

Teachers' Competencies and Attitudes in Coping with Changing Educational Modalities Amid COVID-19: Basis for Faculty Enhancement Program

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ABSTRACT

The COVID-19 issue comes at a moment when most school systems are not prepared for the future of immersive learning experiences (Schleicher, 2020). Many universities and colleges substitute conventional evaluations in higher education with online evaluation instruments deemed new to teachers and learners, and tests are more likely than average to develop measurement errors (Burgess and Sievertsen, 2020). Four approaches on how future generations improve the way they are educated have been established by the World Economic Forum (2020). This includes educating people in an interconnected community, redefining the role of the educator, teaching the life skills needed for the future, and leveraging technology for education. This study, which was conceptualized with the end in mind of determining the competencies and attitudes of teachers as they cope with the changing educational modalities and approaches in the midst of the challenges brought about by COVID-19 outbreak, had employed quantitative methods through primary data collection. It used the descriptive research design as it tried to determine the aspects that require additional training to enhance the teachers' capability in conducting alternative learning methods through the use of technology. A total of 111 out of the targeted 157 participants readily responded to the survey obtained through online data collection. Majority of the participants are young adults with the largest proportion 27.03 percent belonging to the demographic group between the ages of 21 and 26. With regard to the participants' connectivity, 25.49 percent stated that they are depending on cellular or mobile data to connect to the internet. Similarity, the participants expressed interest on topics related to data presentation. Details of the evaluation of teaching requirements, however, have indicated that there are already areas for development in terms of electronic learning and study writing abilities of teachers. As far as online learning is concerned, it was noted that teachers have positive attitude towards having the upgrading training on planning an online class as it proved to be very beneficial particularly so if it is coupled with appropriate evaluation and feedback mechanism as a means to identify all other existing gaps. Overall, findings were found to be useful in conceptualizing the reskilling and upskilling initiatives as interventions for the holistic enhancement program for teachers.

Keywords: competencies, educational modalities, enhancement program

INTRODUCTION

The pandemic outbreak has exacerbated the complexities of reforming the education system. The education sector is highly influenced internationally by the public health crisis brought on by the virus. The bulk of the academic calendar at the university has been interrupted (Mateo, 2020). In the midst of a crisis where face-to-face learning is not feasible, educators from all over the world need to find successful ways to impart information to learners. The majority of

colleges have closed down and have begun online training. While current generation students are familiar with computer innovation and can learn better through school ICT infrastructure and resource integration (Ghavifekr, 2015), and even though information technology per se remains a valuable tool to help the current system, the fact remains that it could be strengthened as a means of revolutionizing the curriculum (ADB, 2017). This aspect will serve as an incentive for teachers to test new approaches and techniques for teaching young people efficiently and effectively.

Continuous teacher preparation is necessary to promote the growth and advancement of teacher skills so as to realize these goals (Akyeampong, 2019). Similarly, when various differentiated learning models and adaptive techniques are implemented into a school's educational pedagogy, teachers need appropriate training (LSUS, 2017). In order to address the challenges faced by educators, other areas of professional growth, in particular catering for an increasingly diversified learning community, appropriate use of knowledge and communication materials and student attitudes, have been considered critical. This stresses the need for teachers to provide continuous support and skills training to expand the teachers' professional competence and specialization (McKay, 2013).

Research in education provides a substantial contribution to curriculum development and reform (Kapur, 2018). There is a mutually enriching correlation between educational research and practice. Considering these as a crucial subject to enhance the educator's competence in the University, this study was developed to identify the area for improvement

and the important skills that teachers need in order to impart their knowledge not just as educators but also as researchers who can contribute to the body of knowledge. Hence, the study aimed to determine the online capability of the faculty and the needed support and trainings to cope up with the new normal. The data collected from the study can be used in conceptualizing a holistic faculty development training for teachers. The training that will be conducted will be evaluated and the feedback will be analyzed to identify gaps for continuous improvement of faculty development training to be provided by the Campus.

