



A Descriptive Study To Assess The Level Of Satisfaction Among B.Sc. (Hons.) Nursing Students Regarding Virtual Classes During The Covid-19 Pandemic Lockdown

Level of satisfaction among B.Sc. (Hons.) Nursing students regarding virtual classes during COVID-19 pandemic lockdown

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Abstract

Introduction: During COVID-19 pandemic lockdown, the whole world switched to online learning. But the efficiency of this mode in Indian and nursing context continues to be under study.

Objective: Aim was to assess level of satisfaction among B.Sc. (Hons.) Nursing students regarding virtual theory and practical classes and to delineate suggestions from study subjects for improving quality of virtual classes.

Method: A quantitative approach and descriptive survey design was used. Study was conducted on 100 B.Sc. (Hons.) Nursing students studying in 2nd, 3rd and 4th year; selected by simple random sampling technique. Structured 5-point Likert scale was developed in the form of Google survey for data collection and was dispatched as a link. Collected data was analyzed using statistical package for social science (SPSS).

Results/Findings: The results revealed that 41 (48%) students were neutral, 41 (41%) were satisfied, 2% were extremely satisfied and 1% were extremely dissatisfied with virtual theory classes. Also, 55% students were neutral, 25% were satisfied, 17% were dissatisfied, 2% were extremely dissatisfied and 1% were extremely satisfied with virtual practical classes.

Teacher factors, technical factors and student factors were ranked 1st, 2nd and 3rd respectively that contributed to students' satisfaction.

Conclusion: The study demonstrated that classes conducted for participants via virtual platform was as satisfactory as classroom teaching. Some suggestions from the participants to improve virtual training efficacy included variety and creativity in using AV aids, adherence to timelines, regular evaluations, increasing student participation, etc. among others.

Keywords: Level of satisfaction, virtual theory classes, virtual practical classes, COVID-19 pandemic lockdown.

I. INTRODUCTION

In the month of March, 2020, Corona epidemic emerged as pandemic and all the educational institutions were closed to safeguard the health of the public and to control spread in the community.^[1] Till then, we have had in-person teaching-learning in schools and colleges; teachers as well as students are used to this kind of learning. However, in the wake of Corona Virus disease or COVID-19, due to sudden shutting down of schools and colleges, practical exposures were not an option for training. This closure made a sudden unplanned shift to use online education systems.^[2] In order to ensure continuity of education, where logistically possible, institutions transitioned to emergency remote instruction, usually with little time given for preparation.^[3] With this sudden shift, various factors like proficiency in using computers and mobile phones, network coverage, feedback and communication, convenience, etc became factors that determined successful completion of the program, or in other words, attainment of satisfaction from the program.

Nursing, being a skill-based profession, requires hands-on practice and practical exposure. However, during country-wide lockdown, pupil's safety took precedence over significance of hands-on training. While nursing educators demonstrated certain procedures in the procedure laboratories on an online platform, some topics were dealt with in the form of case scenarios, role plays, discussions, etc. Completion of curriculum, whether theory or practical, in its entirety, relied on virtual platforms. Although e-learning offers some educational continuity when it comes to academic learning, technical education has suffered doubly since the social distancing requirements have disrupted the implementation of both practical and work-based learning activities, which are critical for educational success.^[4] Online classes encompass a wide range of challenges for students including conceptual understanding, digital literacy, technical issues and ease of access.^[5] While students have mostly been satisfied with how they have adapted to e-learning, they have missed the lectures and personal communication with their teachers and peers.^[6] It would be unfair to expect a sudden upgradation and adaptation to the new teaching-learning practice from both teachers and students. Body language, eye contact and other non-verbal forms of communication is another aspect that plays an important role in teaching-learning practice, but was compromised during the virtual mode of training. However, inadequate readiness among teachers and students to abruptly switch from face-to-face teaching to a digital platform has been reported.^[7]

Worldwide, due to the pandemic of Corona Virus, all campuses were closed to reduce the infection rates. This closure made a sudden unplanned shift to use online education systems.^[8] "The learners' satisfaction is the degree to which a learner is delighted towards the involvement in online learning."^[9] Learners' satisfaction has a direct impact on the success of the teaching-learning process and leads to improving the quality of the whole process. Many factors affect the learner's satisfaction on the virtual platform.

