

Assessing the Impact of Learning Modalities to the Tertiary Students' Academic Performance: Basis for the Early Childhood Pedagogical Enhancement

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Abstract

This study aimed to assess the impact of learning modalities to the academic performance of Tertiary students. The research tool employed a 5-Point Likert Rating System with descriptive rating of strongly agree, agree, disagree and strongly disagree. The type of study was quantitative research design and it is none-experimental. Moreover, it used survey as a data collection technique to know the impact of synchronous and asynchronous learning modalities to the academic performance of Bachelor of Elementary Education fourth year students. It was concluded that students had a very good performance during the school year with the blended learning modality which is the synchronous and asynchronous and the Synchronous and Asynchronous Learning Modality was Moderately Extensive in its implementation. Moreover, extent of implementation of synchronous and asynchronous learning modality do not significantly impact the students' academic performance. It was recommended that the future researchers may include other factors that may affect the academic performance of the students in synchronous and asynchronous learning modalities, include the academic performance of the students, and include other learning modalities such as Modular learning, common modality, etc.

Keywords: *learning modalities, tertiary students, academic performance, early childhood, pedagogical enhancement*

Introduction

The coronavirus disease (COVID-19) pandemic has caused an unprecedented crisis in all areas. In the field of education, this emergency has led to the massive closure of face-to-face activities of educational institutions in more than 190 countries in order to prevent the spread of the virus and mitigate its impact.

Education has been one of the most affected sectors by the COVID-19 pandemic. According to UNESCO, there are more than 1 billion students affected globally, which accounts for more than 60% of the student population and more than 15% of the world's populations.

Online education has grown in popularity and accessibility, attracting students with its schedule-friendly format options. These formats can be grouped broadly into two categories: Synchronous and Asynchronous. Synchronous learning is online or distance education that happens in real time, often with a set class schedule and required login times. Asynchronous learning does not require real-time interaction; instead, content is available online for student to access when it best suits their schedules, and assignments are completed to deadlines.

Zamboanga Peninsula Polytechnic State University (ZPPSU) implemented the retention policy for the students of Bachelor of Elementary Education (BEED) effective first semester of academic year 2018-2019. Education students need to maintain a Grade Point Average (GPA) of at least 2.0 or grade of at least 85% every semester. This new policy aims to ensure better performance of the Teacher Education

graduates and consequently improve the college's passing rate in the Board Licensure Examination for Professional Teachers (BLEPT).

As a result, the complete lockdown has led the educational institutions to resort to online methods in quick action to ensure continuity of learning in students as traditional face-to-face learning was not possible in this unprecedented situation.

Related Literature and Studies

Synchronous communication tools help learners and instructors directly interact and provide feedback among themselves (Giesbers, Rienties, Tempelaar, & Gijssels, 2013). For example, in synchronous environments, instructors have the ability to put students in groups so students can work on certain problems among themselves, emulating an F2F classroom environment. This is possible by using technology like Blackboard Collaborate.

Along with communication methods, teacher leadership has also been shown to increase student recruitment and retention rates. A teacher leader is someone who can collaborate with other teachers to find ways to bring in new talent in order to perform effectively inside the classroom. It is essential to have an array of teachers in the classroom (Eyo, R. II & Eyo, L., 2021).

It has been discovered that teachers' performance has a considerable impact on pupils' academic success. This will help teachers concentrate on student results and organize activities for in-service education. It will also assist identify and reward effective teaching (Eyo, L., 2021).

Through a multi-case evaluation of asynchronous courses Garrison and Cleveland-Innes (2005) found that alone participant interaction does not inculcate a feeling of mutual social existence or involvement in online education. They found that participants of asynchronous online study seek the content uploaded by their instructor or they try to engage themselves in meaningful learning tasks. Research findings regarding the impact of synchronous and asynchronous teaching settings on student performance are not without ambiguity. Even in the classes of physical education, it was reiterated by Jimeno (2021) that challenges still exist in the teachers' implementation of the sports' program; hence, a mentoring program has been recommended.

