

Original Research Paper

## Adaptation on the Key Areas of Competencies in Online Teaching Modality during the Wake of Covid-19 Pandemic

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**Abstract:** The purpose of this study is to assess the online teaching preparedness of the faculty staff and evaluate their key areas of competencies to better prepare teaching faculty of Higher Education Institution (HEI) specifically in Santiago City, Isabela, Philippines for an effective online teaching modality. A descriptive cross-sectional survey design was used in the study and analytical sample used was total enumeration which composed of 38 respondents from different HEI of Santiago City. Data were collected using the Faculty-Self Assessment: Preparing for Online Teaching adapted in Penn State University with total of 30 items and divided in three categories of competencies. The result found that teaching faculty was successfully done in all the key areas of competencies in online teaching ( $M=2.38$ ,  $SD=0.65$ ). The findings revealed there is a significant difference in age but no significant difference on gender and educational attainment based on the level of preparedness in teaching using the online modality.

**Keywords:** Education During Pandemic, Online Education, Online Teaching, Teacher's Performance.



## 1. Introduction

Today's COVID-19 pandemic has formed the largest disruption of education systems in history, distressing almost 1.6 billion learners in added than one hundred ninety countries and all continents. Closures of schools and other alternative learning spaces have affected 94% of the world's student population [1]. Since the World Health Organization (WHO) declared a pandemic on March 11, 2020, avoiding face-to-face activities and engaging in social distancing has become a part of everyday life. The pandemic has also persuaded changes in several countries' educational environments as they started instituting online classes [2].

Online teaching-learning ways are followed by foremost universities for over a decade to cater to the requirements of students who stay far away from universities & colleges. But during the COVID-19 pandemic period, online teaching-learning helped most all universities, colleges, and affiliated students [3]. Technology is a recognized teaching aid, and online teaching has facilitated teaching across borders. However, although technology has been proved to be an effective teaching aid, it cannot replace a teacher [4]. Numerous reports deliberate the constraints of only using online classes, as a result the use of both online and face to face classes has been encouraged. The COVID-19 pandemic, however, has forced educators to rely solely on online classes [5].

It is implied in several researches, not every teacher can adapt to online learning, particularly at the high school level. Students who are at this level of education are highly vulnerable to getting unequal learning material if the teacher is unable to master the technology, especially the tools used in the teaching and learning process. The next challenge of educators must not only focus on pursuing curriculum targets, but also equip learners with life skills that are reinforced by character values [6]. The purpose of this study is to assess the online teaching preparedness of the faculty staff and evaluate their key areas of competencies to better prepare teaching faculty for an effective online teaching modality.

## 2. Literature Review

The study developed a framework based on the Faculty Self- Assessment for Online Teaching tool by Penn State University. The Penn State University developed the scale Faculty Self-Assessment: Preparing for Online Teaching, the Penn State model focuses on individual faculty competencies without considering the institutional environment. The tool was the outcome of a literature review, focus group input, and usability testing, and was examined at a well-attended Sloan-C Conference presentation [7].

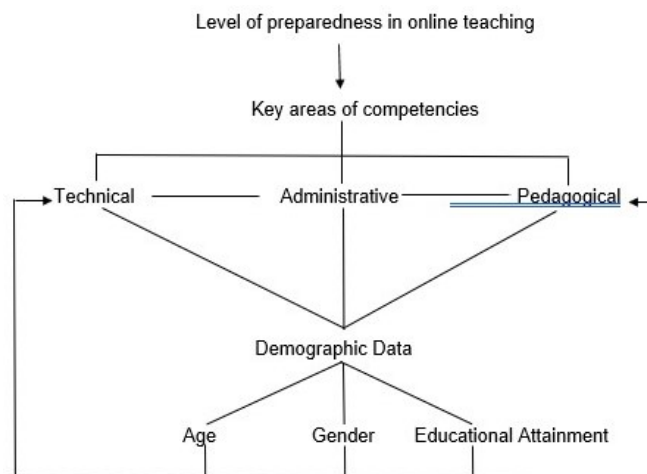


Figure 1. Conceptual Framework in Online Teaching Performance

### 2.1. Online Education

Universities need to familiarize to the new situation created by the COVID-19 pandemic. It is a need to convert face-to-face teaching into an online format that is generally suitable by their students [8]. Mixing methodological and technological decisions should not just only be a task for the higher education institutions as entities but should also include collaboration among professors, students and

administration staff and services [9]. Existing research offers effective teaching strategies for online education. Though, some disconnection in the application of these strategies and faculty perceptions of related outcomes [3].

