Netaji Subhas Open University
&
Commonwealth Educational Media Centre for Asia

A Collaborative initiative on

Implementation of Blended Learning in Higher Education Institutions in West Bengal

(Enhancing Capacity of Higher Education Teachers)

Consolidated Report

Prepared by

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About Netaji Subhas Open University (NSOU)

Netaji Subhas Open University (NSOU) is the premier State Open University in India and only Open University in West Bengal established in the year 1997 [W.B. Act (XIX) 1997] and recognised by UGC-DEB and RCI. NSOU is offering Under Graduate, Post Graduate and Ph.D. programmes and also a good number of vocational courses. NSOU is the first Open University in India to apply for NAAC A & A process and the first State Open University in India to be accredited by NAAC with Grade- 'A' in its first cycle. NSOU operates through three Regional Centres (Kalyani, Durgapur, Jalpaiguri) and 162 Learner Support Centres across the state of West Bengal. The university is now implementing the ICT integrated pedagogy to deliver its programmes Under Graduate, Post Graduate degree programmes. A good number of blended Vocational and Educational Training (VET) programmes of the university also help the youth to skill and/or reskill themselves to remain relevant and productive in the continuously changing job market.

About Commonwealth Educational Media Centre for Asia (CEMCA)

The Commonwealth Educational Media Centre for Asia (CEMCA) serves as the regional educational media centre of Commonwealth of Learning (COL), Vancouver for Commonwealth Asia, established at New Delhi in 1994. CEMCA promotes the meaningful, relevant and appropriate use of media and technology to serve the educational and training needs leading to Sustainable Development through learning in Commonwealth member states of Asia. The Govt. of India by a Gazetted Notification, dated 10th February 2000, notified CEMCA as a diplomatic mission under provisions of the United Nations (Privileges and Immunities) Act, 1947.

Backdrop

The scenario of the higher education is rapidly changing and the need of the hour for accelerating the global competition, increase in employment opportunities, for ensuring inclusive and equitable quality education and promote lifelong learning opportunities for all and increase in quality of learning experiences is to change, the way we are approaching to higher education in the lines from universities to industry connect and industries to university connect for learning, unlearning and relearning in the new Mantra of 'skill, reskill and upskill' for empowering, enabling teachers, researcher and students and young population in higher education to equip and sustain in global market competitions. The outbreak of COVID-19 has resulted in a paradigm shift in education throughout the world and India in particular. Online/ blended teaching learning has become need of the hour to sustain our education system.

About the Project

Blended learning is a teaching and learning approach that combines traditional classroom methods with ICT-mediated activities. This pedagogical approach combines face-to-face and online activities, as well as synchronous and asynchronous learning tools, allowing for the most effective learning processes. Blended learning is the practice of combining digital learning tools with traditional classroom teaching. In a true blended learning environment, both student and teacher should be present. Regardless, students should be able to use the digital tools to control the pace and topics of their learning. Blended learning bridges the gap between traditional method and online classrooms by combining physical and digital learning (eLearning). Teacher training is one of the thrust areas of NSOU through which the university organizes orientation programmes, capacity building programmes for teachers, Training of Trainers (ToTs) to ensure the quality of teaching specially in ODL and digital learning environment. Under the auspices of this collaborative venture, NSOU and CEMCA jointly took the responsibility to enhance the capacity of the higher education teachers of the state of West Bengal for effective teaching in the post pandemic period when the on-campus activities are being resumed slowly. Now the educators have many options of teaching viz. face to face and digital (synchronous and asynchronous) system. Depending on the situation and with available resources and infrastructure, the teachers and educational institutions may combine or blend these methods for effective teaching and learning for the better outcome.

Need of the Project

As discussed supra, the emergence and adoption of blended learning in the context of education and education technology is quite evident. The Context is changing, vis-à-vis there is need of the hour in changing the content and process of higher education. The blend is beautiful. Meaningful blend is even more beautiful, to look, to feel, to interact, to organize the content, learning material, learning experiences, peer interactions, group formation, classroom organization and effective classroom management in challenging times and also in the age of technology.

Modern-day educational trends largely revolve around the buzzwords "blended learning" and "social media." It's the ultimate goal that drives nearly every other trend. For some time now, we have been living in a digital environment. Digital adoption accelerated to an almost dizzying pace when the pandemic hit, driving this tendency into overdrive. Almost overnight, every college and institution were transformed to offer academic and educational services through digital platform due to wake of COVID-19 pandemic all over the world. For the first time in many decades, educational institutions were compelled to diverge from their regular practices. Nonetheless, colleges and universities seized the opportunity to use multiple platforms, apps, and channels to their advantage as soon as they were disrupted. Resultantly, a wide variety of video conferencing platforms have become household names.

More than ever, tools like Blackboard are critical in the classroom. Toward the end of 2021, everything began to return to normal. Increasingly, students were allowed to return to the on-campus. There has been a growing interest among educators and students alike in developing hybrid systems that would combine the greatest features of online and face-to-face training. Blended learning has become second nature to educators because of the convenience and adaptability it offers. As a result, they have more access to the Internet's richness of information. It is now easier than ever for educators to create interesting courses that allow students to connect with museum and library collections. When it comes to teaching, it is understandable that educators want to keep their choices open for the future.

Overall objectives

- To improve the knowledge and skills of teachers/academics in higher education to develop and offer Online/Blended Course.
- To enable the staff/faculty members to the process of planning, designing, developing and delivering online courses.
- To adopt appropriate ICT tools and learning platforms as an adjunct to face-to-face teaching and to teach in a fully online or distance learning context.
- To find out the prospects and challenges of providing online/blended learning in the context of Higher Education Institutions in West Bengal.

