in many ways with the rapid advancements and innovations in science and technology in this 21st century world. The modalities of teaching and learning such as distance learning (DL), online learning (OL), and blended learning (BL) are some of the approaches 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. The use of BM is gradually increasing in Nepalese educational institutions too in recent years. 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 interviews as research tools, the study found that the students had positive attitudes towards BM, and it was more popular to those learners 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.

Abstract in Nepali

आजको एक्काइसौं सताब्दीको विश्वमा विज्ञान र प्रविधिको द्रुतदर आविष्कार तथा विकासले गर्दा शिक्षाको क्षेत्र भित्रका शैक्षणिक विधिहरुमा धेरै प्रकारका परिमार्जनहरु भएका छन् । वर्तमान समयमा शिक्षण सिकाइका मोडेलहरु जस्तै दूर शिक्षण (दू. शि.), अनलाइन शिक्षण (अ. शि.), तथा मिश्रित शिक्षण (मि. शि.) निकै नै लोकप्रिय भइरहेका शिक्षण विधिहरु हुन् । केही वर्ष यता मिश्रित सिकाइ मोडेल (मि. सि. मो.) सिकाइको नयाँ विधिकोरुपमा द्रुतदर र व्यापक किसिमले फैलिरहेको छ । हालका वर्षहरुमा मि. सि. मो. नेपालका शैक्षिक संस्थाहरुमा पनि क्रमिकरुपमा बिस्तार भइरहेको छ । यस अध्ययनले नेपालको उच्च शिक्षाको सन्दर्भमा मिश्रित सिकाइ मोडेलप्रतिको विद्यार्थीहरुको धारणा, साथै यसका फाइदा र चुनौतिहरुको अन्वेषण गर्ने प्रयास गरेको छ । सर्वेक्षण-प्रस्नावलि र अर्ध-संरचित अन्तर्वार्तालाई अनुसन्धानको उपकरणकारुपमा प्रयोग गरिएको यस अध्ययनमा यो पाइयो कि विद्यार्थीहरु मि. सि. मो. प्रति सकारात्मक थिए, र यो मोडेल आफ्नो अध्ययनको साथै आफ्नो परिवार र पेशाको समेत जिम्मेवारी भएका विद्यार्थीहरुको लागि बढी लोकप्रिय थियो । यसका साथै अध्ययनको क्रममा यो पनि बताइएको थियो कि यद्यपि इन्टरनेटको उपलब्धता विद्यार्थीहरुकालागि समस्याहरुमध्ये एक प्रमुख थियो, तिनीहरु मि. सि. मो. को माध्यमबाट आ. सा. सि. (आमने सामने सिकाइ) र अ. सि. दुवै विधिहरुका फाइदाहरु लिन सक्षम थिए ।

Keywords: Blended learning, F2F learning, Interaction, Feedback, knowledge construction

Introduction

Generally, blended learning refers to the amalgamation of both classroom learning and Internet technology mediated learning. It is a modality of education in which students learn through the use of both traditional classroom teaching mode and Internet-assisted learning mode. According to Keengwe and Kang (2013), blended learning is an approach that integrates both F2F and online learning, focusing on the use of Internet-based technology. Bluic, Goodyear, and Ellis (2007) define, "Blended learning describes learning activities that involve a systematic combination of co-present interaction and technology-mediated interaction between students, teachers, and learning resources" (p.234). Likewise, Dziuban, Hartman, Juge, Moskal, and Sorg, (2006) 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, Brooks, and Saranchuck, (2009), 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 different things or intermingling different varieties. According to Graham (2005; p.5) blended learning is, "the combination of instruction from 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". It is an integrated amalgamation of F2F instruction and computer mediated instruction (CMI) that combines methodologies and technologies in teaching and learning practices (Sharma, 2010; Graham, 2005; Oliver &Trigwell, 2005).

