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# Shift to Technology-Assisted Learning through Blended Mode: University Teachers' Experience

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### ABSTRACT

This article explores the experiences of university teachers regarding the shift they have encountered in academia while using blended mode of learning. The study applies a qualitative interpretive design with semi-structured interviews to collect data. During the time of COVID-19 pandemic, almost all the universities in Nepal shifted their teaching mode from traditional face-to-face to online virtual teaching assisted by various information and communication technology (ICT) tools. Blended mode of learning is the amalgamation of traditional face-to-face learning and virtual learning supported by technology. The use of technology has become an integral part in higher studies to address the needs and challenges of various students. By the integration of virtual learning environment with the elements of face-to-face learning, flexibility can be made to include many students. Blended learning fills the gap by proving itself as an alternative mode in this rapidly changing and globalized world where almost everything has been digitalized. It also promotes self-regulated learning and improved student engagement. In the context when fully online mode is not possible, blended mode enables both teachers and students to cope up with the challenges. Problems concerning the

speed of the internet, irregular power supply, lack of necessary devices and so on affect both online and blended modes. For the effective implementation, there is a lack of infrastructure development in both university classrooms and homes. Students can increase communication with teachers using blended mode so that learning can be enhanced which combines positive aspects of online and physical learning environment. The popularity of blended learning is increasing due to its inclusive nature and being an alternative method. The findings of the study indicate that blended learning, if systematically managed by making the provision of infrastructure development, can be applied as the best alternative for students' learning enhancement.

**KEYWORDS:** Blended mode, ICT tools, learning enhancement, physical mode

## INTRODUCTION

Teachers adopt various modes of teaching and learning activities to make their classes interactive and effective. Due to the availability of various tools like computers, laptops, tablets, multimedia and software tools, teaching and learning activities have become easier for both teachers and students. These modes have enabled the process of transforming knowledge from one to many or from one place to other places. The most significant thing in today's world is to focus on the process of effective teaching and learning. The traditional teaching-learning methods emphasize on memory-based learning in which the role of teachers is a mediator who assigns certain reading resources to the students. They first learn something from books or other sources and then they deliver it to the students. For effective teaching and learning, it is urgent to apply different modes of learning equipped with new methods which are being practised in this modern world. Mainly, at university level, the best way to deliver the lesson by teachers is to encourage the students using ICT tools and face-to-face mode. By using such tools, students can be connected with scholars of various fields and can attend their classes. The technological changes of the modern world have shaped students with virtual and online world in many ways. Students are exposed to learn in both modes and learning has become possible both from university and from their residence. Focusing on the benefits of blended mode of learning, O'Connor, Mortimer and Bond (2011) emphasize that blended mode of learning supplements traditional tutorials introducing new approaches to learning and offers innovative teaching strategies through new possibilities to enhance the experiences of the students.

These days, things like online collaborative learning, distance learning and online community groups are considered to be the most essential things in academic sectors. Rather than depending on the teaching of a single teacher, students need to be encouraged to attend the classes of other teachers who are recognized as specialists in their respective areas. Students can be made familiar with the ways of teaching all over the world. It requires a continuous process of interactions, synthesis of various contradictions as a dialectical process. Through a dynamic process of integration of conflicting ideas, the barrier of traditional boundaries can be crossed and one can enter a new self, acquiring new knowledge. In this regard, Farooq et al. (2022) argue that blended learning helps to develop a sense of ownership and responsibility, encourages participation of students, and decreases the burden of the instructions. They also emphasize on incorporating advanced methodologies to the curriculum for the improvement of learning outcomes. It is a process of synthesis in which many things are included for achieving something new and fresh. For the efficiency and broadening opportunities of both students and teachers, blended mode of teaching-learning can assist a lot and its application is very significant. It is the amalgamation of the traditional face-to-face mode of learning, which has been followed for centuries and the new technically equipped mode of the present context. It is the process of carefully handling two modes equally and challenges can occur when students focus their attention on one mode. Both modes are interdependent and the role of the teacher becomes like a facilitator. Teachers are criticized for only delivering traditional knowledge and students are not motivated to learn independently for their overall development.