Since its inception, virtual classes have been criticized and doubted upon regarding quality from the established educational communities and society at large. Often, in addressing these concerns, students' perceptions of their course experience become a surrogate for learning engagement in the context of satisfaction. Modern technologies are contributing to the dissolution of traditional classroom boundaries. Students connect with their instructors and each other through modalities of almost every variety, greatly expanding avenues of communication.^[10] There were very limited research materials available on the subject. Keeping this in the backdrop, this study was conducted to assess the level of satisfaction among B.Sc. (Hons.) Nursing students regarding virtual classes during the COVID-19 pandemic lockdown.

Objectives of the study were:

- To assess the level of satisfaction among B.Sc. (Hons.) Nursing students regarding theory sessions conducted on virtual platforms during COVID-19 pandemic.
- To determine the level of satisfaction among B.Sc. (Hons.) Nursing students regarding practical sessions conducted on virtual platforms during COVID-19 pandemic.
- To delineate measures for improvement in effectiveness of virtual mode of training as suggested by B.Sc. (Hons.) Nursing students.

II. MATERIAL AND METHODS

A descriptive cross-sectional study was conducted to collect data from 100 B.Sc. (Hons.) nursing students of a selected nursing college in Delhi, who were selected through simple random sampling technique. Sample size was determined using Raosoft sample size calculator with a confidence interval of 95% and margin of error 5%.

Participants were given a web-based link via text messages and various social media platforms to access online questionnaire.

The validated structured questionnaire was developed that consisted of 4 sections, in which section I (12 items) had statements regarding sample characteristics; section II (24 items) enquired about satisfaction regarding virtual theory classes among B.Sc. (Hons.) nursing students; section III (24 items) enquired about satisfaction regarding virtual practical classes among B.Sc. (Hons.) nursing students; and section IV invited suggestions or feedback from the study subjects with an intent to improve virtual classes. Positive items were to be rated from strongly disagree (1) to strongly agree (5) and negative items were scored reversely, i.e., strongly disagree (5) and strongly agree (1). Range of score for section II and section III were 24-120 for each. Interpretation of scores were done as follows:

24-43: Extremely dissatisfied

44-63: Dissatisfied

64-83: Neutral

84-103: Satisfied

104-120: Extremely satisfied

Reliability of the tool was established using Cronbach's Alpha and the values were 0.90 and 0.94 for section II and section III of the tool, respectively.

The data collected from the study participants was analyzed using software SPSS version 20.0.

For ethical clearance, administrative permission was taken from Institutional Ethics Committee (IEC) of Jamia Hamdard, Delhi, to conduct the research study.

An online informed consent was taken from each subject. They were assured of anonymity and confidentiality of the information provided during the study.

Also, coding of the participants' names was done to ensure anonymity.

III. RESULT

3.1 Description related to the sample characteristics of B.Sc. (Hons.) Nursing students

This section revealed the frequency and percentage distribution of sample population and the background data to describe the samples' characteristics in the study. 99% study participants belonged to the age group of 18-25 years, 71% of the population were females, 34% students were studying in B.Sc. (Hons.) Nursing 3rd year, 47% participants had a monthly family income of >25,000 INR, 71% students resided in urban area, 78% of the population preferred audio-visual learning type, 68% subjects had no previous exposure to virtual classes, 88% of the students claimed to have basic knowledge of computer applications, 45% study subjects used mobile network as source of internet, 63% students reported that they had uninterrupted network service, 83% subjects had at least 1 digitally literate member in their family, and 65% students used mobile phone to access virtual classes (Figure 1 & Figure 2).