The integration of technology-based and F2F mode of teaching and learning is the most common characteristic feature in blended learning approach, though varieties of the forms of blended learning are found. Driscoll and Carliner (2005) have discussed four types of the forms of blended learning: (a) a mix of web-based technology, (b) a mix of various pedagogical approaches, (c) combination of any forms of instructional technology with F2F instruction, and (d) combination of instructional technology with actual job tasks to form an effective mix of learning and working. Whatever the forms, varied interactivity involving the teachers and the students; and prompt feedback to the students' response are the key instructional strategies to students' engagement in blended courses (McGee & Reis, 2012).

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 the support of 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 as they might not be always able to attend the classroom physically, and there is no flexibility of time and place (Graham, 2005). On the other hand, technology integrated OL is a new approach that emphasizes learner-material interaction in low fidelity and self-paced learning (Graham, 2005). 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 having experiences of 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 (Hockly, 2018; p.98).

Several research studies have been conducted to explore the nature and role of BL as an educational approach. Many research works carried out based on the contexts of the developed worlds have disclosed that BM provides learners with lots of opportunities for enhancing learning outcomes creating learning spaces (Poon, 2013; Graham, Allen, & Ure, 2005; Chung & Davis, 1995). 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, especially based on the higher educational context in Nepal. Moreover, as BM has been recently introduced in the Nepalese higher education system, it still requires research studies for developing the stakeholders' cognizance about its characteristics. Besides, empirical research

works regarding the use 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 higher education 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 were:

- How do the students in higher education perceive blended learning approach?
- What are the benefits of BM?
- What are the challenges that the students encounter while learning with BM?

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 (Graham, 2005). Another fact is that the rapid emergence of technological innovations has caused world globalization and it has created many complexities in the society (DeMulder, Ouedraogo, & Stribling, 2009). 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 (2015) believes that the pedagogical use of the digital tools and technologies can play a significant role in the development of an educational system that makes learners able to face the challenges.

Effective delivery of knowledge is one of the main concerns of current pedagogical approaches. Poon (2013) listed the benefits of blended approach that it can: (a) enhance student learning outcomes, (b) provide greater flexibility for students and teachers, (c) improve autonomy, reflection, and resources skills, (d) reduce the students' withdrawal rate, (e) foster professional learning environment, and (f) saves potential cost and resources. Chung and Davis (1995) discuss that blended instruction can enable learners in controlling the pace of learning and flow of instruction, in selecting resources, and in making better time management.

Graham, Allen, and Ure (2005) have discussed three reasons that influence the spread of BL: (a) 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 (b) 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 (c) 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 tow or several approaches 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, Seaman, and Garrett (2007) 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, Borokhoski, Schmid, Tamim, and Abrami, (2014) 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 (2018; p.99), "There is no one right blend because BL can take place in a wide range of contexts". Whittaker (2013), as cited in Hockly

(2018) has suggested some considerations of a four-step approach in designing BL course: (a) teaching-learning context, (b) lead mode and timetabling, (c) teachers' and learners' role, and the interaction pattern, and (d) feedback and evaluation.

There is a significant role of the integration of the technological and pedagogical tools in blended approach. Some of the important pedagogical tools used in BL as mentioned in Keengwe and Kang (2013) 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: (a) provide spaces for learning to integrate into learning communities, (b) integrate the creative ideas of the learners into practical skills, and (c) help the learners for the classroom integration of their technological skills (Keengwe & Kang, 2013).

Wai and Seng (2014) 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. Likewise, Dziuban et al. (2006) found BM more effective than fully F2F and OL teaching-learning modes in terms of the satisfaction of the students and flexibility of time and place. Frantz, Himalowa, Karuguti, Kumurenzi, Mulenga, and Sakala, (2011) 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. Smith, Clark, and Blomeyer (2005) argued that the teachers and the students have to struggle in online learning because of the lack of theoretical and practical understanding. Keengwe and Kang (2013), pointed out that online learning can be problematic due to the activities such as cyber-bullying and cyber-harassment.

The review of literature has given an insight that BM can be of different forms and can have different combinations. More importantly, BL is a new approach that has been refined in such a way that it includes the strengths of F2F and OL, and at the same time it avoids the limitations that exist in these modalities. 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.

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 (Vygotsky, 1978), and the concepts of learning such as self-governed learning, problem-based learning, and collaboration process are derived from a social constructivist approach (Dalsgaard, 2006). 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.

