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Post-COVID Blended Learning at Kathmandu Shiksha Campus: Challenges, Successes, and Future Prospects

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Abstract

The COVID-19 pandemic accelerated the global transition of higher education institutions to digital and blended learning. This study discusses the use of blended learning in Bachelor of Computer Applications (BCA) Department at Kathmandu Shiksha Campus (KSC. Forty Students was involved in online survey while five faculty members were participated in mixed method of data collection through interviews. The analysis was done on Moodle Learning Management System (MLMS) of Kathmandu Shiksha Campus and the results show that it has improved teaching and learning with the help of its features such as video based learning, easy access to materials, availability of resources in time and encouraging students study in their flexible hours. Teachers are happy with the regular training session that college is conducting yet focused on more advanced workshops or research seminars. As per the findings, KSC's blended learning program has been successful since its availability, students are more keen to learn, digital advancements are ongoing and teacher student interaction has been improved.

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Introduction

Institutions of higher education have been affected by COVID-19 and have transitioned to online platforms much faster than they would have otherwise (Bordoloi et al. 2023). In Nepal, universities and affiliated campuses utilized several different platforms (such as Google Classroom and Google Drive) in order to be able to continue educating their

students during the pandemic (Paudyal 2022). Before this transition to virtual classrooms, classes at Kathmandu Shiksha Campus (KSC) prior to the pandemic were primarily traditional face-to-face classrooms with the addition of downloadable course materials on Google Classroom and file sharing using Google Drive. During the onset of the pandemic, KSC switched to using Zoom to facilitate online classes in an effort to not lose educational services for students. However, the KSC administration felt that this was inadequate and introduced Moodle Learning Management System (LMS) on the KSC portal in 2022 as a replacement for those older forms of online education. Moodle provides a structured way for faculty to provide lecture content in addition to homework and quizzes, as well as lecture video recordings for their students. The implementation of Moodle was supported by providing training to administrators, instructors and students in order to help them use the product more efficiently. This represents a larger trend throughout the world since the (Rahmawati & Waseso 2020).

There is very little systematic evaluation of students' and teachers' blended learning experience in Nepalese campuses, apart from these initiatives. Previous research has established that even though LMS platforms like Moodle do increase student participation, issues arise, and they include digital illiteracy gaps, internet connectivity issues, and pedagogical constraints in adoption (Baral, 2021; Sunarti et al., 2024). At KSC, it is unclear the extent to which the trainings targeted stakeholders, how Moodle has been of benefit, and to what extent challenges still hinder its use. Without such evidence, institutional strategies on blended learning may completely overlook the end-user experience.

This study aims to determine the implementation of blended learning at Kathmandu Shiksha Campus, with respect to the transition from pre-COVID methods (Google Drive, Google Classroom, Zoom) to the integration of Moodle LMS and related training programs and to assess the experience and perspective of students and teachers in the BCA Department, identifying major challenges, successes, and recommendations for the future of hybrid learning at KSC.

Research Questions

- What Kind of methods were used in BCA Department of KSC before and during COVID-19?
- How Moodle LMS was implemented in college and what kind of trainings were given to staffs, teachers and students.

- How effective was Moodle based blended learning among students and what were the challenges they faced during its use.
- What are teachers' experiences of working with Moodle, both success and challenges?
- In what directions should the future of blended learning at KSC go based on students' and teachers' experiences?

Literature Review

Both prior to and especially during the COVID-19 pandemic, blended learning that entails both online and offline teaching has received widespread recognition as the best teaching model. Learning Management Systems (LMS), especially the use of Moodle, has been shown to improve levels of university students' engagement and self-directed learning, provided it is well incorporated into the teaching process as indicated by empirical studies. Hayden (2017), for example, indicated that the deliberate teaching adoption of Moodle instead of the conventional teaching formality positively influenced the degree of university students' engagement and overall academic performance. Rahmawati & Waseso (2020) concur that the COVID-19 pandemic had the effect of positively influencing university teacher education students' self-directedness towards the teaching program using the blended teaching process on the Moodle site.