Objectives of the Project

To make the Higher Education Teachers -

- cognizant with the utilitarian features of different outcome-focused models of Blended Learning
- apprised with relevant ICT Tools that can be applied by them for inducing collaborative learning, for enriching the cognitive acumen of the students and for facilitating the learners in deciphering complex thematic components
- equipped with the techniques of applying effective digital tools that can be supportive to interactive teaching -learning method.
- rational with the globally reputed learning theories and instructional models that are highly conducive in teaching the adult learners.
- in achieving conceptual clarity and operational dexterity regarding the concept and process of Facilitation
- enlightened with the participatory and inductive learning methods that are covered by Facilitation
- well-informed with diversified strategic interventions that are applied while facilitating the adult-learners

- in understanding, applying and analyzing the multi-faceted role of Facilitation in Competency Development

Table-1: Project Team

Project Team Members	
Project Adviser	Dr. Manas Ranjan Panigrahi, CEMCA
Project Director	Professor Anirban Ghosh, NSOU
Workshop Facilitator/Mentor	Mr. Purandar Sen Gupta Dr. Shaunak Roy
Project Coordinator	Dr. Ritu Mathur Mitra, NSOU Dr. Papiya Upadhyay, NSOU

Project Modalities

There were 5 workshops held for capacity building programmes, four face-to-face at four regions viz. Durgapur RC, Jalpaiguri RC, Kalyani RC and Headquarters at Kolkata and one in blended mode owing to the sudden outbreak of Omicron induced lockdown across the state. The duration of each workshop was three days.

Schedule of the 5 Workshops

Table 2: Schedule & Venue of the Workshop

Sl. No.	Workshop Venue	Date	Mode	Time
1	Durgapur RC	17, 18 & 19 December 2021	Face-to Face	10A.M-5:00 P.M
2	Jalpaiguri RC	07, 08 & 9 January 2022	Blended	
3	Kalyani RC	25, 26 & 28 February 2022	Face-to Face	
4	NSOU HQs	25, 26 & 27 March 2022		
5	Jalpaiguri RC	08, 09 & 10 April 2022		

Nature of the Participants

The faculties of NSOU and other universities/colleges that are Learner Support Centres of NSOU and other Institutions/academics located at the particular region were invited to participate in these programmes. Teachers of various levels viz. Associate Professors, Assistant Professor, State Aided College Teachers and Research Scholars were trained under this project during the 3-day workshop at each venue. The face-to-face workshops were organized in the respective campuses of the university following the COVID Appropriate Protocol (CAP) announced by the government. In response to our invite, the participants attended the workshops at their respective zones in spite of the fear of Covid-

19 pandemic. These events were organized by the university on-campus in face-to-face mode for the first time since March 2020 when the lockdown was announced to close all the educational institutions including higher educational institutions. We were overwhelmed to see the enthusiasm among the participants who took the workshop very seriously as the agenda of the workshop were very relevant and important for the teachers in the post-covid era. Out of the total participants, 26% were female which also met of the agenda of COL-CEMCA to ensure the gender participation in the event.

Table 3: No. of Participants

Venue	Male	Female	Total
Durgapur RC (F2F)	41	10	51
Jalpaiguri RC (Blended)	36	9	45
Kalyani RC (F2F)	37	17	54
Headquarters (F2F)	55	25	80
Jalpaiguri RC (F2F)	29	8	37
Total	**198**	**69**	**267**

Methodology of the Workshop

- All the workshops were conducted through the following activities/interventions-
- Lecture
- PPT Slide Presentation
- Situation Driven Role Enactment
- Situational Analysis, Planning & Problem Solving
- Focused Discussion
- Creative & Analytical Exercises
- Probing & Brainstorming
- Quality Circles
- Participatory Planning
- Human Process Laboratory (Miniature Version)
- Design Thinking
- Cognitive Apprenticeship
- Fish Bowl Exercise
- Role Playing
- Gaming

- Interaction
- Blended Learning Course material preparation
- Hands-on activities
- Questionnaire to assessment of Workshop Feedback
- Questionnaire for assessing effectiveness of implementation of BL/Lessons learnt

Proceedings of the Workshops

Each workshop was comprised of the sessions, namely:

- Inauguration
- Ten Technical sessions
- Valediction
- Closing

Highlights of the Workshop

Lesson Learnt

During the 3-day workshops, the participants were exposed to the following models/approaches, intervention strategies and facilitation tools/techniques to grasp the blended learning and its implementation in the Higher Education context:

- Models of Blended Learning
- Practical ICT Tools that are instrumental for fostering cognitive competencies
- Learning Theories & Instructional Models
- Facilitative Learning Model by Carl Rogers
- Collaborative Learning Model by May & Doob
- Problem Based Learning Model by Howard Burrows
- Discovery Learning Model by Jerome Bruner
- Robert Gagne's Nine Instructions
- ARCS Model by John Keller
- Experiential Learning Model by David Kolb
- Cognitive Taxonomy by Benjamin Bloom
- Diversified Learning Styles by Honey and Mumford
- Elaboration Theory by Charles Reigeluth
- Cognitive Load by John Sweller
- Success Approximation Model by Michael Allen

Participatory & Inductive Methods deployed in Facilitation

- Scripted Role Play

- Situation Driven Role Enactment
- Situation Analysis, Planning & Problem Solving
- Learning Games
- Case Analysis & Logical Deduction
- Brainstorming

Strategic Interventions that are deployed in Facilitation

- Mind Mapping
- Design Thinking
- Appreciative Inquiry
- Positive Reinforcement
- Behavioral Modeling
- Scaffolding
- Motivational Story Framing
- Probing & Probing induced Metacognition
- Paraphrasing
- Parenthesis

Consolidated Feedback analysis report of the 5 workshops

At the end of each workshop, a structured questionnaire in a google form was circulated among the participants for their feedback. There were three sections viz. i) personal information and certain parameters for evaluating the ii) workshop and iii) programme outcome. The feedback of each workshop was analyzed before the next workshop to improve the content and change the methodology appropriate for the specific target group of different zones as per the local needs. 84% participants submitted the online form on the basis of which the following inferences have been drawn.