Social constructivism asserts that human development is socially situated, and the learners construct knowledge through interactions with others. Adoption of technology in social constructivism is a process that involves 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" (Bondarouk, 2006; 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 interactions in different kinds of social networks (Dalsgaard, 2006; p.1). To Daslgaard (2006), 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. For the development of such self-governed problem-solving activities, it needs an open-ended learning environment, the constructivists' learning environment, which provides the learners with multiple possibilities for various activities such as rich interaction, collaboration, and resources sharing (Land & Hannafin, 1996; Jonassen, 1999). 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 helps enhance their knowledge construction. The environment of social nature of interactions, and active experiential learning situations are prioritized in social constructivism (Masciotra, 2007), which can be created in blended modality of learning. BM creates a learning environment to interact, share and practice learning experiences both in F2F mode and in virtual mode both with human social community in the classroom environment, and with digital learning community in online environment for knowledge construction of the learners.

Data and methods

This study is a mix of both quantitative and qualitative research design to make the research work of related issues more extensive and comprehensive. The participants in this study were the students of master's degree in English education at Tribhuvan University, Dhankuta Multiple Campus, Dhankuta, Nepal. The students were from the first and second year and were involved in the blended modality of teaching and learning process. All of the participants were irregular students due to different reasons such as: their campus/college was located in far distance from their home, they needed to take care their family, they had job responsibilities, and they were involved in some other business. In the process of sampling, the irregular campus students studying M. Ed. English were sorted out, and a list of the students who were involved in blended modality was made. Then, the random sampling method was used in the selection of 32 participants (N = 32, 19 boys and 13 girls) from this population. Random sampling method is relatively more bias-freer to increase more objectivity and reliability of the study; and is useful to improve the degree of generalization (Cohen, Manion, & Morrison, 2007). It is also that the probability/random sampling enables the researchers to ensure that the sample has the same composition and characteristics of the universe (Kothari, 2004).

The quantitative data and qualitative information collected for the study were related to the students' experience of blended learning. As the tool of data collection, a survey-based questionnaire with two close-ended questions, three five-point Likert type questions and three open-ended questions was developed to obtain data related to both facts and personal feelings of the participants. Altogether 28 students' responses were received (16 boys, and 12 girls), and they were given pseudonyms 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 analysed 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 five students to understand their in-depth experiences of BM. The students were given pseudonyms as "participant A, B, C, D and E", and the open-ended questions were elaborated to be used as the interview guidelines. A

recording device was used to record the interviews, and tape-scripts of the responses were produced. The responses to the interview questions in the tape-scripts were coded, segmented, and categorized into themes adopting a category construction approach (Bogdan & Biklen, 1992); and were analysed and interpreted using qualitative content analysis methods (Patton, 2002).

Results and Discussion

The results of the facts and numerical data 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 analysed, discussed, and compared with the qualitative information; and the findings have been interpreted in the following sub-headings in the paragraphs to come.

Students' perception towards blended learning

The participants involved in this study had experiences of F2F teaching and learning in their previous level. As they were the students of master's level, they had also some experiences of online, distance, and BL modes of instruction. An attempt was made in this study to understand the participants' perception of different modalities, and the results of the data analysis show that BL was a relatively more appropriate modality of learning for the students. Among F2F, BL, DL, and OL; 57% of the students preferred BL to other modalities (see Figure 1). The results illustrate that 32% of the students had their preference to F2F. Only 7% and 4% of the students chose OL and DL respectively.
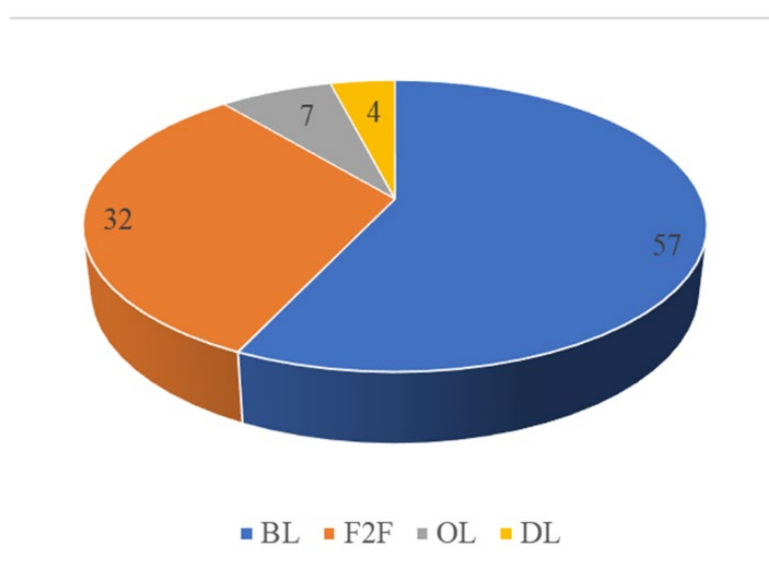