The result of the study may validate the capability of the teachers to effectively implement various flexible learning modalities to the students. These may be deemed relevant to the implementers of campus policies and to the human resource department of the university in conceptualizing appropriate training development and strategies towards achieving a successful learning environment that could meet the demands during this pandemic situation of the country.

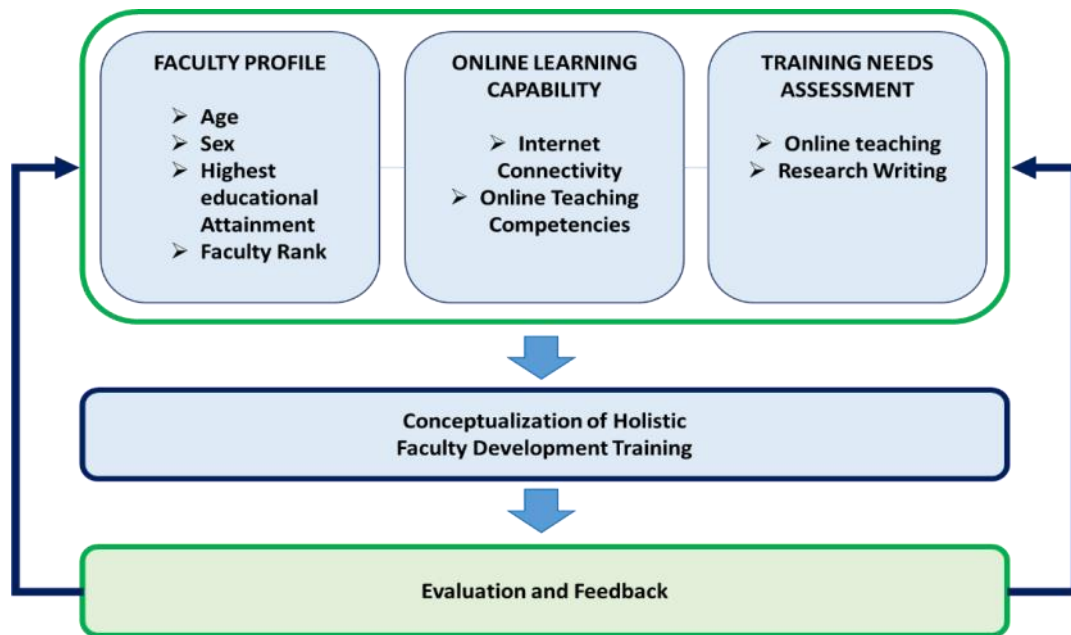


Figure 1. Teachers' competencies and attitude framework

Conceptual Framework

The conceptual framework of the study illustrates the three indicators utilized in the study to evaluate teachers' competencies and attitude. These are profile, online learning capability and teachers needs assessment. The online learning capability of the participants was assessed to identify the technical aspects needed in the conduct of online classes. On the other hand, the training needs assessment of the teachers was also considered in the study which focus on the dual function of instructor, research and instruction. The research aims to evaluate the necessary competency areas for faculty development.

METHODOLOGY

The methods used in the collection and analysis of data are presented below.

Research Design

The study used a descriptive research design. Specifically, this study employed online survey method of data collection.

Research Framework

The study centered on defining potential training programs for members of the faculty of Cavite State University Imus Campus. Three key

aspects were included in the framework: the profile of the faculty, their online learning capacities, and evaluation of training needs.

The data obtained from the research can be used to conceptualize teachers' holistic faculty development preparation. The training to be carried out will be measured and the feedback will be evaluated to identify deficiencies in the campus' continuous improvement of faculty development training.

Sources of Data

The study was conducted at Cavite State University Imus Campus which is one of the largest satellite campuses of the University with the largest number of permanent faculty members. The campus has a total of 203 employees — 157 academic and 46 non-academic personnel. Faculty members with job order and contractual statuses and those with temporary and permanent plantilla positions served as participants of this study.