A. Feedback on the Workshops

1. How effective was the program in achieving the learning objectives?

Like every programme, the present project also had some pre-determined learning objectives which has been given in the earlier sections. About 79% participants opined that that the learning objectives have been achieved per excellence while 19% opined that the workshop was well designed to achieve the learning objectives (Fig-1).

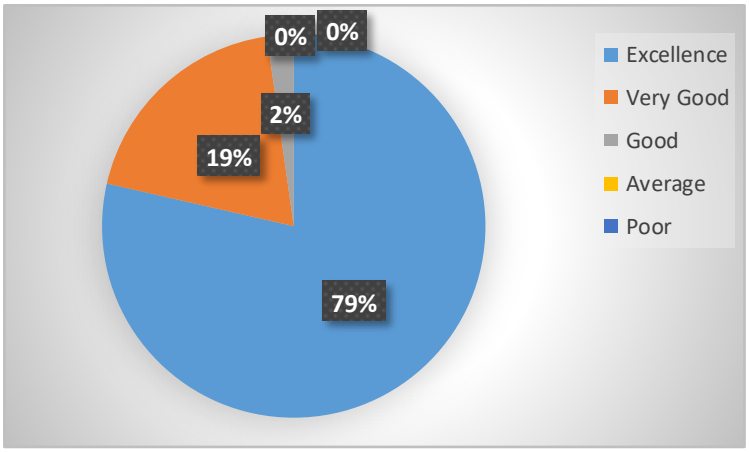

Fig.1: How effective was the program in achieving the learning objectives

2. Feedback on the different parameters/ areas

To make a workshop effective and useful, the components/ parameters of a workshop are designed in such a way, that the outcome of the workshop can easily be achieved. The feedback on the parameters shows that all most all the participants agreed that the workshop was engaging, relevant and useful in today's context of digital learning environment. The learning materials distributed during the workshop were also relevant and useful. The activities carried out through live demonstration were the special attraction of the workshop. The participants demonstrated various activities from their own life through group activities. They also opined that the trainers were very cordial, and knowledgeable. The ICT tool used in the workshop was very effective and user friendly (Fig.2).

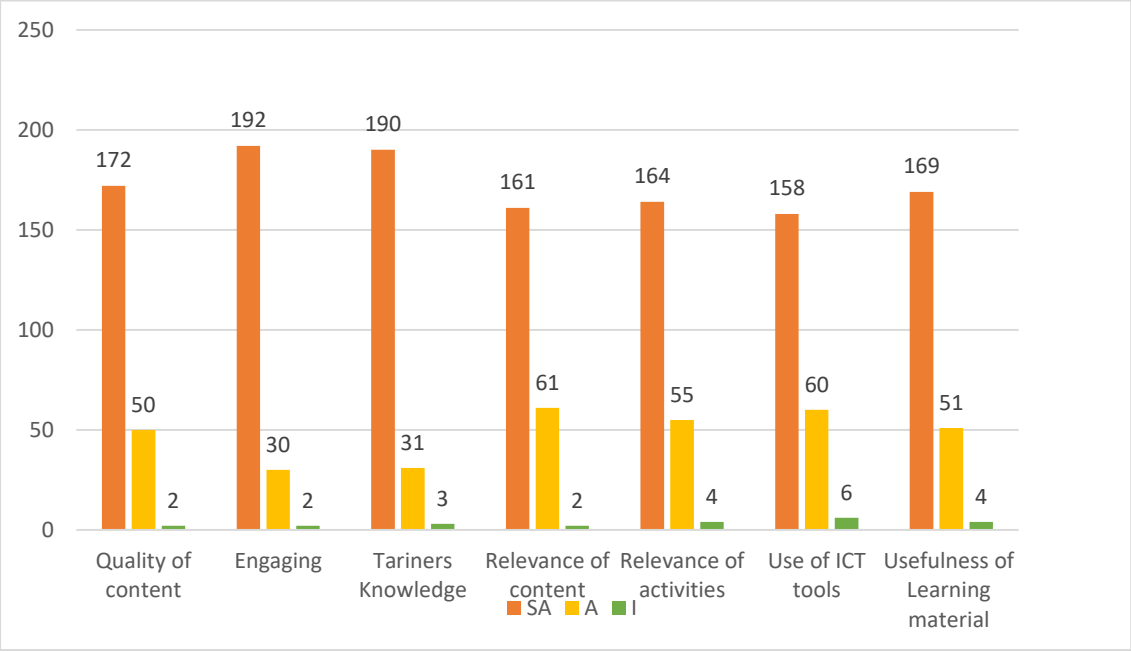

Fig.2: Feedback on the different parameters/ areas

B. Feedback on Programme Outcome

To evaluate the programme outcome, following four parameters were presented before the participants in a five-point scale as Excellence (E), Very Good (VG), Good (G), Average (A) and Poor (P).

i) Knowledge on Blended learning,

ii) Knowledge on Pedagogy, Andragogy and Heutagogy,

iii) Knowledge on ICT Tool,

iv) Knowledge on Learning Interventions.

The google form was framed to assess the knowledge of the participants before and after the workshop, whether there is any knowledge gained in the above-mentioned areas after the workshop. The figures show there is a significant change in level of knowledge in different domain viz. knowledge on blended learning, knowledge on pedagogy etc., knowledge on ICT Tool and knowledge on learning interventions.

1. Knowledge on Blended Learning

Figure 3 depicts that after the workshop the percentage of the participants who had average/ poor knowledge on blended learning had come down from 32% (average, poor) to almost nil (0.44%). After the workshop, it was evident that almost all the participants are now capable to understand the concept of blended learning (Fig-3).