The technological foundation does exist, and, nevertheless, the success of the online learning process also depends upon adequate support for students and lecturers, along with the development of digit literacy skills that could help avoid any misuse of the online platforms. According to Paudyal (2022), well-structured training of university lecturers and appropriate preparation by their institutions have proved critical for the sustained adoption and successful use of online learning platforms by university lecturers of Nepal. Moreover, simultaneously, there also exist some obvious and traditional weaknesses for many South Asian nations, which include unstable internet connectivity, lack of capacity of appropriate ICT, and lack of accessibility of high-quality technical assistance (Bordoloi, et al., 2023). Students and lecturers also display some mixed feelings regarding their experience with online learning. While students of online learning find many benefits related to greater accessibility and ease of online learning, on the other hand, they also experience some drawbacks, such as lack of motivation, more distractions, and reduced interaction with their lecturers (Sunarti, et al., 2024). On the other hand, the lecturers of online learning also show some benefits, which include more workload due to greater responsibilities and the need for diverse learning techniques to

promote successful usage of online learning platforms along with inadequate development of digit literacy skills (Baral, 2021). While they experience many obvious drawbacks related to online learning, they also recognize that online learning creates a sense of opportunity for improving education quality with appropriate post-support.

In Nepalese universities or colleges, it is still in early stage. As per Baral in 2021, affiliated colleges of Tribhuvan University has adopted blended learning model and there was a promising success as well but long term success depends on how effectively these colleges use the usable infrastructure and conduct continuous trainings. Paudyal in 2022 reached the same conclusions in that teacher attitudes regarding blended learning in the Nepalese setting are driven by a motivation for innovation and frustration with the limitations of technology. The same can be concluded in the case at Kathmandu Shiksha Campus regarding the methods for improved post-COVID teachings and learning processes.

Collectively, the preceding research has indicated that there is a great potential for improvement within the delivery of higher education offered via blended learning. Yet, this depends upon the manner in which the institutions respond to the training, infrastructure, and readiness of the stakeholders. The current study continues this train of research via the examination of case-based experience at KSC for blended learning within the BCA department, incorporating both the teacher and the students.

Methods

This study used both online survey and semi structured interview approach to study the use of blended learning in BCA department of KSC. In this mixed method of research, both qualitative and quantitative data were collected from students and teachers. Some issues, comments and their views were evaluated in a descriptive manner. Students completed an online survey to collect quantitative data, and faculty members participated in semi-structured interviews to collect qualitative data.

Participants

The study focused on the KSC BCA Department, which had a total of 110 students and 10 faculty members. Out of these, 40 students took the online survey, a response rate of around 37%. Five faculty members were also interviewed to gain insight into their Moodle and blended learning experiences.

Data Collection

The study collected data in two phases. For Student Survey, an online survey was used among BCA students through Google Forms. The survey contained closed questions (scaled questions like Likert Scale) as well as open questions regarding accessibility, usability, and learning efficiency in Moodle. The study covered online learning experiences of students regarding access to learning materials, viewing uploaded videos, as well as note sharing from tutors.

And in Teacher Interviews, Semi-structured interviews were conducted with five members of the BCA faculty. Questions asked in these interviews were on teacher experiences on Moodle, uploading course content, posting lecture videos, as well as using the blended approach. Data collection in this research utilized descriptive statistics, employing percentages, bar charts, and pie charts. Interviews undertaken in this research were categorized as semi-structured interviews, with data collection being in the form of themes that emerged based on teacher experiences, lessons, challenges, and advantages of blended learning.

Results And Discussion

Prior to the emergence of the COVID-19 pandemic, the BCA Department at the Kathmandu Shiksha Campus had commenced the integration of technology in their study opportunities using limited digital platforms like Google Classroom and Google Drive for teaching and learning activities. However, due to the rise of online distance education resulting from the COVID-19 pandemic, the KSC had to devise an efficient way of managing the learning and teaching activities and, as such, introduced the LMS Moodle into their college website.

To ensure that the implementation of the system was successful, many orientations and trainings were conducted by KSC for students, faculty, and administrative personnel. Participants were taught how to load and manage lessons in Moodle, as well as other features such as managing submissions, inserting videos, and dealing with forum discussions. These orientation and training activities facilitated and helped the teachers and students acquire the needed skills and confidence required to utilize Moodle successfully for their combined learning mode. The successful implementation of this first step provided the foundation and opportunity for KSC to integrate technology into their learning method, leading to the formation of the permanent post-COVID learning

model. The first orientation and training were conducted with smaller numbers of attendees where they could work hands-on with individual instructor assistance.