The study utilized purposive sampling technique in determining the participants. All the participants considered in the study were employees of Cavite State University Imus Campus and only the academic or teaching employees were included as part of the sample in the study.

Table 1. Distribution of employees of Cavite State University-Imus Campus according to types of employment

EMPLOYMENT CATEGORY	ACADEMIC	NON-ACADEMIC	TOTAL
Permanent	33	6	39
Temporary	11	0	11
Contractual	3	19	22
Job Order	110	0	110
Agency	0	21	21
TOTAL	157	46	203

Data Collection Methods

Corresponding primary data were gathered and collected on May 2020. A self-structured questionnaire was distributed to the target participants and subsequent responses were obtained via an electronic data collection platform including emails and other forms of digital communication.

RESULTS AND DISCUSSION

This section presents the results of the study on teachers' competencies in coping with the transformation of the educational system into online-based learning. The study includes the profile of the participants and their access to technologies. The perception and capability of the participants to engage in online learning were also evaluated using specific determinants of teacher's attitude and competencies.

Profile of the Participants

A total of 111 out of 157 participants responded to the survey conducted online. Their age ranges from 21 to 63 years old. Majority of the participants (27.03%) were young adults, belonging to the age group ranging from 21 to 26 years old, while 26.13 percent of the participants were between 27 to 32 years old.

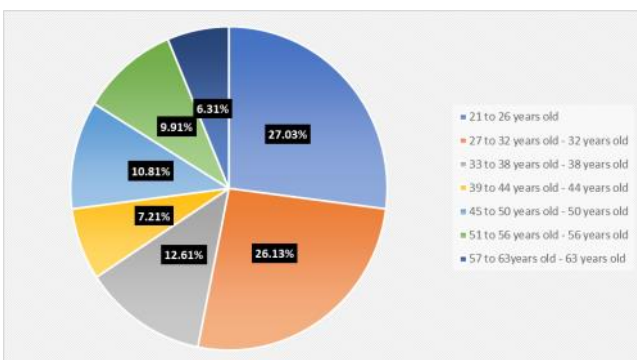


Figure 2. Distribution of the participants according to age

There were 12.61 percent of participants that fall under the ages between 33 and 38 years old; 7.21 percent of them belong to the age group between 39 and 44 years old; 10.81 percent of them belong to the age group which ranges from 45 to 50 years old; 9.91 percent were 51 to 56 years old and only 6.31 percent were part of the group with ages from 57 to 63 years old.

More than half of the participants are female (53.15%) while 46.85 percent are male.

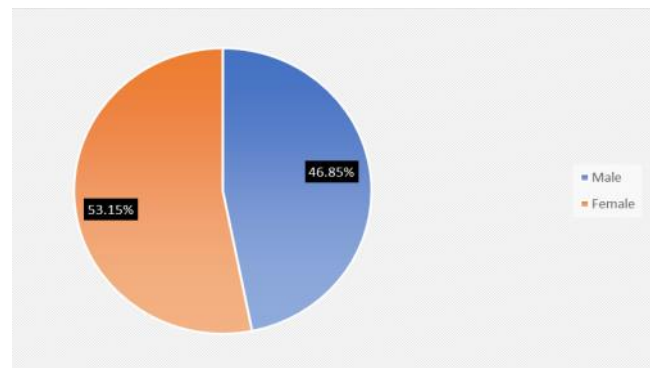


Figure 3. Distribution of the participants according to sex

There were 28.83 percent of teachers that are bachelor's degree graduates while the majority (36.04%) of the participants have masteral units. The data also shows that 21.62 percent have finished their master's degree; 6.31 percent of