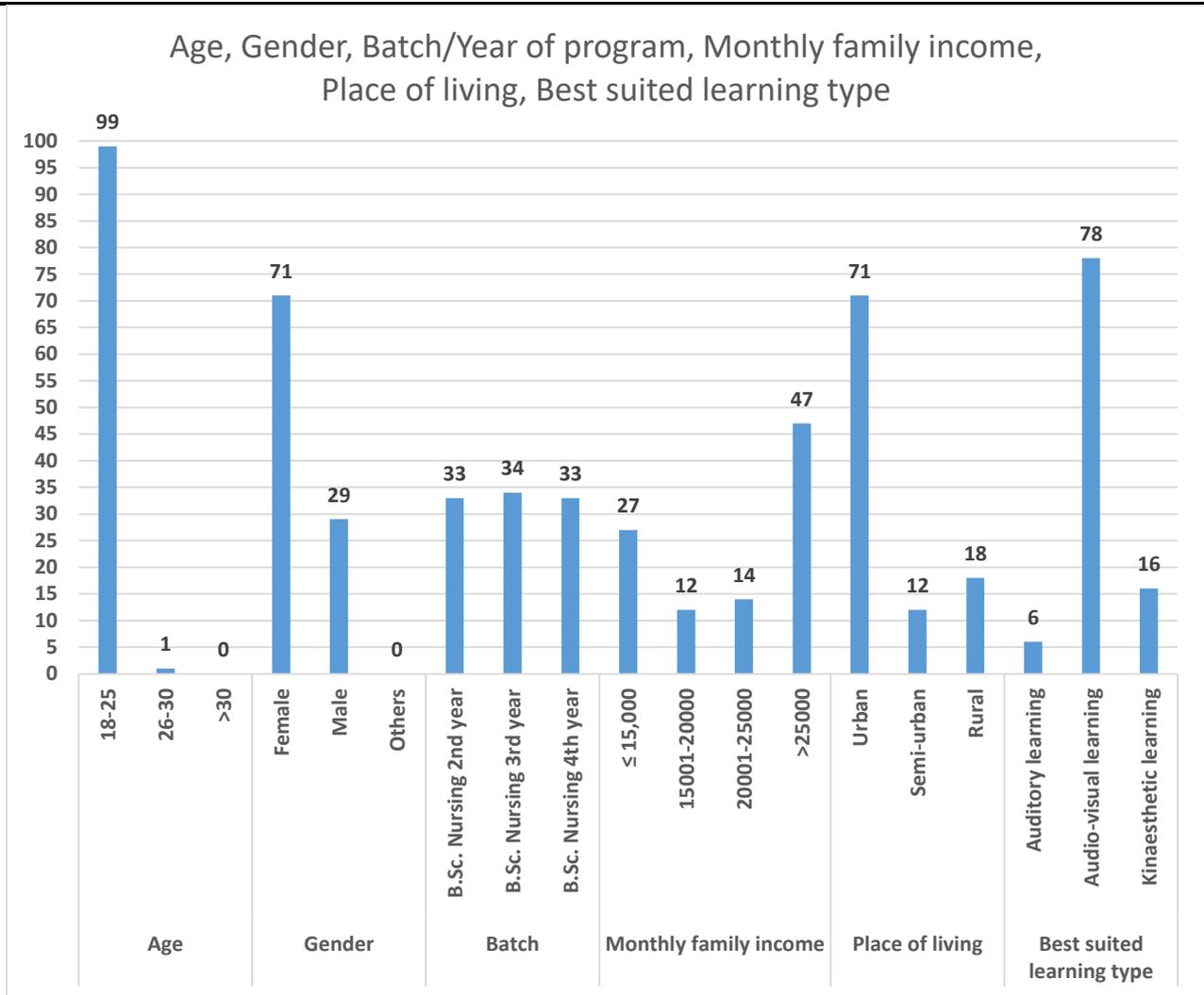
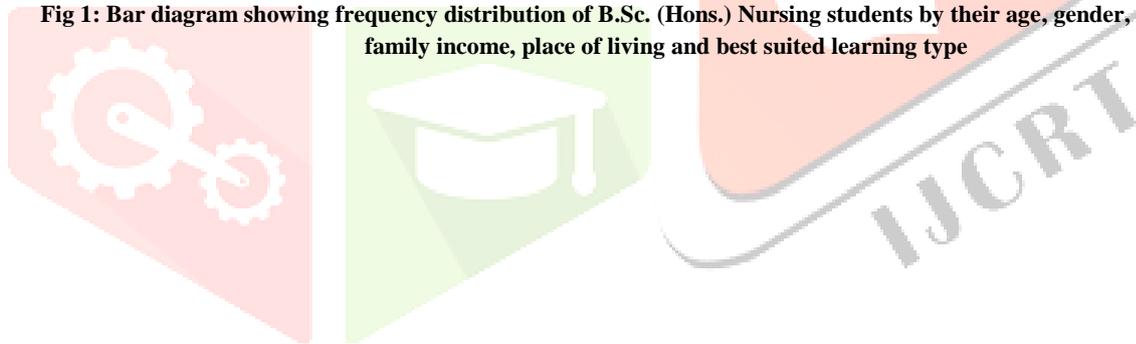


