

Challenges Faced by the CMBT Faculty on the Delivery of Asynchronous Learning Amidst Pandemic: A Basis for Improvements

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Abstract - *The study aimed at determining the challenges faced by faculty members of College of Management and Business Technology of the Nueva Ecija University of Science and Technology (NEUST) University was quick in its response in the change of educational escape use simple word of face-to-face classroom setting. Sensing these challenges, NEUST on its part responded rightfully by instituting a series of webinars and workshops especially in the use of technology via virtual learning, among other things.*

There were 32 faculty members that responded, including the program heads. The descriptive research method was applied. Similarly, as the primary instrument for data collection, a questionnaire in the form of a Google Form was distributed via internet. Gender, age, and years of teaching experience were all factors in the study, which were compared and correlated with instructional styles and approaches, technological use, and time management. ANOVA and Pearson r were used to do statistical analyses on them.

Findings revealed there was no significant difference between gender and teaching experience in the delivery of asynchronous learning. The same way that age was found to have no significant relationship with the other variables.

The following recommendations are made:(1) continuous upgrading of knowledge and abilities, particularly in the use of technology;(2) periodic evaluation of the efficiency and efficacy of various learning modalities for both professors and students.

Keywords: Challenges, Modalities, Technology, Learning, and Teaching.

I. INTRODUCTION

As Nueva Ecija University of Science and Technology started using a flexible learning strategy because of the COVID-19 pandemic, faculty members are coping now in this new way of teaching. The Commission on Higher Education (CHED) described that flexible/asynchronous learning is the design and delivery of programs, courses, and learning interventions that address learners' unique needs in terms of place, pace, process, and products of learning. It involves the use of digital and non-digital technology, and covers both face-to-face/in-person learning and out-of-classroom learning modes of delivery or combination of modes of delivery. (CHED Guidelines on the implementation of flexible learning).

Asynchronous learning allows the schools to limit face-to-face learning, make certain social distancing, and reduce the volume of people outside the home at any given time.

The College of Management and Business Technology faculty members also prepare themselves to comply with the mandate of the University in accordance with the given standards of the Commission on Higher Education. Teachers/professors as the facilitators in this asynchronous learning will help their students

on how to cope with this fast-paced education. Also, they will be guiding their students on how to perform well in their assigned daily activities.

The faculty members of College of Management and Business Technology may come up with a solution to these challenges like planning ahead of time, advanced preparation of their teachings, time management, and good communication with their respective students. The researchers aim to understand asynchronous learning and how faculty members cope with it and use it as an excellent and beneficial method of learning. May this study provide help and convenience to the faculty members of College of Management and Business Technology.

This paper will determine the challenges faced by College of Management and Business Technology faculty on the delivery of asynchronous learning in order to strengthen the culture of sharing knowledge, resources and best practices.

II. STATEMENT OF THE PROBLEM

The purpose of the study is to determine the challenges faced by College of Management and Business Technology (CMBT) faculty on using asynchronous learning. Specifically, the study sought to find answers for the following questions:

1. How may the Profile of the respondents be described in terms of:
 - 1.1 age
 - 1.2 gender; and
 - 1.3 years of teaching experience
2. What are the Challenges Faced by the College of Management and Business Technology Faculty on Asynchronous Learning be described in terms of
 - 1.1 Teaching Styles Challenges;
 - 1.2 Pedagogical Challenges;
 - 1.3 Technological Challenges;
 - 1.4 Technical Training Challenges; and
 - 1.5 Time Management Challenges?
3. Is there a significant difference among the gender, years of experience of the respondents and the challenges in using asynchronous learning?
4. Is there a significant relationship between the age of the respondents and the challenges on using asynchronous learning?

III. RESEARCH METHODOLOGY

This chapter presents the description of the method of study, the instruments used, procedure of analysis, statistical treatments of data, and the actual procedure of the study.