For making teaching and learning activities more interactive and productive, it is necessary to apply different methods as the world is being influenced by globalization. In such a context, all academic institutions are under the pressure of using new and innovative approaches to replace their traditional approaches. While adopting only the traditional mode of learning, there is less chance of effective enhancement of learning. Therefore, it is necessary to apply blended mode of teaching and learning for making

teaching and learning effective. It is appropriate to apply blended mode of learning, both teachers and students can involve in the process of making their classes effective with the help of available ICT tools. Often teachers are criticized for only delivering traditional knowledge and students are not motivated to learn independently for their all-round development. With the application of blended mode of teaching and learning, university teachers can make their students learn effectively. The perception of teachers is missing while using blended mode and it is very significant to explore their views for its effective application. Thus, it is necessary to explore the perceptions of teachers while using this mode and how they encourage students about using blended mode in learning process. Likewise, it is equally important to investigate the challenges and opportunities they have encountered while using blended mode and how their students use various ICT tools in learning.

## **REVIEW OF LITERATURE**

### **Blended Learning as an Alternative Mode**

We need to change our traditional way of instruction by adopting new techniques. In this regard, blended mode of learning can be taken as an opportunity for students' active engagement in many kinds of activities. As an alternative mode of learning, blended learning plays a significant role in making learning easier by assisting both teachers and students by creating learning platforms. Wang (2010) says that online discussion forums provide opportunities to learners in the process of knowledge construction through collaboration and offline is effective for interaction among students. Online opportunities provide a favourable environment for the all-round development of the students making their involvement in different activities. In the process of successful performance, a single mode of delivery cannot offer choices concerning engagement and social contact and new mode is required to facilitate successful learning and performance. Moreover, Garrison and Kanuka (2004) include that blended learning is effective as it works how information and communication technologies have encompassed societies changing their ways of receiving and sending information meeting the needs for intellectual talent. It is the duty of stakeholders to find its transformative potential which provides flexibility of time and place along with unlimited educational discourse. For the outcome, the ability to utilize both face-to-face and online mode plays a significant role and the higher educational institutions need to focus their attention to this direction.

In the teaching-learning process, the involvement of students plays a greater role. If they can be motivated for active participation, the expected goal can be achieved. Blended mode enables students to become active in learning by providing opportunities making their involvement both inside and outside the academic institutions and students who are out of it miss a lot and cannot perform well. Students who are not familiar with this process are found weak in academic performance. Similarly, Hubackova and Semradova (2016) conclude that it is both accepted and favoured by students being study supplement as they can handle various tools easily and understand better working with separate tools. For the effective implementation of blended mode, stakeholders need to focus on the important factors. In this regard, Hockly (2018) mentions that effective blended learning includes interaction, research, proper design, tools, tasks, materials, integration, evaluation, context and training for both teachers and students. These issues may help in many areas like curriculum development and creating robust pedagogies. As Anthony (2022) concludes that for meaningful learning, blended mode enables interaction between teachers and students and combines different media through synchronous and asynchronous teaching strategies. The uses of various media strengthen the interaction and promote effective learning outcome.

### **Technology Assisted Learning**

Teachers need to focus on different methods and tools to achieve desired goals. Mainly, they use various techniques in classrooms to involve students in learning activities. In this regard, Pool et al. (2017) opine that blended mode emphasizes in self-regulation skills of the students and the support of teachers is quite needed for learning but time management, skills, ineffective coordination and management are its challenges. It focuses on the active participation of the students for making learning activities interesting and constant guidance and support from the teacher is equally important. Similarly, Evans et al. (2020) argue that blended mode of learning is very effective in professional development and it is the most suitable and effective for teachers as it can enable holistic experimental learning. Due to its popularity and effectiveness, it has been accepted and implemented widely within a very short time. It also encourages students to work on their own ways, taking guidance from teachers of different places during their suitable time frame. It also shapes ideas to improve our way of dealing with content, interaction in social circles, reflection, higher order thinking, problem solving, collaborative learning and more authentic assessment in higher education. This could potentially lead to a greater sense of student involvement.