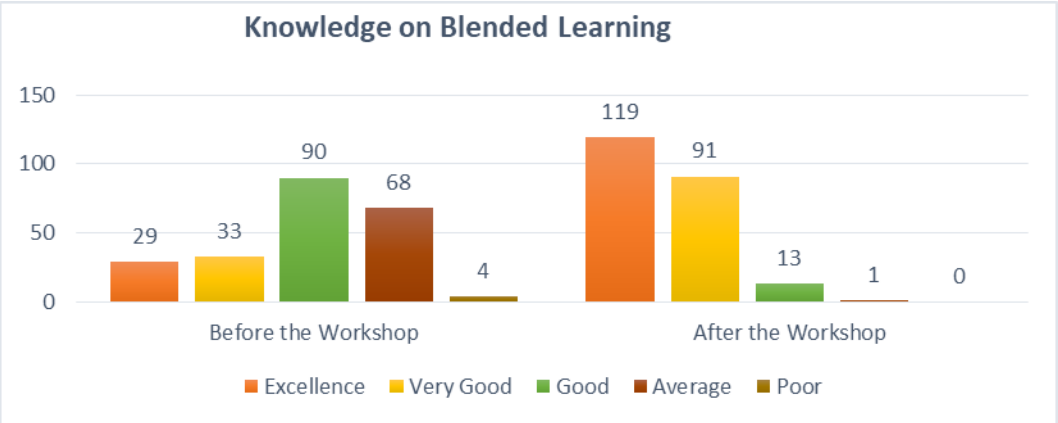

Fig.3: Knowledge on Blended Learning

2. Knowledge on Pedagogy, Andragogy & Heutagogy

The project was carried out to include the Higher Education teachers working at different HEIs across the state of West Bengal as capacity building in the area of teaching methodologies/

pedagogies etc. The Figure 4 shows that the there is a remarkable improvement in the cognitive level of the teacher-participants specially the concepts like andragogy, heutagogy etc. Now the teachers are well versed with these terminologies which they may follow in their professional life more effectively.

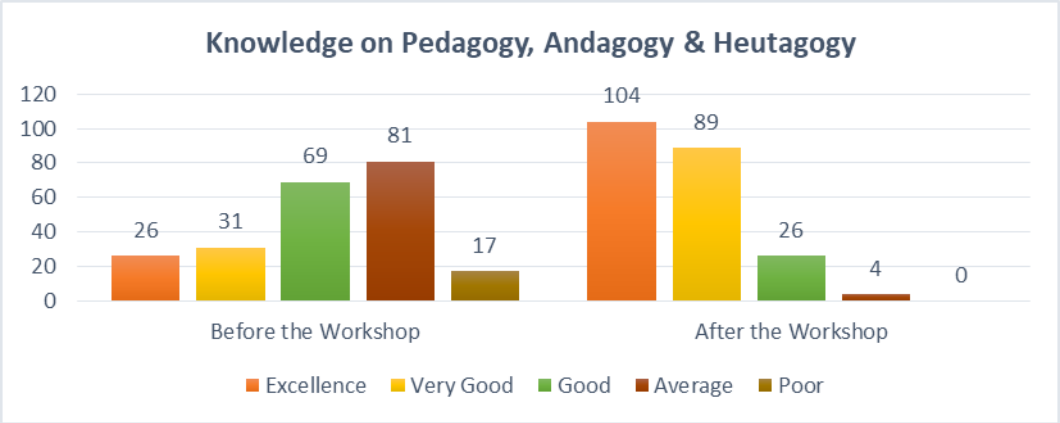

Fig.4: Knowledge on Pedagogy etc.

3. Knowledge on ICT tool

Due to advent of the Information and Communication Technology (ICT), the learning style and attitude of the 21st century learners have been noticed. Now the students are taking the benefits of flexible learning of anywhere, any time learning and also flexible in terms of choice of their courses. Without the knowledge of ICT tool, the teachers may not reach their students with their own academic content both on campus and off campus settings. The figure 5 shows that the workshop helped the teachers to gain knowledge in using ICT tool for synchronous and asynchronous mode of teaching. It is evident that there is a significant increase in the no. of participants (from 33% to 90%) who have gained knowledge in using ICT tool. With other ICT Tools, PADLET was demonstrated in detail- how to use, its effectiveness etc. with hands on training.

Considering both the figures 3 and 5, it may be inferred that the teachers are now more conversant with ICT tool which they may use to apply for effective implementation in a blended learning mode.

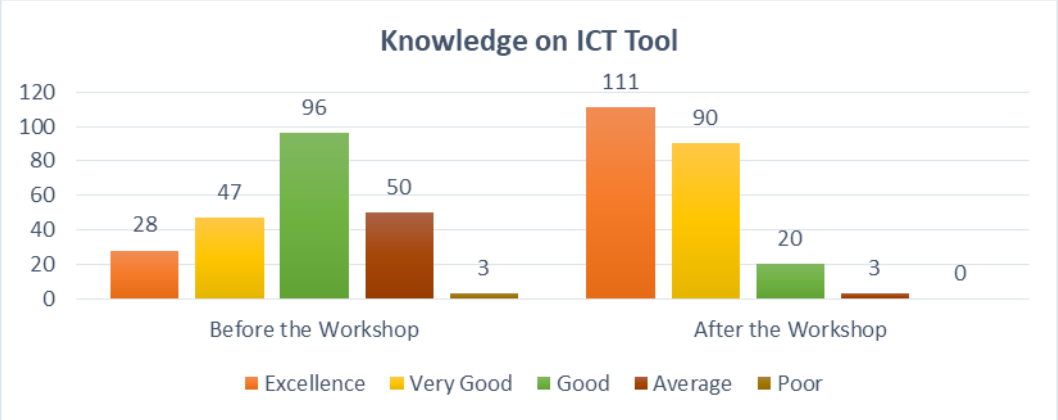

Fig.5: Knowledge on ICT Tool

4. Knowledge in Learning Interventions

The important feature of the project was to engage the participants in various activities and to show how the different teaching models are being used by the teachers at different situations and local context. The group activities were the key behind the success of the project. In each workshop, participants were divided in groups and requested to present their views/ opinion on a particular topic/ situation etc. through their group leader. These were based on collaborative approach. Story telling was another key factor for engaging the participants all through the workshops. It is evident from the figure 6 that after the workshop, 91% of the total participants agreed that there is a positive impact of learning intervention to engage and retain the students' attention in the teaching-learning process. The joyful learning, collaborative learning, participatory learning, group activities are the other key factors of success behind the blended learning which can be implemented through judicious use of available ICT tools.