Fig 1: Bar diagram showing frequency distribution of B.Sc. (Hons.) Nursing students by their age, gender, batch, monthly family income, place of living and best suited learning type



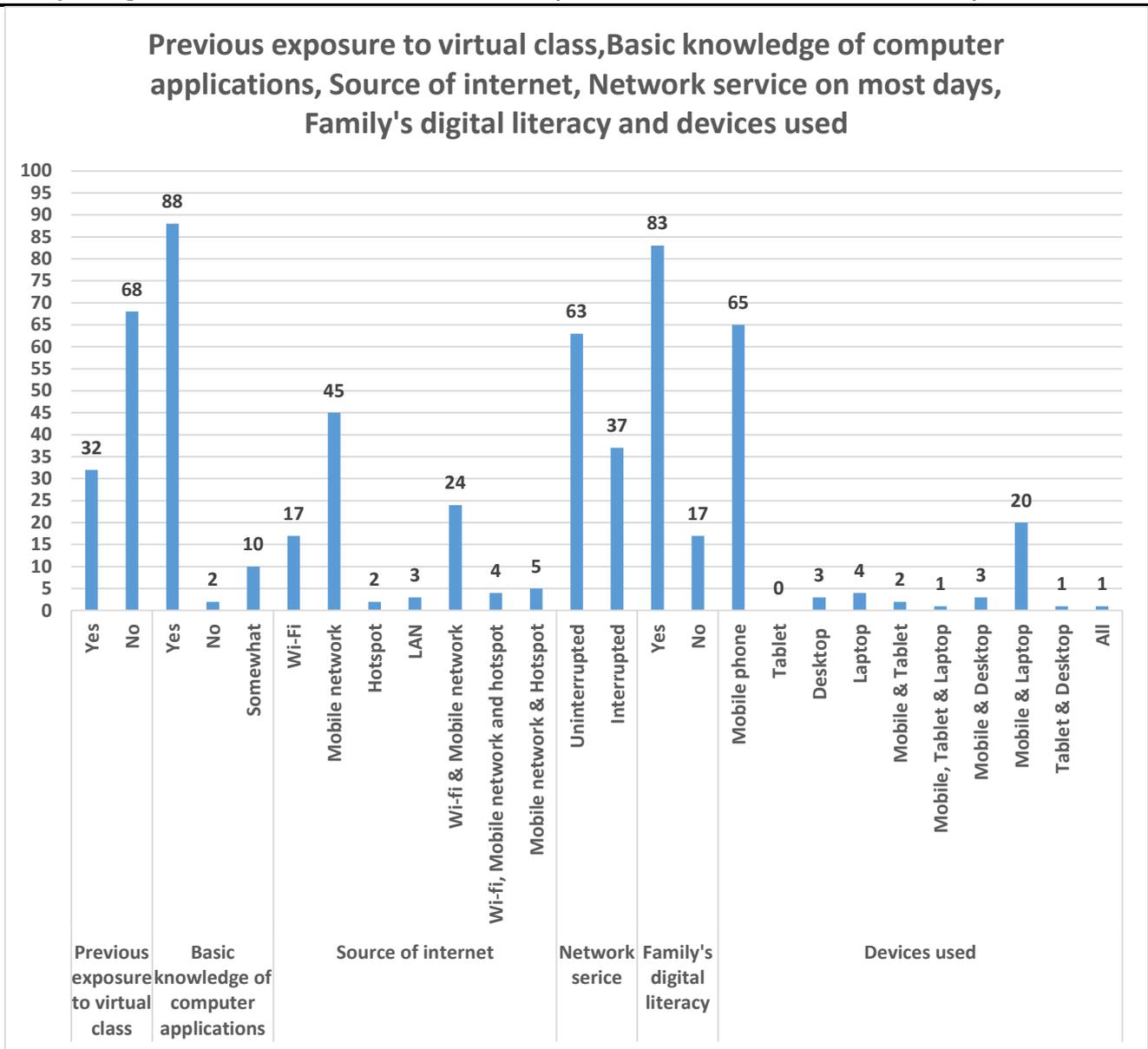


Fig 2: Horizontal bar diagram showing frequency distribution of B.Sc. (Hons.) Nursing students by their previous exposure to virtual class, basic knowledge of computer applications, source of internet, network service, family’s digital literacy and device(s) used to access virtual class

3.2 Level of satisfaction of B.Sc. (Hons.) Nursing students regarding theory sessions conducted on virtual platform during COVID-19 pandemic lockdown

In the present study, 41% students were found to be satisfied with virtual theory platform and teacher factors were ranked 1st in contributing to student satisfaction (Table 1 & Table 2).

Table 1

Frequency and percentage distribution of B.Sc. (Hons.) Nursing students by their level of satisfaction with theory sessions conducted on virtual platform

n=100

Level of satisfaction	Frequency
Extremely dissatisfied (24-43)	1
Dissatisfied (44-63)	8
Neutral (64-83)	48
Satisfied (84-103)	41
Extremely satisfied (104-120)	2

Table 2

Mean, Modified Mean and Rank Order obtained by the assessment of level of satisfaction regarding theory sessions conducted on virtual platform

n=100

DOMAINS	MEAN	MODIFIED MEAN	RANK ORDER
Teacher factors	31.96	3.55	I
Technical factors	16.85	3.37	II
Student factors	31.2	3.12	III

The data in table 2 reveals that:

The satisfaction of B.Sc. (Hons.) Nursing students regarding theory classes conducted on virtual platform was found to be the highest for the teacher domain, as assessed by calculating the modified mean (3.55), hence, it can be concluded that teacher domain was ranked first in contributing to the satisfaction level of B.Sc. (Hons.) Nursing students. The technical factors and student factors were ranked second and third, respectively.

3.3 Level of satisfaction of B.Sc. (Hons.) Nursing students regarding practical sessions conducted on virtual platform during COVID-19 pandemic lockdown

In the present study, 41% students were found to be satisfied with virtual theory platform and teacher domain was ranked to be 1st in contributing to students' satisfaction, as depicted in table 3 and table 4.

Table 3

Frequency of B.Sc. (Hons.) Nursing students regarding practical sessions conducted on virtual platform

n=100

Level of satisfaction	Frequency
Extremely dissatisfied (24-43)	2
Dissatisfied (44-63)	17
Neutral (64-83)	55
Satisfied (84-103)	25
Extremely satisfied (104-120)	1

Table 4

Mean, Modified Mean and Rank Order obtained by the assessment of level of satisfaction regarding practical sessions conducted on virtual platform

DOMAINS	MEAN	MODIFIED MEAN	RANK ORDER
Teacher factors	40.68	3.39	I
Technical factors	14.34	2.87	II
Student factors	19.46	2.78	III

The data in table 4 revealed that:

Similar to the theory satisfaction level, teacher domain was ranked first for students' level of satisfaction regarding practical classes conducted on virtual platform. The technical factors and student factors were ranked second and third, respectively.