Blended learning is not only the mixture of physical activities supported by online technologies, but also the integration of learning activities. In it, students and instructors work to bridge the gap between learning and working to promote collaborative learning. The synthesis of various methods and modalities assisted by technology, the capacity of the students can be developed to survive in a technological era. Syahrawati et al. (2022) opine that the implementation of blended mode in learning helps to increase motivation in learning, conceptual understanding and develop students' thinking skills by supporting activities that can train students to improve the twenty-first century skills. Even this mode is referred to as flexible and convenient due to the clarity of the online materials and easy access for students. The best outcome in education can be possible through the collaboration between teachers and students and various ICT tools and applications enable them to involve in this process. Day by day, many tools and applications are introduced and they need to be used both by teachers and students for making teaching and learning process easier. By the support of ICT, learning can be made interactive, result oriented and effective. Independent learning can also be possible by the support of various ICT tools and applications.

### **Flexibility in Learning**

Blended learning has become ubiquitous as it is used by a large number of students and teachers. Students find it reliable as they can use it without the restrictions of time and distance and become less dependent on teachers. They can learn themselves at home and become less dependent on their teachers. Sometimes students want to work on their own for confidence and they can do it by the help of various ICT tools. Prifti (2022) opines that the satisfaction level of students has increased as various online activities have enabled them to enhance their critical thinking with positive self-efficacy and have the potential to result in better outcomes. Furthermore, the nature of the students' subject also determines the effectiveness of teaching-learning. Finlay (2022) mentions that blended learning optimizes students' learning and academic experience but provides little opportunities for socialization, difficulty to maintain authenticity and managing the activities of sports and exercise science. For running activities which require a direct involvement are not possible in blended mode. Regarding the role of blended learning in the modern world, Widjaja and Aslan (2022) say that the application of blended learning is a solution in solving problems and issues of global competition where the process of

renovating and transforming learning with flexibility and effectiveness is rapid with technology. The aspects of modern learning include productivity, effectiveness, innovation and efficiency that can be achieved by the proper application of blended mode of learning.

Blended learning is not only reliable, but also challenging in terms of its application as it needs the confluence of many things. A successful implementation of blended mode requires alignment of institutional, faculty and student goals. For this, infrastructure must be robust and supportive for both teachers and students. It also needs continuous evaluation to lead it on the effective track. Moskal et al. (2013) state that it is dangerous in the sense that administrators need to do some effort in provision of management and faculties need to be potential for enhancing effective learning. Similarly, students need to reexamine their perceptions and in absence of these provisions, it cannot be applied in practice and becomes ineffective. In this way, it requires the combination of the effort of all. Similarly, Rasheed et al. (2020) include the challenges of blended learning from the sides of students, teachers and institutions. Students face self-problem of inability of using technology. Teachers become unwilling having negative perception of using technology, and institutions find it difficult to provide correct and robust infrastructure and training. Keeping teachers at the heart of the educational process and its change, Bruggeman et al. (2021) mention that implementing blended mode of learning is challenging in which the role of teachers requires shift from rejection to adaptation overcoming the anxiety of incorporating technology in learning process.

## **METHODOLOGY**

This study reports the experience of university teachers regarding blended learning and the use of technology for learning enhancement. It is based on qualitative interpretive design employed semi-structured interviews with the participating teachers as suggested by Cohen et al. (2013). Twelve university teachers were selected on the basis of reported information about their involvement in blended mode of teaching. They were approached through the personal contact for the interview classes and interview who were teaching in online classes following the lockdown in COVID-19 pandemic situation. This research employed both primary and secondary sources of data. The primary sources of the research were teachers teaching in the universities using blended mode for teaching. The secondary sources of data were various scholarly journals, books, previous research works, journal articles and electronic versions related to the issues.

The phenomenological approach was utilized in the process of data collection as suggested by Creswell (2003) to emphasize an extensive engagement on live events focusing on the experiences and stories of the participants. The participant teachers were contacted personally to obtain informed consent for the interviews. Participants were followed by live, semi-structured interviews as suggested by Cohen et al. (2013) to explore how they applied blended mode and their experiences and perception of blended learning. Participants were interviewed in face-to-face mode on multiple occasions. The interviews were recorded on a diary to follow systematic analysis of the overall data.