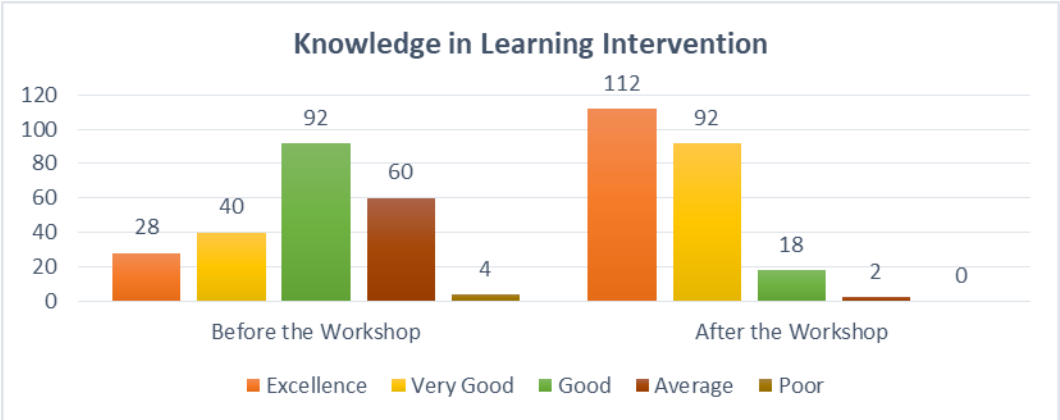

Fig.6: Knowledge in Learning Intervention

5. **Would you recommend this Capacity Building Program to your colleagues?**

On the basis of feedback received, it may be inferred that there is a significant improvement in the knowledge base of the teachers who participated in the project. As outcome of the project, we expect that in one hand they will disseminate this knowledge among their colleagues at their work place and on the other hand they will implement various educational theories and instructional model (pedagogy/ andragogy/ heutagogy) in blended mode to impart their knowledge among their students with the help of modern ICT tool. At the end of the questionnaire, the participants were asked whether they will recommend this capacity building programme to their colleagues. The response was overwhelming and all the participants appreciated this collaborative initiative of NSOU and CEMCA for the betterment of teaching learning environment in post pandemic period (Fig.7)

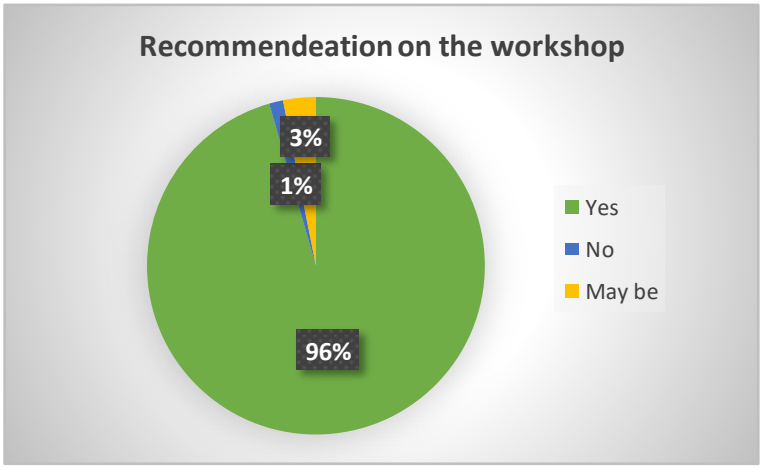

Fig.7: Recommendation on the workshop

Outcomes of the Project

The outcomes are elucidated below:

I. **4- Week MOOC on Foundations of Heutagogy**:

In a Blended Learning (BL) paradigm, heutagogic environment is impressed. Through facilitation, the effectivity of BL commensurate the effectuality of learning outcome. A facilitator dispenses knowledge in a community of participation. A facilitator in a blended learning plays many roles. It is also important to consider some of the learners' skills that support online and blended learning success. Learners who succeed in an online or blended learning program will need self-motivation, self-efficacy, time management, and communication skills. Considering these abilities, as well as when arranging essential assistance to assure the success of life-long learners, self-determined learning and justified facilitation by the facilitators/coach/mentors, takes a centre stage-the Heutagogy. As ushered from the project that was translated through five workshops, the deliberations proposed a preliminary insight about the new amendments and incorporations in the NEP 2020, the new proposals by the UGC and how the future is moving towards heutagogy, from a pedagogical

paradigm. Heutagogy is principled on self-determined learning and has a symbiotic relationship with technology. Distance education is in a unique position for creating learning environments for supporting a heutagogical teaching and learning approach, as well as for contributing to further research into heutagogy. Hence a 4-week MOOC on Foundations of Heutagogy has been developed which is ready to launch through NSOU-LMS.

II. Effectiveness of the lessons learnt

In order to know the exactitude of the competence and skills acquired during the workshop and its implementation in the real context, a sample of 62 higher education teachers (out of 267) as partakers of the workshops, were surveyed after 20 days from the last workshop held. The objective behind this time gap was to assess the participants' retention of knowledge acquired during the workshop. Assessment of the acquired lessons during the workshops by the participants were captured through a questionnaire. The Google form responses to 10 close-ended statements and 02 open-ended questions are clubbed as common reflections of their views and actions hitherto.