Method of Research

Descriptive method of research was used to answers the problems posed in the study. This method was considered the most appropriate since it can be used in providing facts on which professional judgement may be based. According to Calderon (2008), as cited by Alberto (2011), descriptive method is also known as statistical research, it describes data and characteristics about the population or phenomenon being studied. This research method is used for mean, frequencies, averages, independent t-test and other statistical calculation. Often the best approach prior to writing descriptive research, in conducting a survey investigation.

The use of descriptive methodology in this study is also supported by Zulueta and Costales (2003). They stated that descriptive method goes beyond mere gathering and tabulation data. This method is often combined with comparison and constant changing measurements, classification, interpretation and evaluation.

The researchers used Survey Questionnaire in collecting data from the respondents who are the faculty members including fulltime, part-time and department heads of College of Management and Business Technology.

Population and Samples

The respondents of the study were the thirty-two (32) faculty members including fulltime, part-time and program heads of College of Management and Business Technology during academic year 2020-2021.

Instrumentation

A Google Form is a survey administration software that is included in Google. The designed questionnaire was self-administered. The cover letter follows the two-part questionnaire; the first part included the age, gender, teaching experience. The second part of the questionnaire was the challenges on using asynchronous learning in terms of learning styles challenges, pedagogical challenges, technological challenges, technical training challenges, and time management challenges.

The types of the questionnaire that was utilized in this study are:

1. Open-Ended questions are phrased as a statement, a type of questionnaire that permits the respondents to give their response without predetermined choices;
2. Checklist in which the respondents will check their answers according to predetermined choices; and
3. Likert Scale, Likert scales (named after their creator, American social scientist Rensis Likert) are quite popular because they are one of the most reliable ways to measure opinions, perceptions, and behaviors. Likert scales are great for digging down deep into one specific subject matter to find out (in greater detail) what people think about it.

In this study, the questionnaire had a 4-point Likert scale which offered the respondents these four following responses:

Response Modes

- 4 - Extremely Challenging
- 3 - Moderately Challenging
- 2 - Slightly Challenging
- 1 - Not at all

Data Gathering and Procedures

Data Collection

Google Form. The researchers designed a questionnaire using Google form and were introduced it first to the adviser for approval; furthermore, along with the request letter requesting the endorsement of the College Dean and Research Unit Head for the researchers to convey surveys online to the respondents,

Consent, selection of respondents, schedule and privacy. The researchers sought first the approval of each Dean by introducing the letter that was affirmed by Research Unit Head. Stratified random sampling was utilized to calculate the number of respondents for each department of College of Management and Business Technology. The researchers selected the respondents by adopting a convenience sampling technique in which the respondents were chosen because of their availability to participate during the time of survey. The researchers assured the respondents that their perspectives, responses, and opinions will be treated in full confidentiality. The convenience of respondents' schedule was likewise thought about.

Distribution of questionnaire. By convenience sampling, the researchers distributed the questionnaires online to the respondents who agreed to partake in the study.

Collection of questionnaires. After the respondents were finished answering, the surveys have been gathered, documented, and kept in full.

Statistical Treatment of Data

The data gathered was analyzed statistically so as to respond to the question in the study.

1. To describe the Profile of the respondents the frequency count and percentage were used as statistical tool.
2. To describe the Challenges Faced by the College of Management and Business Technology Faculty on Asynchronous Learning namely: Teaching Styles Challenges; Pedagogical Challenges; Technological Challenges; Technical Training Challenges; and Time Management Challenges, the weighted mean was as statistical tool with scoring guide as follows:

Range	Interpretation
3.25 – 4	extremely challenging
2.5 – 3.24	moderately challenging
1.75-2.4	slightly challenging
1 – 1.74	not at all

4. Analysis of Variance (ANOVA) was used to determine if there a significant difference among the gender, years of experience of the respondent and the challenges in using asynchronous learning. Pearson Product-Moment Correlation was used to determine if there a significant relationship between the age of the respondents and the challenges on using asynchronous learning.