In addition, various archived documents were read against the data gathered through interviews. Collected data were thematically categorized into specific themes to follow systematic analysis using thematic analysis (TA) as suggested by Clarke et al. (2015). The data were analyzed by using interpretive phenomenological analysis (IPA) as suggested by Smith and Shinebourne (2012). The specified data were delineated into phenomenological reduction. The results were interpreted along with discussion and

analysis. The application of the analytical approach enabled to recognize and bring out participants' experiences and perceptions.

## RESULTS AND DISCUSSION

### Blended Mode for Facilitation in Learning

Teachers in the interview reported that they have been using various ICT tools to conduct teaching and learning activities from home staying away from their university classrooms. Before the COVID-19 pandemic, they were all habituated to teach in physical mode and teaching through technology was quite unheard. The pandemic gave them opportunity to use technology in the process of teaching-learning, which was quite exciting as being a new method. Before the pandemic, teachers were not familiar with technology in this process and they had to take guidance from other IT experts about how to use technology.

Technology assisted both teachers and students to continue classes when the physical classes were not possible. Similar to his voice another teacher from the same university T5 said:

*In the beginning students hesitated to join online classes as they were not habituated with technology. But later on as we taught them the procedure to follow the online classes, the classes ran smoothly. Students had confusion while applying online mode but later on they were in the habit of joining classes regularly. Then we found them enjoying a lot.*

T5's remark indicated that students prefer technology assisted learning, which can cover their need of the present situation. Students want novelty in classes as they find only physical classes monotonous. For bringing newness in the way of teaching, the use of technology in the physical classes is essential. Sharing the experience of using blended mode in the class, T8 said:

*Before the pandemic I had to give notes, write long hands outs, solve sample questions for the model of the students and it used to consume a lot of time. It was quite hectic schedule to complete the course. After this pandemic, students also became quite familiar with electronic apps and then I am also using these apps as well. I do not write those questions answers and solve all the problems. I do not write everything on the whiteboard but I upload using the apps or I just send all the notes through email. We discuss other parts like theory and interpretation in the classroom. Writing and practical parts are shifted to online mode. This type of conglomeration, a type of confluence between physical and online mode is must method for teaching and learning in the days to come.*

T8's comment reflects that both teachers and students have found mixed mode of learning easier to do many activities for learning. For example, they send and receive reading materials online and do some difficult tasks using technology.

The computer-assisted teaching is making a shift from teacher-centred learning to student-centred learning. For both teachers and students, the use of various available ICT tools has enabled to make learning process convenient without consuming too much time and energy. Teachers can transmit many ideas through the use of technology. They can discuss about the problems in the physical classroom. Some of the issues can be solved by the use of ICT tools so that independent learning can be promoted. When teachers upload the reading materials earlier, students can have prior knowledge of the things that is going to be taught. In this way, they can prepare before the class and participate in class with more confidently.

Even the physical classes are in operation, teachers are found to be applying the blended mode to include those varied natured of students in the learning process.

Teachers are reported to be sending reading materials through online and students and teachers meet once or twice in a week and discuss the subject matter. In this way, the students who are missing physical classes are getting benefit.

On the other hand, blended mode is applied effectively for making learning process easier. Teachers use different strategies to make teaching more effective, interactive and result oriented. They prepare various slides for making teaching different from traditional methods. In this regard, T6 said:

*In blended mode of teaching I apply power-point presentation to the students. So they can see or visualize also. Through the digitalized world they can visualize the reading materials on the screen. Besides that I also develop some online questions using Google form. So students can fill up the answers of the questions through online mode. This way I taught during the time of pandemic and still I am using the same technique in physical classes.*

Some of the techniques used by teachers in online mode of teaching mainly at the time of pandemic are continuously followed being so effective and easy to use. The use of technology in teaching-learning activities is increasing after the pandemic.

By applying blended mode, teachers can keep students engaged in studies by supplying various materials using various tools. Blended mode has become common for the teachers after they were introduced to apply online mode. In this context, T10 said:

*I have seen the future of mixed mode of teaching because we can provide students the reading materials in advance that we have prepared. This is the world of technology and students are also techno-friendly. So they need not be taught about using technology. Due to access of information and communication everywhere, it is possible to use blended mode in teaching.*

T10's comment shows that students are familiar about using technology as they prefer using technology-assisted method for making learning easier. In this sense, online classes are less effective than physical classes. At the same time, the environment which is assisted with various ICT tools together with the presence of teachers and students is the best and most preferred mode in this global world where many of our daily activities are handled by technology.