Figure 1. Faculty members participating in Moodle training at Kathmandu Shiksha Campus

Figure 2. Instructor helping with practice session of LMS

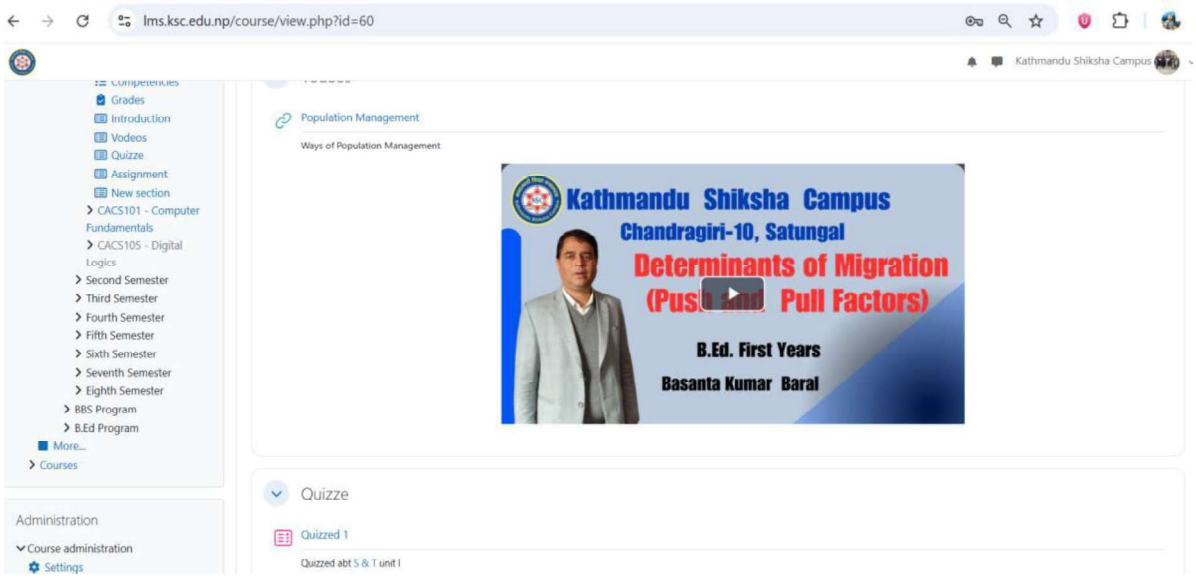

Figure 3. Video and Quiz contents uploaded in LMS Moodle of KSC

Students were given an introduction to Moodle through demonstration sessions after faculty training. During these sessions, they learned how to log in, access lecture materials, download notes, view uploaded videos, and turn in assignments online. The platform quickly emerged as the BCA Department's main communication and course management hub.

Results from students' Survey

A total of forty students from the BCA Department of Kathmandu Shiksha Campus were taken for the study with the help of a Google Form consisting of ten questions. Data analysis was conducted using various descriptive statistics such as mean, standard deviation, percentage, and frequency. To provide quantitative analysis for responses, numerical codes were given to the questions, with responses ranging from 1 INDICATING Strongly Disagree to 5 INDICATING Strongly Agree statements. Moreover, for creating better visuals, charts were plotted using the software Microsoft Excel.

As far as the demographics of the survey are concerned, 40% of the individual surveyed were females, whereas 60% were male. Out of the total surveyed individuals, 30% were students taking the 5th & 7th semesters, whereas 20% of the surveyed individuals were students of the 3rd & 8th semesters. In respect of accessing the Internet, 25% of the total sample surveyed made use of mobile data connections for accessing the Internet, whereas 75% made use of home Wi-Fi connections. These statistics clearly indicate that there is a fair representation of the students of Kathmandu Shiksha Campus who have access to sufficient Internet services for e-learning with the support of the online learning platform of Moodle.

Most of the student gave negative answer while asking if Moodle LMS was easy to use and locate the resources. The answers were not very positive. In Fact, 10% of students found it difficult to use and 75% of students found it a bit unique or not so easy to locate and confusing at times. Overall student gave an average response of 3.95 (with standard deviation of 0.87) which indicate that it supports their learning well. But Still many felt that this system could've been more user friendly, easy to locate, and few improvements on usage.