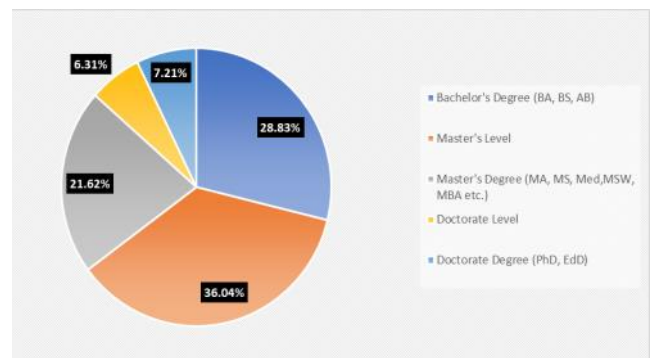


Figure 4. Distribution of the participants according to educational attainment

them were at the doctorate level and 7.21 percent have doctorate degrees.

In terms of faculty ranking, majority (92.79%) of the faculty were Instructor I; 1.80 percent was Instructor 2 and 0.90 percent was Assistant Professor I. About 2.70 percent of them were Assistant Professor II and only 0.90 percent were Assistant Professors III and IV.

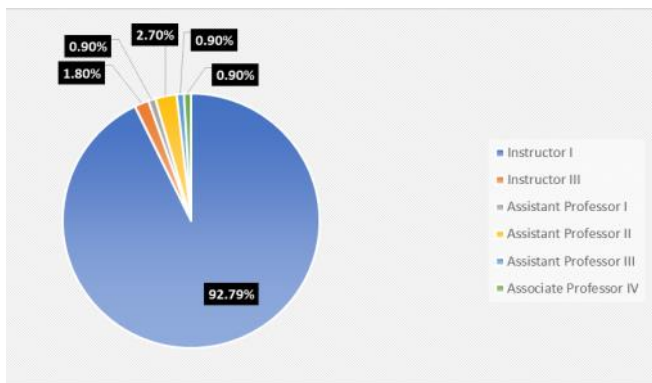


Figure 5. Distribution of the participants according to the job position

Majority of the participants reside in cities. As noted, 33.33 percent of them were from Imus City; 16.22 percent was from Bacoor, and 14.41 percent reside in Dasmariñas.

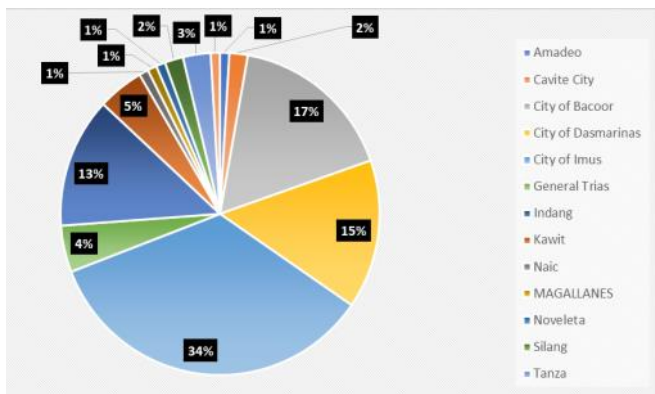


Figure 6. Distribution of the participants according to locale

In addition, 12.61 percent of participants were residents of Indang; 4.50 percent from General Trias and Kawit; 1.80 percent from Silang and Cavite City, 2.70 percent from Tanza while other areas such as Trece Martires City, Noveleta, Magallanes, Naic, and Amadeo had employees of 0.65 percent each.

Internet Connectivity

The pandemic crisis had restricted the face-to-face classes in the Philippines which led to class suspensions and class promotions in different schools and universities in the countries. The situation urges the educational institutions to transform the educational system, either distance learning or blended learning mode of teaching, and access to the internet has been deemed essential. The study shows that majority of the participants have access to internet but there were still some who had stated that they do not have good access to it.

Findings revealed that 28.10 percent of the participants had WLAN network connection while 17.65 percent had LAN connection. It was also found that 25.49 percent of participants used mobile data while 0.65 percent of them had internet connections at cyber cafés. Another 0.65 percent relied on their neighbors and friends for internet connections. The result reveals that there are still teachers who do not have their own internet connection which may hinder their capacity to engage in online teaching.