### **Support of Technology in Learning Process**

Participating teachers involved in this study shared their initial experiences of using various ICT tools like Zoom, Google Meet, and MS Teams for teaching and learning during the COVID-19 lockdown in the country. The lockdown caused by the pandemic brought a shift from physical to online mode. First, they struggled to learn to use these tools and gradually developed their confidence of using the available ICT tools which could be helpful for them to make teaching and learning process easier.

Even students have made a connection with students and teachers of other counties and make online groups for sharing ideas and knowledge. Similar to these ideas, T9 said:

*In physical classes there are limited sources for providing materials for students. In online teaching there are number of resources which can be provided to the students in classes and students can become resourceful. They can look for anything they need which is not possible in physical classes. When they come to attend physical classes they do not come with laptop and cannot access many materials.*

T9's remark reflects that there is a great chance for making students equipped with more reading materials in online classes by the use of various ICT tools. Even students can have access of reading materials from various websites and other online depositories. The

use of technology in classes makes teachers easier to manage classes. They can deliver many things using the technology. They do less physical labour by the help of technology. They also hope that students also enjoy reading using the available tools. As T1 said:

*I am pretty sure blended mode will be developed in Nepal also. Many students will also prefer computers, laptops, mobile, tablets and other available tools. At that time parents also offer these things. There will be only problem of infrastructure development. Otherwise the use of ICT in education is a very good idea for quality enhancement. It will be good for senior students to combine technology in learning.*

T1's idea indicates that the use of technology is increasing rapidly as many students use them. The problem of using technology in education is the infrastructure development. If reliable internet facilities can be provided for them both at home and classrooms, quality education can be possible.

Teachers have positive attitude about using technology as they could have access of various materials. During the time of pandemic they applied online and after the pandemic was over, they shifted to physical mode. In this connection, T7 said:

*Various ICT tools are being developed and used day by day as it is the age of science and technology. But in our country generally we feel some problems in the availability of devices, internet facilities, electricity supply and our mentality is also affected, so it is little bit difficult to apply new techniques in our society and university. It takes time to utilize the tools fully for getting maximum benefit.*

T7's comment indicates that for effective use of ICT tools in education we need to do some more in making provision of infrastructure.

Some teachers and students have increased their knowledge using technology. As T6 said:

*Before I started my career as a teacher, I used only chalks, marker, and duster. These days I often use laptop or other devices which are the parts of digitalization. So we are shifting to digitalized age by the rapid development of science and technology. The world has already shifted toward virtual classes. We can use various tools to some extent without affecting the physical environment.*

T6's remark indicated that the impact of digital literacy is increasing day by day and utilizing digital tools we can continue our teaching-learning activities in physical presence. We can utilize the digital platforms for gaining new knowledge. As T5 said:

*The whole world is digital nowadays. So there is no option left for us about choosing digital method. We need to convince our students who are approaching the new methods. We will be lagging behind if we do not choose the digital mode. One day definitely we have to follow online and the students wherever they are taking classes through online mode. Teachers are also fond of taking online classes.*

T5's comment shows that the future of the teaching method will be controlled more by the assistant of digital tools. Many of our materials will be in digital form and technology will assist us in teaching and learning.

### **Challenges and Opportunities of Blended Mode**

In the interview, teachers reported that they experienced both complexities and advantages of blended mode which they have been using. The problem is related to infrastructure which can be improved in future and it will be easier. Similar to this view, T3 said:



*I think we are lacking in technologies and infrastructure development. Some students are from remote areas where still required infrastructure is not facilitated. Physical classes are effective in that sense because we have direct conversation and contact with the students. Basically the topic and the subject matter which needs practical classes, physical classes are relevant there is no doubt. But sometimes in master's level in social sciences physical classes can be substituted by online classes. For this reason, blended mode is the most effective to use.*

T3's remark shows that facilities need to be available to find the opportunities of the blended mode of learning. When blended mode is applied some of the challenges concerning teaching learning can be minimized. Similarly, T5 said:

*There are both advantages and disadvantages of blended mode. First we are applying new mode which is quite fascinating for students. Second it is useful for the students who are thinking studying abroad. The disadvantage is that all students cannot manage the technical equipment as per the demand. Next, frequent power cut creates problem for the students.*

T5 indicates that blended mode helps students to have access of abroad studies.