Figure 1. Students' preference of learning modality

Similarly, some efforts were made to understand the degree of the students' satisfaction with BM in this study. Among the alternatives *very satisfied*, *generally satisfied*, *neutral*, *dissatisfied*, and *strongly dissatisfied* given in the Likert type question; the results indicate that the maximum number of the students were *generally satisfied* with BM. As Figure 2 shows 71% of the students were *generally satisfied*, and 18% were *very satisfied* with the modality of blended learning. Likewise, altogether 7% of the participants were *neutral*, 4% of them were *dissatisfied*, while none of the participants were *strongly dissatisfied*.

The results can be interpreted that many of the students have positive attitudes towards BL modality as it is the first choice for them. They perceive BM as a useful and appropriate approach to their learning. The participants shared their experiences that it is mainly due to the flexibility of place and time in BM. Unlike F2F, BM do not require the students' physical attendance in the classroom the whole academic session, and that they do not need to be bound within a fixed time framework. Except in the contact/classroom session (which is usually

for 20 to 30 percent of the duration of the academic session), the students themselves can manage their study time according to their contexts and needs.
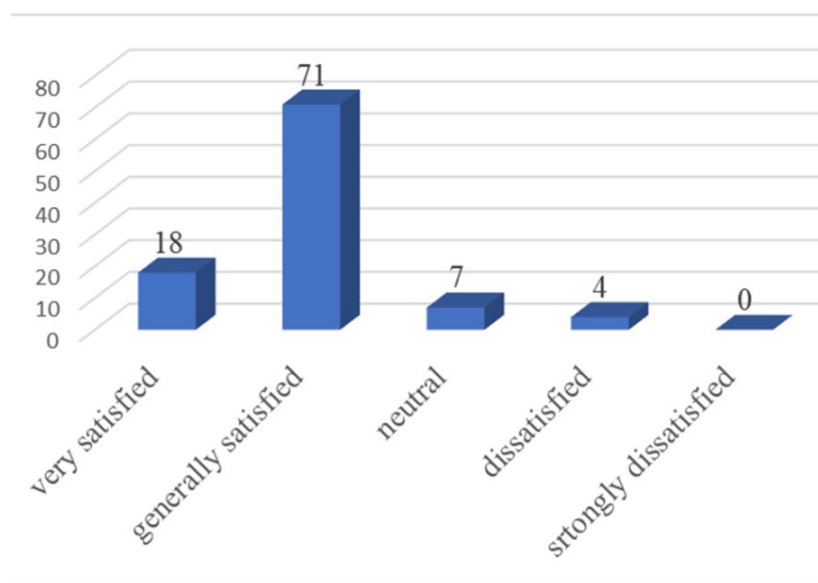

Figure 2. Level of students' satisfaction with BM

Likewise, the participants shared that the combinatorial feature of BM is another important attraction. BM is the situation by which the students can take advantages of both F2F and OL. As in F2F, the students are provided with the environment of human connectivity to practice several types of social interaction in BM. The opportunity of direct and face to face interaction and discussion with their teachers and friends help increase their quality of meaning negotiation, and clarity and confidence in learning. Likewise, as in OL, there is environment for accessing several learning resources in an efficient way, being connected to the learning community and learning platforms globally, and efficient tools for learning collaboratively in BM. The students can have opportunities of using effective tools for sharing their ideas and learning resources anytime anywhere. All these increase the students' satisfaction with BM.