The minimum internet standard is also taken into account by work from home arrangements for teachers. The Philippines has the lowest average link in the Asia Pacific region, with an average speed of 5.5mbps, according to the study carried out in (Akamia, 2017).

In this study, majority of participants consist of 29.41% stated that their internet connection speed reaches up to 10 to 20 Mbps, and 26.80 percent had internet speed of up to 5 Mbps. About 12.42 percent had 25 up to 50 Mbps connection speed and 3.92 percent who had a

very strong connection of up to 75 Mbps and above. This revealed that the participants have the capacity to conduct online teaching. On the contrary, many of them are having low internet speed which may cause technical glitches in the conduct of virtual conferences.

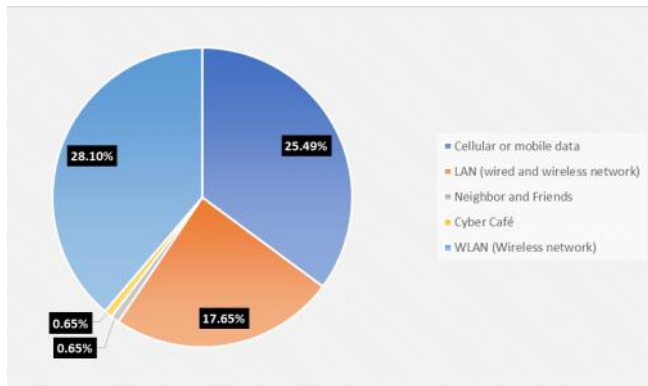


Figure 7. Distribution of the participants according to internet connectivity source

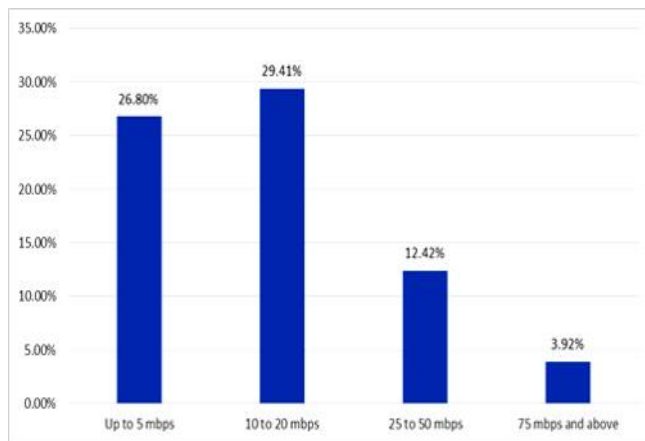


Figure 8. Distribution of the participants according to internet speed

Online Teaching Competencies

The participants agreed that they have the capacity and available resources to provide various modes of instruction. The highest rating was observed on online handouts and

assignments which means that participants have capabilities to provide the said instructional materials online with a weighted average of 4.35 and 4.21 (SD=0.6274, 0.7522), respectively. The participants also agreed that they have the capacity to provide other materials for asynchronous learning such as video lectures, modules, and other supplementary reading materials. Furthermore, the result revealed that the participants can also conduct synchronous learning through virtual conferences and massaging. The participants also agreed with the state's online materials because they believed that learning methods should be flexible in adherence to the physical distancing protocol required by CHED considering the pandemic situation in the country.

Training Needs Assessment

These transitions of learning modalities require the faculty members in the higher educational institution to have the necessary skills to implement flexible learning strategies. The study determined the possible training needed by the faculty members of Cavite State University Imus Campus. The need assessments were divided into two core competency skills which are the online learning skills and research writing skills.

In terms of online learning, most of the participants considered all the topics as extremely helpful with the highest rating on organizing students in the online class and lowest rating on the topic about making online activities and quizzes. There were also other suggested topics for training such as on asynchronous and synchronous teaching platforms, training on instructional materials and learning aids development with a standardized format for faculty, training on system operation (school portal) for uploading all modules/syllabi/instructional materials for access of students and faculty, training on how to conduct an online defense presentation for individual and group of students as well as the conduct of online and offline feedback of students assessment.