When they are trained in a new way of teaching, students can compete in international level. At the time, there is a problem of electricity supply.

Teachers have also pointed out the positive impacts of technology assisted learning. There are many possibilities in future and blended mode can be a best method to follow for making learning easier for students. In this regard, T10 said:

*Reformation in education is the essential thing as the world has progressed a lot but we are still using traditional pedagogy. We need to make our classrooms techno-friendly. The access of required devices including internet should be made available to all. For quality enhancement we need to apply technology in education to meet the requirements of the modern world.*

T10's remark indicates that newness in education is the demand of this globalized world. Here everything is constantly going on changing and we all need to be ready for reformation for enhancement in learning. As T8 said:

*The future time the teaching pedagogy should be in blended mode. My claim is that if the innovative universities like Kathmandu University also demanded blended mode of application for the potential candidate. I think that sooner the blended mode will be will applied. Without blended mode no teaching will be effective in the days to come.*

T8's comment indicates that there are many advantages of blended mode due to its inclusive nature.

Many teachers and students are enjoying it. Newly admitted students are acquainted to by previewing its positive aspects. As T9 said:

*It can be applied for that certain things are required. Some countries in the west have applied it. We are only initial stage of online and it may take time to apply blended mode fully. Anyway we can go to blended mode very soon but we have to focus on IT infrastructure. There are many digital platforms and we are using only a few. So changes are seen in our country but not fully.*

T9's remark shows that there is chance of adopting blended for making learning effective but due to lack of facilities it is not utilized fully.

## **Discussion**

Teachers in the interview appreciated the application of technology in teaching as they have developed new skills of teaching, information sharing, collecting teaching

materials and knowledge enhancement. Technology assisted learning could be more flexible, cost effective and time consuming. Their idea aligns with the finding of Dhawan (2020) that COVID-19 changed the way receiving and imparting education and available application like ZOOM enabled both students and teachers conducting online classes and technologies will even help us cope up with the ongoing challenges concerning teaching-learning. Various materials found from online repository have promoted independent learning for students. It has enhanced education in changing academic environment offering many options for both teachers and students. Technology has assisted both teachers and students to deal with the rapidly changing scenario of the modern world. As Sharma et al. (2022) show that students like technology driven-learning as animated videos and graphical simulations help them understand at ease but they find lack of interaction in online class and blended mode becomes the best alternative to address the problem. Blended learning provides students and teachers opportunity of interaction rather than in online classes. It helps to cope with the ongoing changes the rapid technology has brought. The practice different modes of teaching come into existence to evolve with time. The use of technology in physical classes also has enabled teachers to share information easily with students.

Participating teachers pointed out the need of technology integration for quality enhancement as the world is moving to the world of digitalization. Technology has become common to all as many people are acquainted with latest gadgets like smartphones, laptops iPads and so on. The use of ICT in education contributes in improving the quality of education. If any teacher fails to cope up with the ICT use, s/he will lag behind in the profession. Their idea aligns with the finding of Macharia (2022) that ICT has created many platforms and opportunities for facilitation of learning and knowledge acquisition by creating student-centred learning setting, expanding access to education and flexibility. The use of ICT increases the communication between learners and the instructors. ICT has also worked as assisting tool in many activities like documentation, collecting data, making assignments, conducting research and other educational activities. Teachers in the interviews pointed out both challenges and opportunities of online classes. The pandemic has transformed the way of learning, creating both opportunities and challenges throughout the world such as abilities for knowledge acquisition, collaboration of students with teachers for feedback and awareness of rapid update with content. From the interviews, it was suggested that blended mode has both advantages and disadvantages. As Kumar et al. (2021) show that blended mode works as a better option by enriching teaching tools, techniques and technologies to meet the global and future challenges, which increases teachers' capacity and students' interest and performance and boosts the latest technology for interaction. Using blended mode, many students can benefit in education due to its nature of being inclusive. Different kinds of students can participate using the available tools as it also facilitates classroom learning. Müller and Mildemberger (2021) show that blended mode offers opportunities of flexible learning removing the barriers of time and space and also contributes in the process of making higher education accessible to a larger section of the community.