Table1. *Demographic profile of respondents*

Demographic Variable	Categories	Frequency	Percentage (%)
Gender	Male: 24	24	60
	Female: 16	16	40
Year	1st	8	20
	2nd	12	30
	3rd	12	30
	4th	8	20
Internet Access	Home Wi-Fi	30	75
	Mobile Data	10	25

Another sign of a significant presence is the frequency with which respondents reported using Moodle. Half of the respondents (50%) said they used Moodle every day, 25% said they used or logged in three to four times a week, and 7.5% said they used it infrequently (twice a month). Students are therefore likely to be able to participate in their educational experience during a period when all students were experiencing a higher level of blended learning due to the COVID pandemic, as evidenced by their average usage frequency of 4.18 (SD = 0.98).

Table 2. *Access and navigation of moodle*

Scale	Frequency	Percentage (%)
Very Easy	12	30
Easy	18	45
Neutral	6	15
Difficult	4	10

Mean = 3.95, SD = 0.87

Table 3. *Frequency of LMS usage*

Usage Frequency	Frequency	Percentage (%)
Daily	20	50
3–4 times a week	10	25
Once a week	7	17.5
Rarely	3	7.5

Mean = 4.18, SD = 0.98

Most respondents found that practice exams and lecture notes were particularly helpful (Mean = 4.35 and 4.20, respectively). Also students found the recorded videos very helpful. An average mean of 4.10 shows they found them very useful for studying at their own time. Reference books and discussion boards were only slightly helpful, indicating that students rely more on Moodle's direct instructional resources.

Most student said that they prefer a mix of both online and in person classes, which means that blending learning is being helpful in their studies. The relatively higher mean value (4.40) indicates that students value flexibility while still appreciating in-person classroom engagement. The popularity of fully online and traditional methods was lower, underscoring the importance of hybrid learning strategies.

Table 4. *Helpfulness of study materials*

Response	**Frequency**	**%**
Very Helpful	14	35
Helpful	18	45
Neutral	6	15
Not Helpful	2	5

Mean = 4.10, SD = 0.81

Table 5. *Preferred learning mode*

Mode	**Frequency**	**%**
Fully Online	6	15
Blended (Online + Physical)	26	65
Fully Physical	8	20

Table 6. *Main challenges with moodle*

Challenge	Frequency	Percentage (%)
Internet Connectivity	14	35
Lack of Interaction	10	25
Technical Issues	8	20
Limited Feedback	8	20

The results show that one of the biggest obstacles to using Moodle effectively is still technical. The most urgent problems are inadequate interaction with instructors and poor internet connectivity. In the meantime, students struggle to fully utilize the platform due to time management issues and a lack of feedback.

Results from the Interview with Teachers

Five faculty members of the BCA Department at Kathmandu Shiksha Campus were interviewed about their experience with the application of the Moodle platform in the context of blended learning in the aftermath of the COVID-19 pandemic. In contrast to the previous scenario where Google Drive handouts were used, the faculty members found the introduction of the Moodle platform to be a positive experience with transformative potential.

These were often shared by the teacher through the use of Moodle, with additional links directed to YouTube. All of the teachers agreed that it became easier for students to view the material at any desired time, but some of the students became less active after the resumption of regular classes. Blended learning is facilitated by KSC's training of their faculty members through Moodle training. Some of the faculty members requested more advanced training to enable the utilization of interactive features like quizzes and forums.

At first, students were a little hesitant about it, but then they appreciated the flexibility of the recorded lectures. Nevertheless, some students still wanted face-to-face interactions but were torn between times of distraction or loss of internet connection. It is observed that the implementation of blended learning through the use of Moodle in KSC has so far been effective, but for it to continue being so, it would need consistent support.

Discussion

The current study examined how five faculty members and forty BCA students at the Kathmandu Shiksha Campus felt about using the Moodle LMS in a post-COVID blended learning setting. Strong mean scores on accessibility (M = 3.95 and SD = 0.87) and usage frequency (M = 4.18 and SD = 0.98) show a generally positive student experience.