3.4 Suggestions for improving student level of satisfaction

This section intended to achieve the third objective of this study. This was done by delineating suggestions as proposed by the study subjects in Section-D of the questionnaire. This section invited suggestions from the study subjects for improvement of virtual classes.

Most common suggestions from participants (10) included elaborate use of online AV aids to improve their satisfaction towards virtual classes. Some participants (9) expressed that class schedules that are pre-planned and are adhered by teachers, would help in increasing satisfaction regarding virtual classes. Frequent formative and summative evaluations and feedback were the next domain highlighted by 7 participants in order to enhance students' satisfaction. Participants also suggested 2-way communication and active student-teacher interaction (6), issue of study materials (5), preventing technical issues (5), and short breaks between sessions (4) to enhance participants' satisfaction.

Other suggested domains included learners' autonomy to select topics of study, to increase the teaching pace, to decrease the teaching pace, to ensure students' attendance by encouraging visual presence on the virtual platform, to keep a check on environmental noises, teachers' training to handle virtual platform, the concepts taught in online classes to be repeated in offline classes, record live-streamed demonstrations for students' reference, to arrange offline classes on alternate days for procedure demonstrations, and to play pre-recorded videos of procedures simultaneously while discussing the topic.

IV. DISCUSSION

The major conclusions drawn from the study are:

Nearly half (48%) of the students were neutral, with respect to satisfaction, towards theory classes conducted on virtual platform followed by less than half (41%) of students who were satisfied with virtual theory classes. Regarding practical classes conducted on virtual platform, more than half (55%) of the students were neutral, followed by one-fourth (25%) students who felt satisfied with the same. These findings were not in line with a cross-sectional study carried out by Dutta et al,^[11] that concluded that nearly half (42%) of subjects were unsatisfied with both theory and practical online classes. This variation in the study findings maybe because the present study was conducted in a private college and the above-mentioned study was conducted in a government college and accountability of teaching among teachers is more in private colleges as compared to government colleges.

On ranking out of the various domains of satisfaction regarding virtual theory classes, teacher domain was ranked 1st (3.55), and student domain was ranked 3rd (3.12). On ranking out of the various domains of satisfaction regarding virtual practical classes, teacher domain was ranked 1st (3.39) and student domain was ranked 3rd (2.78). These findings were consistent with the findings of a quantitative survey conducted by Shaid et al,^[12] which revealed that undergraduate students were satisfied with the use of online learning in terms of instructor characteristics, technology characteristics and learners' dimension, with modified mean values of 3.70, 3.66 and 3.31, respectively.

Limitations

The study was conducted on 100 students which limits the generalization of the findings on a larger population.

Interpretation & Implications

By assessing, the level of satisfaction of training rendered through online medium, one can assess the impact as well as effectiveness of the virtual mode of training in enhancing knowledge and other clinical skills of the student nurses.

Assessing the level of satisfaction of nursing students regarding virtual theory and practical classes gives a direct indication of the effectiveness and quality of the training carried out via virtual platform. This can help the stakeholders of the pedagogical system to understand the quality, strengths and limitations of the virtual mode of training and enable them to improve the efficacy and quality of the same in the coming times.

Nursing profession consistently works towards upgradation of knowledge and skills of nursing officers by means of in-service education and by rendering on-the-job trainings. However, in times like COVID-19 pandemic, not only it becomes unfeasible but also risky to attend offline/ 'in-person' training sessions. In situations like these, virtual classes are a great alternative to keep the nursing staff abreast with knowledge without any potential risks of exposure or additional physical strain.

Findings of this study can be used to carry out extensive research on a larger population sample in various colleges/Universities. This will help to assess the satisfaction of students regarding various courses conducted on virtual platform and subsequently improve the virtual pedagogical methods.

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