Transformation and reformation in education are the main issues of the modern world. It is urgent to deal with the changes of the global world as everything is constantly changing. For this, we need to transform the way of teaching and learning for reformation. Without it, our students cannot compete with the students of other countries. They lag behind in education and cannot progress. For the development of any country the most essential thing is its education and our focus should be in improving it by various factors. Their idea resonates with the finding of Widjaja and Aslan (2022) that

blended mode of learning provides a solution for the transformation by creating favourable environment for innovative learning by addressing the problems and issues of global competition. Blended mode is effective through a proper use of media and tools for effective learning environment. It is highly preferred and adopted by reputed universities of the world being reliable and popular. From the interview with the teachers, it was noted that blended learning plays a great role in making effective learning process. Their idea aligns with the finding of Ma and Lee (2021) that students prefer blended learning as it has a higher satisfaction perception than face to face mode as blended mode motivates students more and provides in-depth understanding being a very effective medium of learning. However, Kirkwood and Price (2014) conclude that from the experience of the students the potential of technology for changing the academic sector has not been noticed and no significant influence of technology is noticed in higher education except replicating and supplementing the existing teaching. Transforming the way of teaching and learning is complex and teachers, students and stakeholders should be conscious for the effective use of technology in higher education. Some of them find no significant changes that are made by technology in the process of renovating the higher education.

## CONCLUSION

Blended learning consolidates best practices of both digital and traditional methods by enabling students to customize their education. As technology played a significant role in education during the time of the COVID-19 pandemic, blended mode contributed a lot in accessing resources and student engagement. The findings confirm that using blended mode learning can be made easier comparatively than in traditional mode of face-to-face method. There are possibilities of shifting to it as some universities are making enrolment of students for teaching through blended mode. By encouraging teachers, students and stakeholders, blended mode can be applied for improvement in teaching and enhancement of learning. The advertisements for blended mode reflect that it is going to encompass the academic scenario soon. Transformation in academic sector is essential and shifted to technology assisted teaching and learning environment leads to such direction.

Academic institutions are under the pressure of installing technology guided approaches to address the needs of students of diverse nature. Many students are familiar with technology-assisted teaching and higher educational institutions are in pressure to accommodate such students. For this, blended learning has become the demand of day which creates the amalgamation of technology in teaching. Many institutions and teachers have been trying to deploy information technology in education to improve students' learning and blended learning has been a popularly recommended paradigm that applies more than one mode of teaching for effective delivery of the subject matter for learning enhancement. It facilitates innovative and active learning helping in course redesigning by improving the quality like grades results, higher content knowledge, course content and so on. At the same time, there are some disadvantages of blended mode that concerns managing requirements and time, difficulty in using technology for novelty, poor integration, increased workload, decrease in academic productivity and unwillingness of teachers. When demand is created for designing new courses, teachers have to step away from their current pedagogy and to assess the surfeit of available options. Similarly, there is no sufficient provision of infrastructure for effective implementation of blended mode. Some students and teachers repeatedly raise voice about instable internet facility, irregular supply of power, and unavailability of necessary devices to use blended mode.

## RECOMMENDATIONS

Blended mode can be made applicable by infrastructure development and by the provision of necessary facilities. For the application of blended mode programmes like capacity building trainings, regular guidance, and seminars need to be conducted. Both teachers and students need to be equipped with new tools for using innovative technology for effective and engaged teaching. Policy makers, educationalists, parents, teachers and academics need to emphasize the use of blended mode for including students of various natured. By identifying factors needed for administration of techno-friendly learning are needed to be initiated. Emphasis on preparing appropriate policies for the promotion of its application in universities is required. Revising the course is also required for better outcome. Many students who are in the state of confusion before appearing the exam can be included in it for better performance as it has the capacity to include all the students. They can prepare and confidently appear in their final exam by making a close contact with their instructors.

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