Nieuwoudt (2020) found that it did not make a difference for student achievement whether students attended synchronous virtual classes or watched the recordings of the virtual classes. However, the sheer time students participated in and interacted with the online learning system did significantly affect their academic success. Also, active participation in both synchronous and asynchronous online learning opportunities has been found to result in higher engagement and better academic outcomes than attending face-to-face classes only (Northey et al., 2015).

Research Objective

The study aims to determine the impact of synchronous and asynchronous learning modality on the academic performance of the Teacher Education students of Zamboanga Peninsula Polytechnic State University. Specifically, it seeks to answer the following questions:

1. What is the academic performance of the BEED students?
2. What is the Extent of Implementation of the synchronous and asynchronous learning modality?
3. Do synchronous and asynchronous learning modalities significantly impact students' academic performance?

Methodology

This study was utilized a descriptive – quantitative research design. This research design is the most appropriate for this study because it was describe the profile respondents in terms of socio – economic

status, and the residency. It was also describe the usage of the learning modality by the respondents and the academic performance. Johnson (2000) in Alieto (2019) explained that a study carrying an objective of providing a description trends and phenomenon is considered as descriptive. This research design is described by (Glass & Hopkins, 1984), descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection.

This was quantitative research because it utilized numerical data to analyze the problems. The numerical data were obtained from the respondents using the survey questionnaires.

Results and Discussions

On the academic performance of the BEED students

Table 1. Academic Performance of the BEED Students

	Mean	Description
Academic Performance	1.59	Very Good

Legend:

- 1.0-1.25 – Excellent
- 1.5-1.75 – Very Good
- 2.0-2.25 – Good
- 2.5-2.75 – Fair

Table 1 shows that the academic performance of the BEED students obtained a mean of 1.59, based on the school's grading system is very good. That means, they can do well in asynchronous and synchronous class. It implies that, students had a very good performance during the school year with the blended learning modality which is the synchronous and asynchronous.

On the Extent of Implementation of the Synchronous and Asynchronous Learning Modality

Table 2. Extent of Implementation of the Asynchronous Learning Modality

Asynchronous	Weighted Mean	Description
1. Students can access learning content outside of designated class time.	2.80	Moderately Extensive
2. Usually requires LMS or similar platform delivery content.	2.78	Moderately Extensive
3. Enables students to have more flexibility and time to process new information and compile questions.	2.78	Moderately Extensive
4. Students learn independently and potentially in isolation.	2.74	Moderately Extensive
5. Learning is available anytime and potentially anywhere.	2.84	Moderately Extensive
Average Weighted Mean	2.79	Moderately Extensive

Legend:

- 3.36-4.0 – Highly Extensive
- 2.56-3.25 – Moderately Extensive
- 1.0-1.75 – Extensive
- 1.76-2.5 – Not Extensive

From what was able to glean in the table 2 that among the items as regards on the extent of implementation of asynchronous learning modalities "learning is available anytime and potentially

anywhere" obtain the highest weighted mean of 2.84 described "agree" this means that the fourth year BEED students were convinced that they can learn at the moment they want using technology. The fourth year BEED students were convinced that they can access learning content outside of the designated class time as evidenced in the weighted mean of 2.80 described "agree". Likewise, the fourth year BEED students agreed in their responses that they usually requires LMS or similar platforms delivery content, it obtain the weighted mean of 2.78 described "agree" on the other hand, the fourth year BEED students agree that they were able to have more flexible time to process new information and compile questions as evidence in the weighted mean 2.78 described as "agree" and the lowest weighted means was students learn independently and potentially in isolation with weighted mean of 2.74 described "agree" this means that students learn alone without being influenced by others. This is in consonance with the study conducted by Garrison and Cleveland – Innes in 2005, which it found that through a multi-case evaluation of asynchronous courses, participant interaction does not inculcate a feeling of mutual social existence or involvement in online education, it further discovered that the participants of asynchronous online study seek the content uploaded by their instructor or they try to engage themselves in meaningful learning tasks.

Same study conducted by Nardo, M.T.B, 2017, where it revealed that students engage themselves in learning the concepts presented in the module. They develop a sense of responsibility in accomplishing the tasks provided in the module. With little or no assistance from others, the learners progress on their own. They are learning how to learn; they are empowered supported the findings.