Several ideas, that online learning is ipso facto more innovative than face-to-face instruction has been dismissed by the reality of emergency online education. Online education has proved to be highly didactic and passive and has resulted in an impoverished learning experience for many students. Across the globe, online education in its most reductionist form as a content delivery system [10] [11].

## 2.2. Online Teaching

It is crucial to identify effective teaching practices for undergraduate health sciences students to enhance the positive outcomes of online teaching [12] [13]. Online teaching demand has increased to ensure the accessibility and affordability of higher education [14] [15]. Students need support to assist with adjustment to the online context. Educators in the online teaching context are facing increased student numbers, resulting in a higher workload. Effective online teaching practices can enhance student and educator performances in health sciences according to Rensburg [16].

## 3. Research Methods

### 3.1. Research Design

Descriptive cross-sectional design was employed.

### 3.2. Study Site and Participants

The respondents and location were the employed faculty of the different Higher Education Institution (HEI) of Santiago City. A total enumeration approach was used.

### 3.3. Research Technique

An online survey questionnaire was the main tool used. The Faculty Self-Assessment: Preparing for Online Teaching with slight modification to suit the needs of the study.

### 3.4. Data Analysis

The analysis of data includes descriptive and inferential statistics. The data was processed by experts in the field of statistics with the use of Statistical Package for Social Sciences (SPSS).

## 4. Result and Discussion

### 4.1. Respondents Characteristics

Based on the obtained data, the total study population was 38. Most of the participants were in the age bracket 21-30 (65.7%), female (57.8%) and master degree holders (39.5%).

Table 1. Frequency and Percentage Distribution of the Participants' Profile When Grouped According To Obstetrical Characteristics

| Characteristics        | Category                  | Frequency | Percentage |
|------------------------|---------------------------|-----------|------------|
| Age                    | 21-30                     | 25        | 65.7       |
|                        | 31-40                     | 5         | 13.2       |
|                        | 41-50                     | 2         | 5.3        |
|                        | 51-60                     | 3         | 7.9        |
|                        | 61-70                     | 3         | 7.9        |
| Gender                 | Female                    | 22        | 57.9       |
|                        | Male                      | 16        | 42.1       |
| Educational Attainment | Bachelor's degree         | 12        | 31.6       |
|                        | Master's Degree           | 15        | 39.5       |
|                        | On-going Master's Degree  | 9         | 23.7       |
|                        | Doctorate Degree          | 1         | 2.6        |
|                        | On-going Doctorate Degree | 1         | 2.6        |

### 4.2. Descriptive Summary on the Overall Level of Preparedness of Faculty Using the Online Teaching Modality

As shown in the table 2, faculty using online teaching modality done successfully in different key areas of competencies (M=2.38, SD= 0.65).

Table 2. The Mean and Standard Deviation of the Level of Preparedness of Faculty Using Online Teaching Environment

| Key areas                   | M    | SD   | Verbal Interpretation       |
|-----------------------------|------|------|-----------------------------|
| Technical Competencies      | 2.36 | 0.51 | I have done this succesfull |
| Administrative Competencies | 2.39 | 0.53 | I have done this succesfull |
| Pedagogical Competencies    | 2.40 | 0.46 | I have done this succesfull |
| WEIGHTED MEAN               | 2.38 | 0.51 |                             |