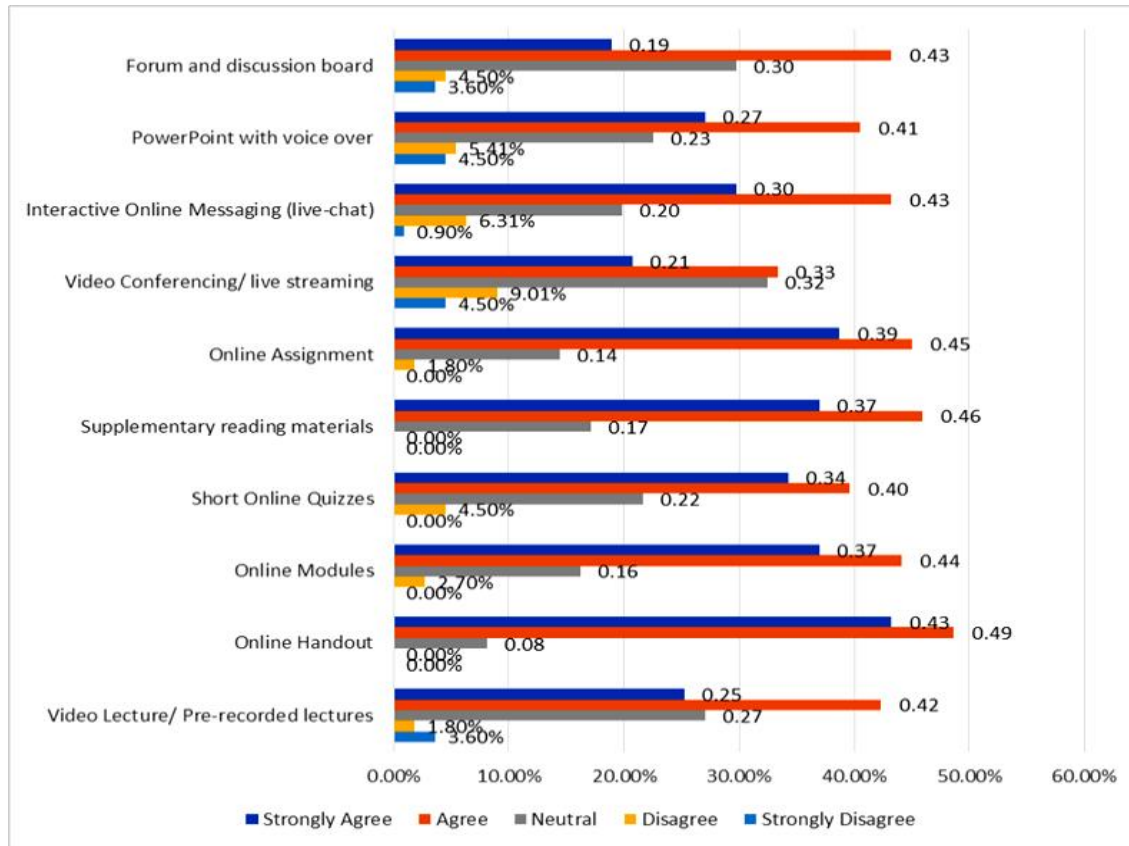


Figure 9. Teachers' capability rating on providing various instructional materials

Table 2. Online teaching competencies of employees of Cavite State University Imus Campus