IV. RESULTS AND DISCUSSION

This section includes presentation of data, analysis and interpretation of data. The following were presented

1. The Profile of the respondents be described in terms of:

1.1 age

Table 1
Respondent Age Profile

	AGE	No.OF RESPONDENT/S	Percentage
Respondent Profile	20-25 YEARS OLD	3	9.38%
	26-30 YEARS OLD	5	15.63%
	31-35 YEARS OLD	2	6.25
	36-40 YEARS OLD	12	37.5%
	41-45 YEARS OLD	6	18.75
	45-50 YEARS OLD	4	12.5
	Total		32

This table displayed the respondents' ages along with the corresponding age brackets. The majority of the College of Management and Business Technology faculty members were between the ages of 36 and 40 or 37.5%. It implies that 37.5 % of the faculty was in the matured age group.

1.2 gender; and

Table 2
Gender Profile

Gender Profile	GENDER	No.	%
	FEMALE	17	53.12%
MALE	15	46.88%	
Total		32	100%

Table 2 depicts the gender distribution of College of Management Business Technology faculty members, 53.12% percent of the faculty are female and 46.88 % are males.

1.3 years of teaching experience

Table 3
Years of Teaching Experience

Teaching Experience	Years of Experience	No.OF RESPONDENT/S	Percentage
	0-3 YEARS	4	12.5%
4-6 YEARS	10	31.25	
7-9 YEARS	5	15.62	
10-12 YEARS	3	9.37	
13-15 YEARS	3	9.37	
16-18 YEARS	2	6.25	
19-21 YEARS	4	12.5%	
22-24 YEARS	1	3.12	
Total		32	100%

The teaching experience of the faculty at the College of Management and Business Technology is shown in the table above. According to the table, the majority of the faculty had at least four years of teaching experience with 31.25%. This implies that majority of the College of Management and Business Technology faculty member have 4 years and above experience in teaching.

2. The Challenges Faced by the College of Management and Business Technology Faculty on Asynchronous Learning in terms of teaching styles, pedagogical, technological, technical and time management are being described using the table below.

Table 4
Teaching Styles Challenges

Teaching Styles Challenges	Mean	Verbal Interpretation
Giving instructions through Facebook messenger and groups in addition to student modules.	2.5	Moderately Challenging
Building an encouraging environment through virtual classes.	3.1	Moderately Challenging
Utilization of Google Suite, Facebook messenger, Facebook groups, etc. during consultations in providing lectures	2.8	Moderately Challenging

Answering questions and clarifications on through Facebook Messenger.	2.7	Moderately Challenging
General Weighted Mean	2.75	Moderately Challenging

Table 4 reveal, the faculty at the College of Management and Business Technology were Moderately challenged in terms of Teaching Styles, with a general weighted mean of 2.75. This implies that the College of Management and Business Technology faculty were somewhat prepared and made some adjustments in terms of their teaching styles, such as giving instructions, building and encouraging students through virtual classes, answering their questions and clarifications, and utilizing different modalities.

Table 5
Pedagogical Challenges

Pedagogical Challenges	Mean	Verbal Interpretation
Creating pre-recorded discussion and PowerPoint presentations in addition to student activity sheets.	3.0	Moderately Challenging
Facilitating synchronous sessions (quizzes and exams).	2.8	Moderately Challenging
Establishing communication with students through Facebook Messenger.	2.6	Moderately Challenging
Evaluating the accuracy of the result of students' assessments.	3.2	Extremely Challenging
General Weighted Mean	2.90	Moderately Challenging

The table 5 revealed, Because the majority of the faculty at the College of Management and Business Technology are moderately challenged in terms of pedagogical challenges, they are extremely challenged in terms of "Evaluating the accuracy of student assessment." This implies that, despite the fact that the majority of faculty members have four years or more of teaching experience, they still need some training and to improve their knowledge and skills of delivering asynchronous learning.