The results in this study seem to be consistent with the research carried out by Wai and Seng (2014) that most of the students have their satisfaction with the learning modality of BL. As a consequence of the students' satisfaction as such, there are good possibilities for enhancing students' learning outcomes in BM. Most importantly, BM is useful for taking the benefits of different pedagogical approaches of teaching and learning. Additionally, BL approach combines technology with pedagogy that facilitates knowledge construction of the learners. As the works Keengwe and Kang (2013), Dalsgaard (2006) discussed the role of different software tools for involving the learners in self-governed problem-solving activities, BM can include different technological tools that help create social constructivist learning environment in which the students can be engaged in learning.

Reasons for choosing blended modality

The study made an attempt to know the reasons for choosing BL as the modality of their learning. For this, a five-point Likert type question was developed in the questionnaire in which most possible causes were given and the participants were asked to mark their opinion among the given alternatives *strong agreement*, *agreement*, *neither agreement nor disagreement*, *disagreement*, and *strong disagreement*. The results indicate that the main reason of choosing BM was that the students were compelled to take responsibilities of their family and/or job, and needed to be involved in the household work or in the office work. 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 the quality of interaction, and 25% of the students had strong agreement that the quality of feedback they received attracted them towards BM. Figure 3 illustrates it.
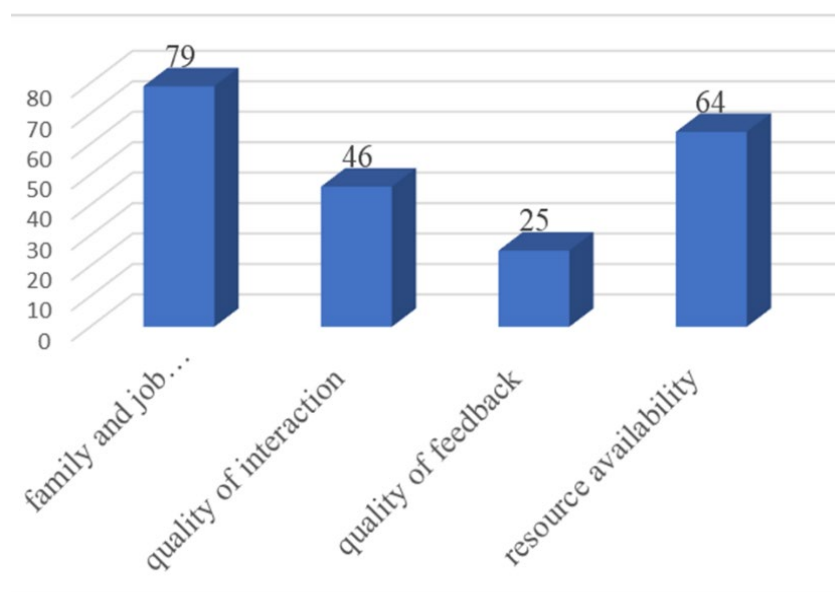

Figure 3. Reasons for choosing BM

The participants shared their experiences in the interview that BM was practically useful to advance their study. Many of the participants opined that it was because of their economic status that they needed to find at least some works, and they were not fully free though they had willingness to continue their study. In such problematic social context, BM was the most appropriate approach that could give right solution. Some of the most impressive excerpts taken from the participants' responses to the open-ended questions 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. For me, BM is the best for this." (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 though I want to advance it." (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 B)

It can be interpreted from the responses above that BL is the most appropriate modality for the learners, particularly in higher education in Nepal. It is because of the socio-economic structure of most of the Nepalese societies is that most of the students doing their master's level study do not get environment to study as a regular/full-time student in the colleges/universities. The fact is that in addition to their study, most of the learners in higher education need to take other responsibilities as well; and they need to work in the offices if they got opportunities, or if not, they work as a farmer or they do household works. BM can be the best choice if someone wants to advance their further study in such socio-economic contexts, mainly due to its flexible modality that allows them to adjust their own appropriate time schedule. The results in this study are very similar to the discussions that Graham et al. (2005) made about the reasons that influenced the spread of BL. The need of the students in the complex global society of this 21st century world is that they need to change their approach of pedagogy from "high human"

to *high machine*, which is possible through BL modality. As Allen et al. (2007) discussed, the students can be benefitted with both F2F interaction with their teacher; and 24-hour connection with learning-community to share their ideas, and learning resources in this improved pedagogy of blended modality.