#### 4.3. Descriptive Summary on the Level of Preparedness of Faculty Based On the Online Key Areas of Competencies

It was revealed in the above table, the level of preparedness of faculty based on the technical competencies for online teaching modality was successfully done based on verbal interpretation (M=2.36, SD= 0.51). Respondents complete basic computer operations including creating and manipulating documents, managing files and folders and working with multiple windows and logging into the Learning Management System (LMS) and access the class ranked highest (M=2.53, SD= 0.56, M=2.53, SD=0.60). On the other hand, setting up and managing grades in LMS such as set a grading scale, use of points/percentages and submit final grades including managing the course roster in LMS like adding and enrolling students in the course with appropriate passwords and rights marks the lowest (M=2.24, SD= 0.75, M=2.24, SD= 0.82) in terms of the technical aspect. But then, all areas of technical competencies in teaching online as a mode of instruction were done successfully by the respondents.

Table 3. The Mean and Standard Deviation of the Level of Preparedness of Faculty Based On the Online Key Areas of Competencies

| Key areas                                 | M    | SD   | Verbal Interpretation       |
|---|------|------|-----------------------------|
| Complete basic computer operation         | 2.53 | 0.56 | I have done this succesfull |
| Log into LMS and access class             | 2.53 | 0.60 | I have done this succesfull |
| Navigate course space                     | 2.34 | 0.63 | I have done this succesfull |
| Set-up gradebook and manage grade         | 2.24 | 0.75 | I have done this succesfull |
| Use course communication system           | 2.32 | 0.66 | I have done this succesfull |
| Manage course roster                      | 2.24 | 0.82 | I have done this succesfull |
| Manage student submissions                | 2.37 | 0.63 | I have done this succesfull |
| Create and manage course files and folder | 2.29 | 0.65 | I have done this succesfull |
| Overall Mean                              | 2.36 | 0.51 |                             |

In table 4, participating faculty done successfully the administrative competencies in the key areas of online teaching (M=2.39, SD= 0.53). They were able to communicate their expectation about the student behavior in their courses like netiquette and related course guidelines which the test result revealed as the highest (M=2.50, SD= 0.69). Meanwhile, mediate course-related student conflicts following the institutional policies and securely report grades to students and input final grades into the University's grading system as required was ranked low (M=2.29, SD=0.77, M=2.29, SD=0.73) in administrative competencies. However, the overall level of preparedness for this key area was reported successfully done by the respondents.

Table 4. The Mean and Standard Deviation of the Level of Preparedness of Faculty Based On the Key Areas of Online Teaching

| Key areas  | M    | SD   | Verbal Interpretation       |
|--|------|------|-----------------------------|
| Use communication tools                              | 2.37 | 0.67 | I have done this succesfull |
| Communicate Grading Per assignment                   | 2.42 | 0.76 | I have done this succesfull |
| Provide comprehensive syllabus                       | 2.32 | 0.66 | I have done this successful |
| Mediate course conflict                              | 2.29 | 0.77 | I have done this succesfull |
| Adhere to RA 10650                                   | 2.39 | 0.72 | I have done this succesfull |
| Revise course content                                | 2.39 | 0.68 | I have done this succesfull |
| Obtain technical assistance                          | 2.34 | 0.71 | I have done this succesfull |
| Communicate student behavior expectations            | 2.50 | 0.69 | I have done this succesfull |
| Communicate and monitor academic intergrity policies | 2.47 | 0.65 | I have done this succesfull |
| Report grades securely                               | 2.29 | 0.73 | I have done this succesfull |
| Notify student of your availability                  | 2.47 | 0.60 | I have done this succesfull |
| Overall Mean   | 2.39 | 0.53 |                             |