A. The 10 Close-ended statements were as follows:

I. In implementing blended learning, technology is directly tied to learning objectives (Agreed:94%)

II. Using technology and varied instructional strategies constitute blended learning environment (Agreed:98%)

III. Blended learning does not allow for technology being used for multiple opportunities in the classroom at the same time (Disagreed:58%)

IV. When technology is just inserted randomly, there is typically no plan for assessment to demonstrate student growth and learning (Agreed:55%).

V. While preparing a blended context, it is not possible to personalize lessons for each student, or at least differentiate among groups of students (Agreed:44%).

VI. It is found that blended learning describes the instructional practice of blending technology with traditional learning (Agreed:81%)

VII. Psycho-social competencies are easily mapped among the students in a classroom (Agreed:82%).

VIII. Flipping the classroom is a herculean task (Disagreed:37%).

IX. The technical skills and intervention strategies learnt helped to develop BL courses/documents for the learners (Agreed:95%).

X. Appreciative Inquiry, Scaffolding, Positive Reinforcement & Behavioral modelling are easily executed through role-plays (Agreed:94%).

The figure-8 depicts the analysis of their responses:

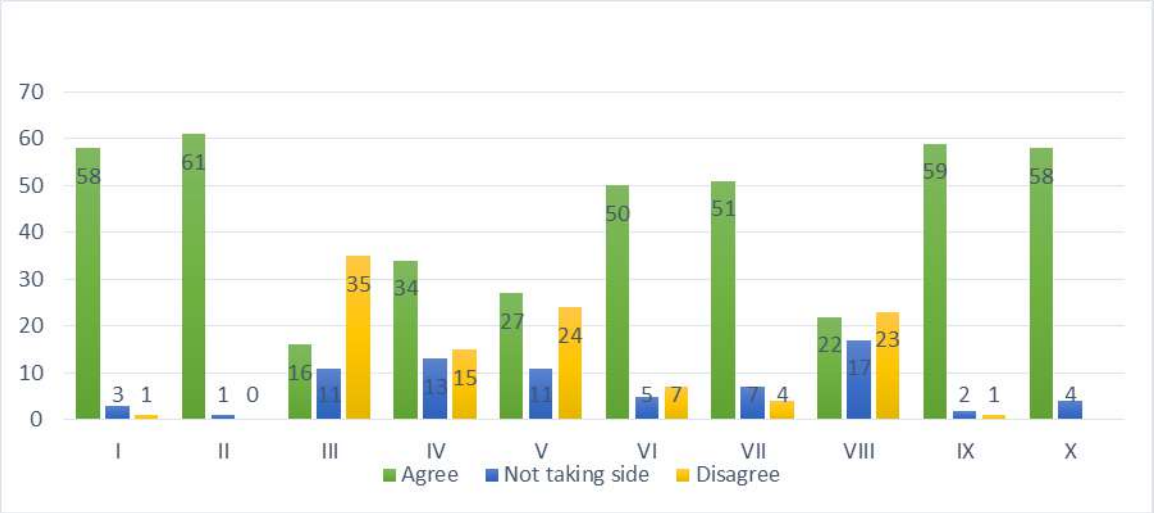

Fig.8: Effectiveness of lessons learnt

The overall responses underpin the fact that the 3-day workshop provided an effective discourse on Blended Learning prerequisites and enabled to a great extent with the skills for delivering intervention strategies and competence to use facilitation tools. The platform also provided to build upon a culture of open-mindedness towards a blend of online/offline components in a context-specific learning situation. To cater to the heterogeneous learner base at the HE level, the blend has to be orchestrated with quality parameters to meet the educational objectives in an ever-changing society.

B. <u>In respect of the two open-ended questions, the following common interpretations have been received from respondents that speaks for itself</u> (Table-4):

Table 4: Responses from Open-ended Questions

Open-ended Questions	Responses by the participants
1.How do you strive for consistency between online and face-to-face communications and with your course documents? (Express your views within 100	Consistency is followed in the following manner: 1. Keeping interaction with the students daily about their class in students' WA group and giving them reminders either with texts or audio. 2. Asking to prepare oral presentations or giving them assignments and mentioning the format of the same in a well-defined manner. 3. By posting study materials either in ppts or PDFs in English as well as

words)	Bengali to make it easy and more appropriate for them to study and understand. 4. Last 10 minutes of the class are kept for conversation with students both in online and offline mode to help them shed their inhibitions and provide scope to speak up about themselves or about class/syllabus-oriented issues.
	Content analysis is needed to decide on which content to be covered through online and which through face to face. Specially where collaboration or hands on activities are needed face to face is essential. But in only theoretical discussion online can be adopted. 1. Effectively communicating with students 2. Error prevention 3. Proper Engagement with the student 4. Provide clear instructions to the students. A blue print of how to make a bridge between online and face to face communication. Then make a minute-to-minute plan of each sub unit and analyse which type of communication will be best suited for development of specific concept. For face-to-face communication inquiry- based learning, mind mapping techniques and collaborative learning. In online communication engagement with the help of virtual reality-based learning and also a discussion forum is encouraged. With the help of social media, online homework could be given; classwork online, by taking online test specially the short questions type through google form, quizzes etc.
	Online studies and face to face communication should always go hand-in-hand for a perfect experience of blended learning. The classroom learning can be enhanced using computer-based presentations and animations, which aids in the understanding of intricate biological processes. Also, examinations and evaluations can be carried out using the computation tools which will be both interactive and interesting for the students.
	The classroom should be equipped with technical gadgets to communicate with the students easily and the students also should be sound in their technical knowledge do that they can easily access the facility. Combination of face to face in-person classroom activities with online