INSTRUCTIONAL MATERIAL	AVERAGE	STANDARD DEVIATION	VERBAL INTERPRETATION
Video Lecture/ Pre-recorded lectures	3.84	0.9491	Agree
Online Handout	4.35	0.6274	Strongly Agree
Online Modules	4.15	0.7885	Agree
Short Online Quizzes	4.04	0.8626	Agree
Supplementary reading materials	4.20	0.7112	Agree
Online Assignment	4.21	0.7522	Strongly Agree
Video Conferencing/ live streaming	3.57	1.0585	Agree
Interactive Online Messaging (live-chat)	3.95	0.9129	Agree
PowerPoint with voice over	3.80	1.0429	Agree
Forum and discussion board	3.69	0.9515	Agree

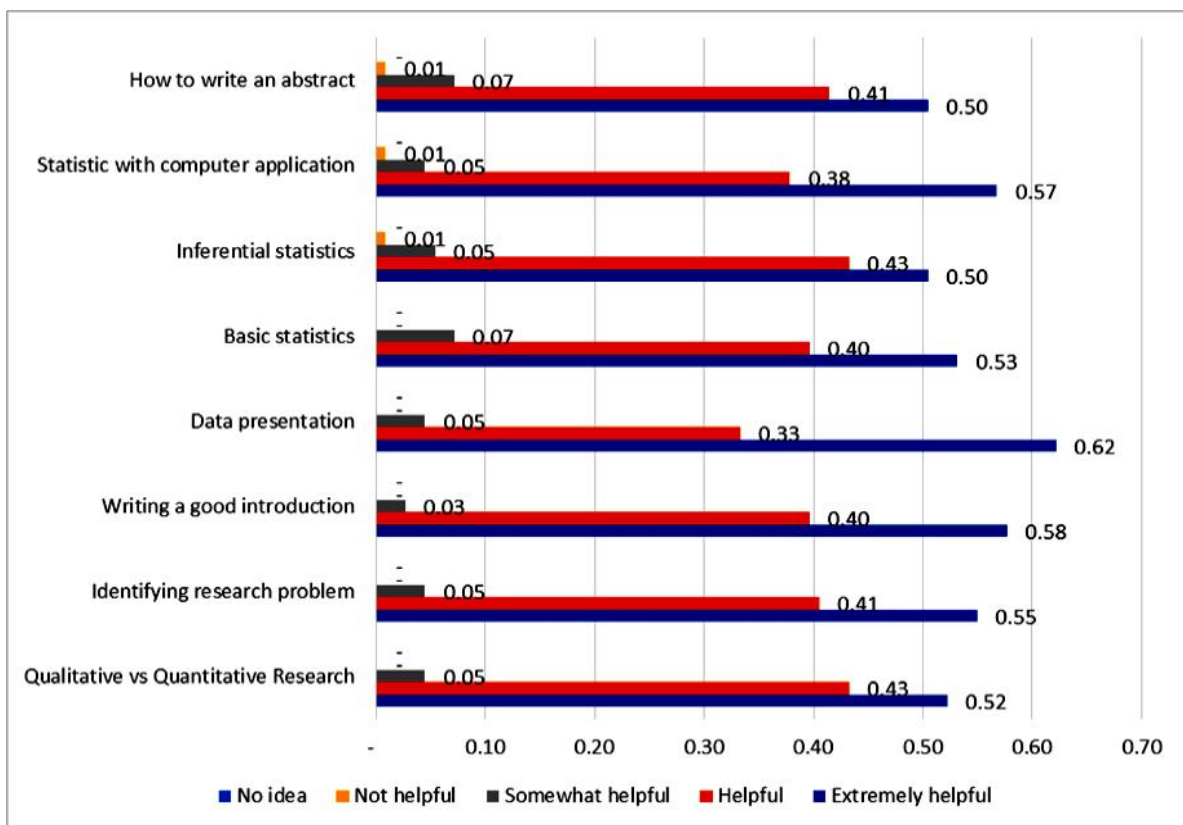


Figure 10. Teachers' training needs assessment rating on research related topics

In terms of research writing, the participants agreed that all the topics presented in the study were extremely helpful with the highest rating on data presentation and lowest rating on abstract writing.