Table 6
Technological Challenges

Technological Challenges	Mean	Verbal Interpretation
Use of phones, laptops, tablets for supplemental discussion.	2.7	Moderately Challenging
Having stable internet access intended for blended learning.	2.9	Moderately Challenging
Establishing communication with students through Facebook Messenger.	2.8	Moderately Challenging
Availability of software applications to facilitate student assessment.	3.0	Moderately Challenging
General Weighted Mean	2.80	Moderately Challenging

The table 6 revealed, A overall weighted mean of 2.80 indicated that the majority of faculty member at the College of Management and Business Technology were Moderately challenged in terms of technological challenges. This suggests that in order to provide high-quality education, the teachers must upgrade and expand their technological knowledge and abilities.

Table 7
Technical Training Challenges

Technical Training Challenges	Mean	Verbal Interpretation
Preparedness in delivering blended learning.	2.8	Moderately Challenging
Availability of technical training in using Google Suite.	2.9	Moderately Challenging
Availability of support in the effective delivery of asynchronous learning.	2.9	Moderately Challenging
Able to use software applications to ensure the honesty of the students during assessments.	3.2	Moderately Challenging
General Weighted Mean	2.90	Moderately Challenging

The table 7 reveal, A overall weighted mean of 2.90 indicated that the majority of faculty member at the College of Management and Business Technology were Moderately challenged in terms of technical problems. This suggests that the vast majority of faculty members require further technical training or webinars in order to keep their existing expertise up to date and continue to provide high-quality instruction to students.

Table 8
Time Management Challenges

Time Management Challenges	Mean	Verbal Interpretation
Meeting the deadlines of encoding of grades set by the school administrators.	2.7	Moderately Challenging
Creating lectures, and discussions.	2.8	Moderately Challenging
Preparing student examinations, quizzes and other forms of assessment.	2.9	Moderately Challenging
Checking and evaluating students' SAS (Student Activity Sheets), quizzes and exams.	3.2	Moderately Challenging
General Weighted Mean	2.90	Moderately Challenging

The table 8 revealed, A overall weighted mean of 2.90 indicated that the majority of faculty at the College of Management and Business Technology were Moderately challenged in terms of time management. This suggests that time management is a difficulty for all faculty members, and that effective scheduling and a teaching program are required to maintain a healthy work-life balance for the faculty.

3. Significant difference among the gender, years of experience of the respondent and the challenges in using asynchronous learning (Table 9)

In Table 2, the researcher used t-test here because since there are two variable male and female.

Table 1

Difference in Challenges of Faculty on Asynchronous Learning Based on Teaching Experience

Challenges	f-value	f-critical	Verbal Interpretation
Learning Style Challenges	.239	3.23	<i>Not Significant</i>
Pedagogical Challenges	1.46	3.23	<i>Not Significant</i>
Technological Challenges	.290	3.23	<i>Not Significant</i>
Technical Challenges	1.263	3.23	<i>Not Significant</i>
Time Management Challenges	.616	3.23	<i>Not Significant</i>

Table 1 shows the data analysis to determine if the challenges in implementing asynchronous learning differs when grouped based on teaching experience of the faculty member. One-way analysis of variance (ANOVA) was used to analyze the data with 5% level of significance. The teaching-experience of the respondents serves as the independent variable, while the challenges encountered serves as the dependent variables. The results of the analysis reveal that there was no significant difference in all sub factor of challenges encountered in implementing asynchronous learning since all the f critical-values were greater than .05. Therefore, the faculty members experience the same level of challenges in implementing asynchronous learning regardless of their teaching experience.