	activities purposefully, meaningfully and appropriately only based on the need of the context by maximizing the benefits and minimizing the disadvantages of each facilitation mode.
	Blended learning is the only way to overcome the problem related to two extreme poles of a sphere. Not only that, but also it is a great opportunity to the modern facilitators for playing their roles in the context of new arena of educational thought process. Only BL has the advantages of synchronous as well as asynchronous mode of curriculum transactions. Through this way a facilitator can easily cope up with online and F2F communication as a leading teaching-learning opportunity.
	Reflective pedagogy is implemented with facilitation tools
	Asynchronous Learning vs Synchronous Learning One of the most significant differences between face-to-face learning and online learning is that face-to-face learning is synchronous, or done at the same time. All instructors and students/classmates are present in face-to-face learning. With online learning, however, that is not necessary. Online instruction can be either synchronous or asynchronous. 2. Delivering Knowledge vs Facilitating Learning In face-to-face classes, instructors are usually just delivering knowledge, and then assessing the understanding of that knowledge at a later date. This is compared to online learning, where instructors are seen more as facilitators of learning — helping their students understand the material through provided online materials. 3. Teacher vs Child-Led Advancement While both online and face-to-face learning can have components of both student-led and teacher-led curriculum, online study lends itself better to student-led advancement and learning. In online study, students can decide for themselves what they want to dig deeper on, and spend more time learning. 4. Discipline and Self- Motivation Some may say that it is harder to succeed in online education, and that is because you must be highly self-motivated and disciplined. In online learning, no one is keeping you on track — you must be your own motivator, time keeper, and disciplinarian. 5. Measuring Performance In both face-to-face and online learning, instructors must have a way to measure performance. This is typically done by way of submitting

	assignments, administering tests, exams and quizzes, and creating points for participation. Participation and class 'attendance' is harder to measure in an online learning environment.
	Introducing flipped method: sending self -made EDUCATIONAL video, then taking the offline classes, sending study materials from various books and sources through Google classroom and whatsApp group, also, taking evening classes for working students through Google meet.
	We can progress our consistency through a clear objectivity of outcome of course and keep in touch with the learners with the various lucrative interesting teaching learning facilitative tools and interventions strategies.
	There are a variety of ways to enhance consistency in online courses and programs including using templates (e.g., syllabus, course shell), using course development standards or guidelines, creating course policies such as standardized response or feedback times, or offering training to faculty teaching online.
	BL is quite developed and advanced technique in educational field. 'I would like to be facilitator rather traditional teacher. So, I will guide my students at the class room & also advise them through the online platform for the sake of their academic benifits.in my view simultaneously, we should guide our students through the class room study & students friendly online process. For example, during offline class we can do board work but through the online mode we can go for the presentation (ppt, screen sharing etc.) for the better understanding of our students'.
	A monitored distribution of time, planning and execution can enhance better learning and teaching environment. thus, one can strive for a modelled pattern of consistency between online and face to face. Giving the pdf of the standard books. Providing different links of you tube on the specific topic in the WhatsApp group. By doing classes through Google meet as well as in offline mode. Providing practical in face-to-face communication as well as in you tube where that topic has

	been discussed. With knowledge and facilitation skill learnt, presenting documents with offline and online mode both at the same time.
2.Enlist the difficulties you faced during creating a blended learning environment. (Express within five points)	1.Availability of proper infrastructure for all the students. 2. Not always possible to assess the outputs from students attending classes online. 3. Sometimes different online platforms becomes difficult to use due to the subscription charges. 4. Students may mostly prefer online mode as they can join from the comfort of their homes. But this hampers the strengthening the practical skills.
	Time management with the course content and Selecting between the two modes for delivering the particular topic to the maximum student. Lack & Application of ITeS & limited knowledge of modern updated software.
	1. Mode of Communication or interaction 2. Delivery of e content 3. Background and Diversity of learners 4. Objective and outcomes of the course 5. Technical knowledge of how to blend the course content.
	Working with a large group of students in blended learning method has its challenges. Both students and the facilitators need to have access to the same tools which might not be possible in many situations. Lack of network Inefficiency Lack of adaptiveness No human contact Lack of interest A new idea has implementational limitations.
	Difficulties faced: 1. Students feel lethargic and show disinterest in studies or classes due to sudden flipping of learning. 2. Students were unaware of blended learning and the situations did not permit them to cope with the digital mode. 3. Consistent low attendance of a few students delayed in completing the required syllabus because previous lectures needed to be repeated more than a couple of times. 4. Joyful learning was indeed a herculean task due to the deficit in digital devices on their part.
	1. Need more improvement technical gadgets. 2. Students should be oriented properly regarding this blended mode of study. 3. Subject wise orientation programme should be conducted.
	1. Technology issues 2. Maintaining students' progress 3. Students' participation 4. Digital gap 5. Inadequate training

	1. Students concentration. 2. Insufficient technical skills of both students' and Teachers'. 3. Infrastructural obstacles. 4. For large no of students it will be difficult to maintain or map psycho-Social competency. 5. Students acceptance of new method replacing traditional method. Application of Technology, Skill and knowledge, infrastructure, available internet, time duration. Students' attention being distracted by circumstances and other factors from home
	1. Technology is Expensive. Many traditional classrooms have only one computer present for student and teacher use. 2. Technology Issues. 3. Adapting Content for Blended Learning. 4. Decreased Motivation. 5. Weakened Relationships.
	Communication, poor network, smart phone availability, electricity, casual approach of students.

From the above responses, the overall views/opinions that elicit the difficulties faced in implementing BL echoes-

1. Device availability/Infrastructure/Physical facilities
2. Time management
3. Technical skills on the part of teachers and learners
4. Knowledge of BL on the part of learners
5. Frequent orientation on BL is necessary to equip the stakeholders
6. Cost effectiveness
7. Network issues
8. Positive mind-set needs to be nurtured more
9. Resistance to change/adaptation
10. Knowledge of updated software and its use

III. Draft BL Course (content) Design developed by the participants using template

Through a group activity that required the participants to create a course, they were segregated into different groups based on the similar subject domains such as Languages, comprising Bengali, Hindi, English etc., Education, Life Sciences, Physical Sciences, etc. The participants developed a two-week course design that they would teach in the blended mode, based on a template that was pre-shared with them (Table-5). The course comprised of a blend of synchronous and asynchronous events, wherein content would be developed and shared with the target learners accordingly. The course

design templates designed by the participants have been delineated subject-wise. A total of 8 courses have been developed by the participants in the Workshop held at NSOU HQs, and a total of 5 courses have been developed in the Workshop held at Jalpaiguri RC, NSOU, resulting in an aggregate of 13 courses from various subjects.