Benefits of blended modality

Another aspect of this study was to understand the participants' opinions about the benefits that they could take from BM. For this, a Likert type question was developed in the questionnaire including the most possible benefits, and the participants were asked to indicate their opinion giving a tick mark in the alternatives *strong agreement*, *agreement*, *neither agreement and disagreement*, *disagreement* and *strong disagreement* provided. The results of the data show that there were many types of 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 of place and time management that they could choose learning time and learning place that were appropriate to them. In total, 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 the cost effectiveness point of view as well. In the same way, altogether 54% of the participants had their agreement that BM was useful to increase the availability of the learning resources needed to them while 50% of them agreed that BM could create environment for clarifying their confusions or difficulties of their problems related to subject matters. Similarly, 46% of the students showed their agreement that they found better quality in the interaction among the teachers and students, and the comments and feedback they provided. While on the other hand,14% of the participants showed their disagreement and were dissatisfied with the quality of interaction they made and feedback they received in BM. similarly, 11% of the participants disagreed that they could clarify their confusions through the interaction and feedback in BM. Table 1 shows the participants' opinions regarding the benefits of BM they experienced.

Table1: 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 an environment for clarifying the confusion		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 of the resources		54	39	7	

SA = strong agreement, A = agreement, N = neither agree nor disagree, D = disagreement
SD = strong disagreement, (Number of participants (N) = 28)

As the response to the open-ended questions about the advantages of BM in the survey-based questionnaire and in the interview, the participants highlighted their experiences that BM consisted several useful features such as amalgamation of different approaches, flexibility of learning time and place, human connectivity and social interaction, resources availability, and cost effectiveness. Some of the most remarkable opinions of the participants were:

> *"I cannot be a regular student at the campus. However, I can take benefits of both F2F and OL in BL modality. It allows the flexibility of time and place of learning through its distance mode, and provides environment for face to face interaction among friends and teachers as well." (participant 24)*

> *"It is possible for doing F2F discussion with the class teacher. I can be clear in many of my confusions in BM, and 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 members." (participant E)*

The results indicate that the students were able to take the responsibility of their family in addition to their learning in BM. Similar to the discussion made by Poon (2013) and Keengwe and Kang (2013), the responses above can be interpreted that BM has many advantages, it can give right solutions to some of the main 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 Jonassen (1999) concludes, in this study too, BL could provide the learners with multiple possibilities to create constructivists' open-ended learning environment enabling the learners to be engaged in problem-solving tasks taking advantages of technologies.

Challenges in blended modality

Another attempt was made in this study to know the problems or challenges that the participants experienced while being involved in BM. For doing this, a Likert type question was developed to help participants indicate their opinions choosing the alternatives *strong agreement*, *agreement*, *neither agreement and disagreement*, *disagreement* and *strong disagreement* provided given in the box. The results of the data have been presented in Figure 4, which summarizes the main problems of the students while being involved in blended modality of learning.
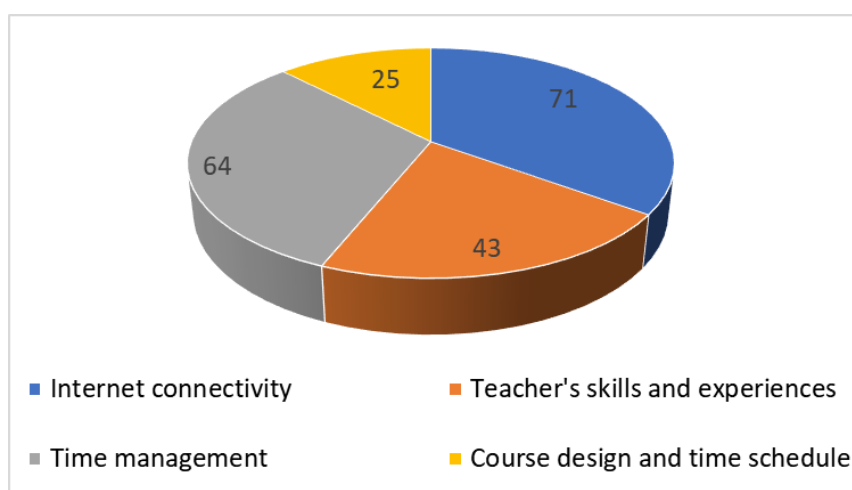