Table 2

Difference in Challenges of Faculty on Asynchronous Learning Based on Sex

Challenges	t-value	t-critical	Verbal Interpretation
Learning Style Challenges	-1.028	2.021	<i>Not Significant</i>
Pedagogical Challenges	-2.291	2.021	<i>Not Significant</i>
Technological Challenges	-.930	2.021	<i>Not Significant</i>
Technical Challenges	-3.194	2.021	<i>Not Significant</i>
Time Management Challenges	-2.038	2.021	<i>Not Significant</i>

The table above shows the statistical analysis to determine if the challenges in implementing asynchronous learning differs when grouped based on sex. Independent t-test was used to analyze the data with 5% level of significance. The sex of the respondents serves as the independent variable, while the challenges encountered serves as the dependent variables. The results show that there was No significant difference in learning style, pedagogical challenges, technological, technical and time management challenges since the t-values were all less than 2.021 (t-critical values = 2.021). Therefore, it only indicates that both male and female respondents experience the same level of challenges in implementing asynchronous learning modalities.

Meanwhile, the results of the analysis also reveal that there was no significant difference in learning style, pedagogical challenges, technological, technical and time management challenges when grouped based on sex since the t-critical values were greater than t-values = -1.028, -2.291, -9.30 and -2.038. Hence, male and female faculty members experience the same level of challenges.

4. Is there a significant relationship between the age of the respondents and the challenges on using asynchronous learning?

To answer the above question the researcher used Pearson moment of coefficient since age is linear.

TABLE 3
Relationship Between the Age and the Challenges on using Asynchronous Learning

ITEMS	r- coefficient	Verbal Interpretation
Learning Style	.002	<i>Negligible correlation</i>
Pedagogical	-.261	<i>Negligible correlation</i>
Technological	-.344	<i>Low positive (negative correlation)</i>
Technical	.101	<i>Negligible correlation</i>
Time Management	-.182	<i>Negligible correlation</i>

Table 3 shows the correlational analysis to determine if the challenges in implementing asynchronous learning have mostly insignificant relationship to the age of the faculty members. Pearson Moment product correlation was used to analyze the data with 5% level of significance. The results of the analysis reveal that learning style challenges, pedagogical challenges, technical challenges and time management challenges had Negligible correlation to the age of the faculty members since the f critical-values = 3.23. While results revealed that when it comes to technological had low positive (negative correlation). Hence, the faculty members in all age group have the same level of challenges experienced in implementing asynchronous learning, age was not a factor to challenges encountered.

SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

This chapter presents the summary and conclusion derived in the conduct of the study which to probe on the “Challenges Faced by College of Management and Business Technology Faculty on the Delivery of Asynchronous Learning Amidst Pandemic: A Basis for Improvement” it also provides recommendations that can be pursued by College of Management and Business Technology Department.

The study was conducted at Nueva Ecija University of Science and Technology, Sumacab Campus, Cabanatuan City, particularly at the College of Management and Business and Technology. The respondents were the faculty members of the College of Management and Business Technology. the researchers distributed the questionnaires online to the respondents who agreed to partake in the study. After the respondents were finished answering, the surveys have been gathered, documented, and kept in full. The research was descriptive research that employed a quantitative research it uses mean, frequencies, averages, independent t-test and other statistical calculation

Summary and Findings

1. What are the Challenges Faced by the College of Management and Business Technology Faculty on Asynchronous Learning be described in terms of Teaching Styles Challenges; Pedagogical Challenges; Technological Challenges; Technical Training Challenges; and Time Management challenges;

A One-way analysis of variance (ANOVA) was used to analyze the data with 5% level of significance. The results of the analysis reveal that there was no significant difference in all sub factor of challenges encountered in implementing asynchronous learning since all the f critical-values were greater than .05. Therefore, the faculty members experience the same level of challenges in implementing asynchronous learning regardless of their teaching experience.

1.1 Teaching Styles Challenges;

Based on the results all the faculty members in the College of Management and Business Technology moderately challenge in terms of teaching styles from giving instructions aside from distributed modules and assessment of students, building and encouraging students, delivery of teaching modalities and answering questions and clarifications using messenger.