There were also other suggested topics such as the conceptualizing research title, construction of research paradigm and conceptual framework, journal publication related topics, proper way of conducting literature reviews, determining appropriate research design. The result implies that teachers need training on different aspects of online delivery in teaching especially in organizing an online class.

SUMMARY AND CONCLUSION

As a small-scale research carried out at one of

Cavite State University's largest campuses, the research was able to provide valuable insights into the growth of the skills of teachers. The pandemic situation in the country needed new skills for teachers in a higher education institution in such a way that teachers' ability to perform online learning activities must be regarded by the type of learning method for students.

Most of the faculty members had more than 5 mbps of data speed in terms of internet access. It is evident that most of the faculty have no problem in terms of internet access. Their pace of networking has the ability to reach reference sites and systems of learning management. Many of the teachers have also accepted that they have the essential abilities for students to perform versatile learning. As noted, faculty members have experience in performing online

Table 3. Teachers perception on online learning related topics for training and development

ONLINE LEARNING TOPIC	WEIGHTED MEAN	STANDARD DEVIATION	VERBAL INTERPRETATION
Conducting online classes (video conferencing/live streaming)	3.42	0.7693	Extremely helpful
Creating assignment online	3.42	0.7453	Extremely helpful
Making activities and quizzes online	3.37	0.7619	Extremely helpful
Setting up an online classroom	3.40	0.8122	Extremely helpful
Organizing students in the online class	3.45	0.8061	Extremely helpful
Tracking student progress online	3.41	0.7790	Extremely helpful
Module writing	3.41	0.7673	Extremely helpful
AVERAGE	3.41	0.7773	Extremely helpful

Table 4. Teachers perception on research-related topics for training and development

RESEARCH WRITING TOPIC	WEIGHTED MEAN	STANDARD DEVIATION	VERBAL INTERPRETATION
Qualitative vs Quantitative Research	3.48	0.5853	Extremely helpful
Identifying research problem	3.50	0.5857	Extremely helpful
Writing a good introduction	3.55	0.5516	Extremely helpful
Data presentation	3.58	0.5807	Extremely helpful
Basic statistics	3.46	0.6293	Extremely helpful
Inferential statistics	3.43	0.6413	Extremely helpful
Statistic with computer application	3.50	0.6306	Extremely helpful
How to write an abstract	3.41	0.6669	Extremely helpful
AVERAGE	3.49	0.6124	Extremely helpful

assignments and supplying students with online handouts. On the other hand, teachers have a lower ranking as to their ability to hold video / virtual classes and to provide students with video lectures. In delivering interactive training for teachers in preparation for the new standard, these areas of their expertise might be considered.

The outcomes of the training needs evaluation showed that there are still areas of teacher's skills and competencies that need to be learned and strengthened in online learning and research writing. The faculty found training in coordinating online classes and other similar topics to be extremely beneficial for them in terms of online learning. For the participants with the highest rating on data presentation subjects,

research writing workshops or preparation for teachers were also found to be important.

RECOMMENDATIONS

Successful implementation of new teaching modalities, as necessitated by the pandemic, should consider the teacher's competence and attitude in adopting technology-based education specifically the technical aspects of ineffective delivery of instructions. The University may identify the competencies that the faculty members need to improve to efficiently cope and adapt to the changes and development in teaching modalities.

Internet connectivity also plays an important role in the successful implementation of the new normal. The teachers have the capacity to connect to the internet, but technical glitches due to limited bandwidth can potentially occur in conducting an online class. The study recommends further research on the technical aspects and issues in online learning. Since faculty members need necessary support in organizing students in an online classroom, the study recommends training on online learning especially in utilizing a reliable learning management system that provides support in organizing an online class.

As higher education educators, research needs to be taken into consideration, and data presentation preparation is strongly recommended for both qualitative and quantitative research. In addition, a wider scope of assessment of the competencies and attitudes of teachers is required to establish a comprehensive approach to continuously improve the quality of education, even during times of pandemic.

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