Figure 4. Problems in blended modality

The results reveal that most of the students (71%) had strong agreement that Internet connectivity was the main problem that they encountered while learning with BM. Another problem was the difficulty in their time management. 64% of the students strongly agreed that they could not manage adequate time for their studies. In total, 43% of the participants had strong agreement that problems occurred due to lack of adequate skills and experiences of their teachers. Likewise, 25% of the participants gave their strong agreement that problems could also be created due to the design and time schedule of the course.

The study also attempted to analyse the issues in terms of qualitative information. In response to the open-ended questions, Participant A in the interview opined,

> *"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 5 reported,

> "My office does not allow me as many leaves as I need. Besides, 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."

With a close observation of these results of the data and information, it can be understood that there were several challenges for the students in blended modality. The students could have Internet access in the educational institutions, but most of them 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 on their mobile phones most of the time, and it sometimes created problems in downloading the resources, and/or opening the web pages. The results in this study are consistent with the study carried out by Frantz et al. (2011) that access to the Internet was the main obstacle for the students. Likewise, though BL was more flexible in time and place; the participants could not manage adequate time for their studies because they had other responsibilities as well in addition to their study. Additionally, the time schedule of the course was 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. The problems were also that the 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.

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 inaccessible in many of the rural areas in one hand, and on the other hand, it is costly to afford the internet and other equipment for many of the students due to their economic status. Moreover, many of the students are compelled to do their job and take their family responsibility because of which they do not have adequate time for their study. Therefore, though many of the students have their willingness to invest their time and effort on their education, they are obliged to be part-timer students. Additionally, many of the teachers lack technological pedagogical knowledge for utilizing ICT tools, which makes teaching and learning less efficient.

Conclusion

Blended learning is a skilful combination of F2F and OL modalities. It is one of the new pedagogical approaches to integrate technology in the education system by mixing of digital learning and traditional classroom teaching. In this amalgamation of different approaches, technology is combined with pedagogy which creates a social constructivists' learning environment for the learners. BM can help overcome various limitations that appear in F2F and OL and adopt the advantages of both types of learning approaches. It can be used as a means to cope with some of the learner-specific problems and difficulties of the students in higher education.

In a nutshell, BM can successfully address some of the important challenges of the learners who have multiple responsibilities together with their studies. Some of the more specific advantages of BM are that 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. Therefore, most of the students have positive attitudes towards BL modality. However, especially in the context of the educational practices in the developing countries, it is necessary to consider the challenges such as the Internet connectivity, teachers' pedagogical skills, and appropriate design of the course for the productive outcomes of BL. Inspite of such factors, BM is spreading out and becoming increasingly popular among the learners in recent years 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.

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Appendix

Survey-based questionnaire

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	Quality of interaction is better in BM					
03	Quality of feedback is better in BM					
04	BM provides environment for clarifying confusions					
05	BM provides more flexibility of time and space					
06	BM is more economical that saves potential cost					
07	BM increases the availability of the resources					

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

3. Problems and Challenges in 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					

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

4. Open-ended Questions

(a) Why do you choose BM to other modalities? Please share your experiences to specify the important reasons.

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(b) Are you satisfied with BM? In your opinion, what are the advantages of BM? Please share your experiences.

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(c) What are the problems that you face while learning with blended modality? Please specify major problems from most important to least important.

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THANK YOU