Table-5 Course Design Template with Blended Learning Approach

TITLE OF THE COURSE
Please include the title of the course you shall be teaching here.

DURATION/TIMEFRAME OF THE COURSE
Two Weeks (Mandatory)

DESCRIPTION OF ASYNCHRONOUS LEARNING (INPUTS & ACTIVITIES)			
Text Based inputs	Video Based Inputs (with YouTube link)	Interactive Activities	
Please specify which topics (and its contents) you shall befacilitating through text-based inputs.	Please specify which topics (and its contents) you shall be facilitating through video-based inputs. You are required to create a short YouTube video, that explains any content that is to be covered by you. After the video is taken, you can share the linkof the video in this segment. Please ensure thatyou specify the Course Name, Module Name and Specific Topic you have included in the video.	Interactive Activities with the Mentors	Interactive Activities with Peers
		Please specify which interactive activitiesyou intend to conductthrough WhatsApp, Padlet and/ or otherdigital tools.	Please specify which interactive activitiesyou intend to conductthrough WhatsApp, Padlet and/ or otherdigital tools.

COURSE CONTENT / TOPICS TO BE COVERED
Please include the topics/ modules you shall be covering in the two weeks in this segment.

DURATION OF THE PERIOD FOR ASYNCHRONOUS LEARNING[1]	DURATION OF THE PERIOD FOR SYNCHRONOUS LEARNING[2]
Out of the 2 weeks of the proposed course, what would be the duration of the course you shall be covering for asynchronouslearning?	Out of the 2 weeks of the proposed course, what would be the duration of the course you shall be covering for synchronous learning?

DESCRIPTION OF SYNCHRONOUS LEARNING (INPUTS & ACTIVITIES)					
Facilitation		Problem Solving		Interim Assessment	
Topics	Process of Facilitation	Topics	Process of Analysisand Solution	Topics	Method
Which topics shall be covered synchronously?	How would the topics be facilitated?	Specify thetopics here.	How would you analyse the problems raised andoffer solutions?	Specify thetopics here.	How would you assess the students?

MODE OF FINAL ASSESSMENT
Please specify the mode of final assessment you would use for the final assessment, viz. Diagnostic, Formative, Interim, and Summative Assessment.

[1]Synchronous classes run in real time, with students and instructors attending together from different locations.

[2]Asynchronous classes run on a more relaxed schedule, with students accessing class materials during different hours and from different locations.

Summary

The project envisaged that the online and in-class materials play an important role in the success of a blended course. Preparing online and offline learning materials is one of a facilitator's three main tasks. Facilitators may need to learn more about technology to create the best online learning materials. Creating online courses using an authoring tool is one of these digital skills.

Also, blended learning works best when facilitators' in-class instructions and online materials' indirect guidance are highly connected. When eLearning, personalized learning, and classroom activities are combined, they enrich learning experiences and improve learner outcomes. A lesson plan/ story board can help facilitators create online learning materials that complement in-class activities.

The various intervention strategies and facilitative tools discoursed in the workshop session established that after the learning process, there will be important connections between facilitators and learners. It helps facilitators assess learner comprehension, correct misconceptions, and provide constructive feedback. It also helps assess the course's effectiveness, allowing facilitators to make necessary adjustments for the next time.

Recommendations

The following recommendations evolved from the transactions and outcome of the project:

Empowering the academics help extending the present online program or launching a new one will involve much research, thought, and preparation on the part of the institution’s leadership team. A critical initial step is to explicitly describe the academic objectives and to provide quantitative metrics for evaluating the implementation's effectiveness. After establishing these objectives, the leadership team may begin planning for personnel, professional development, curriculum, facilities, and technology, among other things. Investing significant time and money in this upfront preparation can assist instructors in creating a curriculum that enables students to achieve academic achievement and excellence.

A Learner benefit from several advantages associated with online and blended learning, including increased access to courses and instructors, more flexibility in scheduling, and greater control over course pacing. Furthermore, learners can improve their time management and study abilities, as well as their academic achievements. Developing the optimal online or blended learning program for the institution is reliant on the learners' particular requirements.

Participants expressed appreciation for the numerous information and communication technology (ICT) tools addressed during the event. Participants also indicated interest in conducting a facilitation training programme and a design thinking workshop at their individual institutions to better understand and appreciate deep-seated difficulties and issues in higher education.

Reports of individual workshop

Workshop 1:

http://www.wbnsou.ac.in/about_us/CIQA/workshop_seminar_events/2021/20211221_Report_DGP_Workshop_2021.pdf

Workshop 2:

http://www.wbnsou.ac.in/about_us/CIQA/workshop_seminar_events/2022/20220116_Revised_Report_NSOU_CEMCA_2nd_Workshop.pdf

Workshop 3:

http://www.wbnsou.ac.in/about_us/CIQA/workshop_seminar_events/2022/20220304_Report_NSOU_CEMCA_Kly_Workshop3.pdf

Workshop 4:

http://www.wbnsou.ac.in/about_us/CIQA/workshop_seminar_events/2022/20220331_Report_Hqs_Workshop.pdf

Workshop 5:

http://www.wbnsou.ac.in/about_us/CIQA/workshop_seminar_events/2022/20220413_Report_Jlp_Workshop_8-10_Apr_2022.pdf

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