Table 5. The Mean and Standard Deviation of the Level of Preparedness of Faculty Using Online Teaching Environment

| Key areas   | M    | SD   | Verbal Interpretation       |
|---|------|------|-----------------------------|
| Attend to unique challenge of asynchronous learning   | 2.42 | 0.60 | I have done this succesfull |
| Provide appropriate education: experience for diverse learners  | 2.34 | 0.67 | I have done this succesfull |
| Achive mastery of teaching and learning environment   | 2.34 | 0.63 | I have done this succesfull |
| Respon to student inquiries   | 2.37 | 0.59 | I have done this succesfull |
| Provide detailed feedback-assignment and exams  | 2.34 | 0.67 | I have done this succesfull |
| Provide detailed feedback-course progress, course announcement  | 2.39 | 0.59 | I have done this succesfull |
| Provide detailed feedback-netiquette guidelines   | 2.47 | 0.56 | I have done this succesfull |
| Provide detailed feedback-student progress by using course statistics or reports  | 2.53 | 0.65 | I have done this succesfull |
| Provide detailed feedback-communicate course goals and outcomes   | 2.58 | 0.72 | I have done this succesfull |
| Provide detailed feedback-establish my presence in course regularly   | 2.39 | 0.55 | I have done this succesfull |
| Provide detailed feedback-departmental-accepted statement of accessibility in the course syllabus and throughout the course | 2.21 | 0.62 | I have done this succesfull |
| Overall Mean  | 2.40 | 0.46 |                             |

The overall result of pedagogical competencies using online teaching modality was done successfully by the faculty (M=2.40, SD=0.46) as shown above. Out of the 11 key areas for pedagogical competencies, the utmost ranked was to communicate course goals and outcomes using the syllabus and course announcements at the beginning of the course (M=2.58, SD=0.72) and the least was providing a departmental-accepted statement of accessibility in the course syllabus and throughout course demonstrate sensitivity to disabilities and diversities including aspects of cultural, cognitive, emotional and physical difference (M=2.21, SD= 0.46).

### 4.3. Significant Difference in Each Key Area of Competencies across Age, Gender and Educational Attainment

The F-computed value obtained was 1.63, 4.65 and 5.35, which equivalent to a significant value of .189, .004 and .002 respectively. It was revealed with the test result of administrative and pedagogical competencies has a less than the level of significance of 0.05 using 4 as a degree of freedom. Therefore, it was concluded that these two competencies based on age have a significant difference in the level of preparedness of faculty in online teaching enumerated therein.

Table 6. One-way ANOVA on the Key Areas of Competenceis Based on Age with Pos Hoc

| Area            | Age Group | N  | M    | SD   | df | F    | p-value | Tukey HSD                      |
|-----------------|-----------|----|------|------|----|------|---------|--------------------------------|
| Technical       | 21-30     | 25 | 2.41 | 0.50 | 4  | 1.63 | .189    |                                |
|                 | 31-40     | 5  | 2.65 | 0.54 |    |      |         |                                |
|                 | 41-50     | 2  | 2.07 | 0.09 |    |      |         |                                |
|                 | 51-60     | 3  | 1.88 | 0.63 |    |      |         |                                |
|                 | 61-70     | 3  | 2.08 | 0.14 |    |      |         |                                |
| Administ rative | 21-30     | 25 | 2.48 | 0.42 | 4  | 4.65 | .004    | 21-30 v 51-60<br>31-40 v 51-60 |
|                 | 31-40     | 5  | 2.80 | 0.73 |    |      |         |                                |
|                 | 41-50     | 2  | 2.00 | 0.00 |    |      |         |                                |
|                 | 51-60     | 3  | 1.58 | 0.46 |    |      |         |                                |
|                 | 61-70     | 3  | 2.00 | 0.00 |    |      |         |                                |
| Pedagogi cal    | 21-30     | 25 | 2.48 | 0.41 | 4  | 5.35 | .002    | 21-30 v 51-60<br>31-40 v 51-60 |
|                 | 31-40     | 5  | 2.80 | 0.30 |    |      |         |                                |
|                 | 41-50     | 2  | 2.00 | 0.25 |    |      |         |                                |
|                 | 51-60     | 3  | 1.73 | 0.47 |    |      |         |                                |
|                 | 61-70     | 3  | 2.00 | 0.00 |    |      |         |                                |

Lastly, pos hoc analysis using was performed to exactly identify and pinpoint that significant difference lies in age brackets 21-30 and 51-60 and 31-40 and 51-60 in both competencies (Administrative and Pedagogical).