Meanwhile, some enduring issues with connectivity, teacher workload, and pedagogical adaptation were brought to light by lecturers' qualitative feedback.

Successes and Positive Outcomes

The claim that blended learning has become the norm in post-COVID universities is supported by the high frequency of LMS use, which suggests that Moodle has been integrated into students' study habits. This is consistent with a larger body of research showing that blended or hybrid models in higher education promote greater adaptability, self-control, and access to educational resources (Angwaomaodoko, 2024; Sain, Aziz & Sain, 2024). For instance, blended learning "offers flexibility, student motivation... and improved academic performance," according to Angwaomaodoko (2024) (p. 89). As evidenced by the mean scores over 4.0 on the pertinent items, which show that the LMS offered helpful learning resources, students in this study also gave Moodle's study materials a positive evaluation. This finding is further supported by a strong preference for blended learning mode, with a mean score of approximately 4.40 in our interpretation, which points to the fact that students like to combine face-to-face and online elements-a fact that corresponds with the results obtained by Watanapokakul (2022) and Cobo-Rendón et al. (2022), who found that blended learning approaches were considered effective and adequate by both students and teachers.

Challenges and Barriers

Despite positive perceptions, the study identifies important problems. Poor internet connectivity was the most frequently cited issue, which is consistent with research indicating that infrastructure remains a significant barrier to blended learning in many contexts (Hossain, 2024; Al-Naabi, 2024). Even though students feel comfortable using Moodle, lecturers noted that it is still difficult to create engaging content, manage workload, and ensure timely instructor feedback. This confirms recent research showing that institutional support, technological literacy, and teacher professional development are necessary for successful LMS adoption (Al-Naabi, 2024; Zeng, 2024).

High usage frequency is also encouraging, but it does not ensure deep engagement or learning outcomes. There have been documented problems with student isolation, decreased interaction, and decreased peer-to-peer collaboration (Balancing Technology, Pedagogy and the New Normal, 2021). Even though the mean scores in our data were high, the standard deviations (0.87–0.98) indicate that there was variation in the quality of the experience, suggesting that some students still had problems.

Practical Implications

Key considerations for improving blended learning sessions for Kathmandu Shiksha Campus and other such institutions: Firstly, given that poor internet connections were one of the factors, it is important that the institutions provide better digital infrastructure for enhanced internet connectivity among students. This is observed by Hossain 2024 and Rizaq & Sarmini 2024, and therefore, such institutions must look at collaboration or support services for ensuring better connections.

Conversely, interviews with lecturers revealed that the major challenge for the greater number of the teaching staff is still in the designing of interactive contents as well as workload management using the Moodle LMS. Online training of faculty staff is to be done to improve the effective use of LMS (Al-Naabi, 2024; Angwaomaodoko, 2024).

Although students were overwhelmingly in support of blended learning, it is important that concerns with regard to motivation and interactions be managed to ensure sustained engagement of students. Balancing Technology, Pedagogy, and the New Normal (2021) state that support services such as tutoring, deadline extension, or pre-recorded sessions could be necessary to ensure sustained levels of student engagement and minimize levels of stress. Lastly, it can be concluded that blended learning should be recognized as an "overall educational approach, independent of its application in response to the Covid-19 pandemic situation" (Balancing Technology, Pedagogy, and the New Normal, 2021). This would ensure that formal provisions for organized blend learning using the Moodle platform are taken into consideration by institutions, as it enhances flexibility and learning satisfaction (Cobo-Rendón et al., 2022; Zeng, 2024).

Conclusion

Following the outbreak of the COVID-19 pandemic, this research aimed to explore the situation of BCA students as well as their respective lecturers at Kathmandu Shiksha Campus with respect to the implementation of Moodle learning. It is evident that it has been utilized effectively, with positive perceptions among students with regard to the resource, learning, and accessibility offered by the learning management system. Challenges still remain, however, related to infrastructure, faculty utilization, and student-teacher interactions. Blended learning with Moodle is a viable option for the future of higher education in Nepal after the COVID-19 era, but it is important that its true potential is achieved with commitment to faculty development support and equity of access. Future research would explore more Moodle criteria and features such as more

engagement, specific activity or consistent performance which will definitely lead to better academic performance.

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