Table 3. Extent of Implementation of the Synchronous Learning Modality

Synchronous	Weighted Mean	Description
1. Students interact in real-time during instruction.	2.89	Moderately Extensive
2. Use of video conferencing, conference calls, online chat, remote labs, and learning technologies.	2.83	Moderately Extensive
3. Allows students to get immediate answers to questions and clarification when necessary.	2.83	Moderately Extensive
4. Learning is scheduled and has a fixed start time and end time.	2.74	Moderately Extensive
5. Students interact with a live trainer/facilitator and other students.	2.83	Moderately Extensive
Average Weighted Mean	2.83	Moderately Extensive

Legend:

3.36-4.0 – Highly Extensive

1.0-1.75 – Extensive

2.56-3.25 – Moderately Extensive

1.76-2.5 – Not Extensive

From what was able to glean in the table 5 that among the items as regards on the extent of implementation of synchronous learning modalities "Students interact in real time during instruction" obtain the highest weighted mean of 2.89 described "agree" this means that the fourth year BEED students to come together and have an effective communication and interaction with each other. The fourth year BEED students were convinced that the use of video conferencing, conference call, online chat, remote labs and learning technologies as evidenced in the weighted mean of 2.83 described "agree". Likewise, the fourth year BEED students agreed in their responses allows students to get immediate

answers to question and clarification when necessary it obtain the weighted mean of 2.83 described "agree" on the other hand, the fourth year BEED students agree that they interact with a live trainer/facilitator and other students as evidence in the weighted mean 2.83 described as "agree" and the lowest weighted means was that learning is scheduled and has fixed start time and end time with weighted mean of 2.74 described "agree" this means that the students didn't really observe the fixed scheduled time. This finding was supported by the study conducted by Sun & Rueda, 2012, where it indicated in the findings that, despite the conveniences of online distance learning, challenges also are encountered by Students and teachers. Distance education provides students much more freedom in how and when they interact.

On the Impact of the Synchronous and Asynchronous Learning Modality to the Students' Academic Performance

Table 3. Impact of Synchronous and Asynchronous Learning Modality to Students' Performance

Independent Variable	Dependent Variable	r	r²	F Obs	P. Value	Interpretation
Asynchronous and Synchronous	Academic Performance	.031	.001	.051	.821	Not Significant

Table 3 shows the impact of the synchronous and asynchronous learning modality to student academic performance. As shown in the table, the coefficient r ($r = .031$) indicates that there is a low relationship between the synchronous and asynchronous learning modality and the students' academic performance. According to Downie and Heat (1985) a coefficient r of 0.4 and below is considered low. The coefficient of determination ($r^2 = .001$) indicates that only 0.1 percent of the variance of the extent of implementation of the synchronous and asynchronous learning modality is contributed by the students' academic performance. It implies further that 99 percent of the factors which contributed to the implementation of the asynchronous and synchronous learning modality are not discussed in the study. The table further shows that the F obs which is associated with the p – value is greater than the alpha level of significance ($p\text{-Value} > .05$) suggest that the extent of implementation of the synchronous and asynchronous learning modality do not significantly impact the students' academic performance. The extent of implementation of the synchronous and asynchronous learning modality do not guarantee the academic performance of the students. The null hypothesis which states that extent of implementation of synchronous and asynchronous learning modality do not significantly impact the students' academic performance is accepted.

Conclusions

It has been concluded that, the synchronous and asynchronous learning modality are a significant tool to the fourth year Teacher Education students. The result means that the fourth year BEED students were convinced that they can learn at the moment they use technology and they can come together and have an effective communication and interaction with each other. The extent of implementation of the synchronous and asynchronous learning modality does not differ among Teacher Education students.

Recommendations

Based on the findings and conclusions, the following were recommended:

1. The Administration may investigate the implementation of the synchronous and asynchronous learning modality in the University as it affects the learning performance of the students.
2. An extensive quarterly monitoring and assessment may be introduced on the extent of implementation of the asynchronous and synchronous learning modality for a better and improve scheme of implementing a learning modality.

3. Future research may be conducted to validate the findings of the present study.

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