1.2 Pedagogical Challenges;

The findings for the pedagogical challenges revealed that most of the faculty were moderately challenge in terms of creating pre recorded discussion and PowerPoint presentation, activity sheets, quizzes and exams. And faculty had extremely challenge when it comes to evaluating the students accuracy of exams.

1.4 Technological Challenges;

Based on the findings When it comes to technological challenges the results revealed that the faculty members were moderately challenge they in using different technology such as smart phones, laptops, and others for supplemental discussions, access in the internet, establishing communication and availability of software to facilitate student assessment.

1.5 Technical Training Challenges; and

The College of Management and Business Technology faculty members are moderately challenged in term of technical trainings. Somehow they are knowledgeable and prepared.

1.6 Time Management Challenges?

The faculty were moderately challenge in meeting deadlines such as encoding of grades, creating lectures, preparing examinations, quizzes and other forms of assessment.

3. Is there a significant difference among the gender, years of experience of the respondent and the challenges in using asynchronous learning?

The statistical analysis conducted aims to see the significant difference among gender and years of experience of faculty members in using asynchronous learning. Independent t-test was used to analyze the grouped based on sex with 5% level of significance. The data reveals that there was No significant difference in learning style, pedagogical, technological, technical and time management challenges in implementing asynchronous learning when grouped in sex. The t-values were all less than 2.021 (t-critical values = 2.021). Therefore, it only indicates that both male and female respondents experience the same level of challenges in implementing asynchronous learning modalities.

4. Is there a significant relationship between the age of the respondents and the challenges on using asynchronous learning?

The results of the analysis reveal that learning style challenges, pedagogical challenges, technological challenges, technical challenges and time management challenges had no significant relationship to the age of the faculty members since the f critical-values = 3.23. Hence, the faculty members in all age group have the same level of challenges experienced in implementing asynchronous learning, age was not a factor to challenges encountered.

The results of the analysis reveal that the learning style challenges, pedagogical challenges, technological challenges, technical challenges and time management challenges of the faculty members' age is not significant, with critical-values of 3.23. As a result, the faculty members in all ages are facing the same level of challenges in the implementation of asynchronous education, the age is not a factor.

Conclusions

Based on the indicated findings, the following conclusions were drawn:

The respondents on the College of Management and Business Technology department has the same level of challenges faced on the delivery of asynchronous learning.

1. The findings revealed that gender and teaching experience are not a factor on the delivery of asynchronous learning.
2. The outcome revealed that there was no significant difference among the gender and years of experience of the College of Management and Business Technology faculty and shows regardless

the gender and years of experience they have the same level of experience in the delivery of asynchronous learning.

3. The results show that the age and challenges of the faculty of Management and Business Technology are not significantly related. In other words, age is not an asynchronous education factor.
- 4.

Recommendations

This study revealed challenges faced by college of management and business technology faculty on the delivery of asynchronous learning, Thus, the following recommendations are hereby presented:

1. Since, the delivery of asynchronous learning was implemented by the College of Management and Business Technology. To maintain the quality education delivered to the students the faculty members must continuously upgrade their knowledge and skills through learning and development, trainings and seminars. This will allow faculty members to strengthen their skills and can bring them to the higher level so they can acquire knowledge and skills. Also Trainings and seminars would help the faculty members to update their knowledge and education and help to reduce weak links in delivering asynchronous learnings.
2. An online faculty assessment must be carried out. This facilitates a quick and clear reports and progress. This makes easier to give useful feedback to the performance of the faculty and the department as a whole. Also in order to get the students feedback. Positive feedbacks can be beneficial to everyone these may promote engagement, and motivates faculty members. While negative feedbacks can help the faculty and the department to address the weak points of the faculty and the department. Continual improvement may apply to empower the faculty members and helps gradually improves the quality education. This can give great information on the effectiveness of the delivery of asynchronous learning.
3. Implementation of online students tracking to monitor and evaluate the performance of the students at the same time this may help to evaluate the efficiency of asynchronous learning delivery also the effectiveness of performance of faculty.

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