Table 7. Independent sample T-test on the Key Areas of Competenceis Based on Gender

| Area           | Gender | N  | M    | SD   | t    | df | P-value |
|----------------|--------|----|------|------|------|----|---------|
| Technical      | Female | 22 | 2.33 | 0.54 | .362 | 36 | .719    |
|                | Male   | 16 | 2.39 | 0.48 |      |    |         |
| Administrative | Female | 22 | 2.36 | 0.61 | .368 | 36 | .715    |
|                | Male   | 16 | 2.43 | 0.43 |      |    |         |
| Pedagogical    | Female | 22 | 2.36 | 0.51 | .686 | 36 | .497    |
|                | Male   | 16 | 2.46 | 0.41 |      |    |         |

The test result revealed all groups had the same degree of freedom. Also, p-value of all the key areas had higher value (Technical= .393, Administrative= .390 & Pedagogical= .408) than the level of significance of 0.5. Thus, the null hypothesis must be accepted.

Table 8. One-way ANOVA on the Key Areas of Competenceis Based on Education

| Area           | Educational Attainment | N  | M    | SD   | df | F     | p-value |
|----------------|------------------------|----|------|------|----|-------|---------|
| Technical      | Bachelor's             | 12 | 2.42 | 0.52 | 4  | 1.057 | .393    |
|                | Master's               | 15 | 2.44 | 0.56 |    |       |         |
|                | On-going Master's      | 9  | 2.26 | 0.41 |    |       |         |
| Administrative | Bachelor's             | 12 | 2.39 | 0.46 | 4  | 1.064 | .390    |
|                | Master's               | 15 | 2.24 | 0.51 |    |       |         |
|                | On-going Master's      | 9  | 2.63 | 0.64 |    |       |         |
| Pedagogical    | Bachelor's             | 12 | 2.45 | 0.31 | 4  | 1.027 | .408    |
|                | Master's               | 15 | 2.28 | 0.53 |    |       |         |
|                | On-going Master's      | 9  | 2.51 | 0.51 |    |       |         |

The findings discovered faculty are well prepared and capable in the challenges of online teaching by assessing the technical, administrative and pedagogical aspects and considered as the key areas of competencies which adapted from Penn State University. There is a somewhat significant difference in age in Administrative and pedagogical areas but no significant difference in the technical area. Moreover, the findings also confirmed that there is no significant difference seen in gender and educational attainment. The level of preparedness in engaging to online teaching of the faculty of HEI in this study can be a basis and support to continuously enhance the capabilities of faculty in using appropriate technology to more elaborate their delivery of instructions to students to attain as possible the program and learning outcomes even during the time of pandemic that face to face is prohibited which brought by the current situation. Incorporating online learning for everyone means society as a whole is presented with a chance to improve including teaching staff and students which we consider digital learning creating a smarter civilization.

## 5. Conclusion

In this study, the level of preparedness to the different key areas of competencies of online teaching adapted from the Penn State University was successfully done by the faculty but need some recommendation to raise or at least maintain the positive outcome of online teaching. The findings of the study have implications for all schools using online teaching modalities for their delivery of instructions during the time of the pandemic.

It is commendable to all online educators the importance of connecting with students, helping students connect and helping them feel they are a member of a supportive learning community. This is a little bit challenging for educators handling freshmen student's as it is important to conduct orientation online to know them as this is their first meeting, likewise it is essential to create a sense of community that makes human connections to ensure all students feel comfortable communicating with the educator and each other.

In addition, it is necessary to offer guidance for colleagues teaching an online course and to conduct training and seminar for new and old teaching faculty in using the Learning Management System (LMS) of their respected HEI. This is needed because trends are an extremely reliable source of change and appear to come at a rapid pace nowadays. Online educators must not only effective and efficient but also, they must be globally competitive so that educators will not be left behind just for the reason of incorporating technology in education.

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