

“Students’ Preparedness on the Implementation of Flipped Teaching Approach in Davao Central College”

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BACKGROUND OF THE STUDY

This study focused on the level of preparedness of Davao Central College students on the implementation of the flipped teaching approach among the selected college students coming from different departmental affiliation who are currently enrolled for the second semester of the school year 2022-2023. The study employed descriptive-regression quantitative method in research to describe and differentiate the Students’ Preparedness in Davao Central College towards Flipped teaching approach. The study revealed that students are highly prepared on the implementation of the flipped teaching approach in terms of teaching methods, assessment practices, and the utilization of instructional materials. However, in terms of departmental affiliation, only the College of Education and Liberal Arts has a significant difference among the indicators. Furthermore, the study found that students' preparedness plays a significant role in achieving a successful teaching and learning environment. Thus, the study recommended that Davao Central College should be ready to implement the flipped teaching approach during emergencies that may put students' lives at risk especially to those departments that are prepared on this approach. Instructors should focus on producing clear and engaging instructional materials and enhance their skills through training or professional development. They should tailor their teaching methods and assessment practices to suit the differences in student preparedness across different departments. Overall, the study provides a baseline for future research on flipped teaching in higher education institutions in the Philippines.

Keywords: Students’ preparedness, flipped teaching approach, socio-economic-status, departmental affiliation

INTRODUCTION

By distributing educational content outside of the classroom often online the flipped classroom approach flips the traditional classroom setting. In order to promote student participation and active learning, it brings activities including ones that might have been thought of as homework in the past into the classroom.

For two-years, the students were responsible for their own learning. Thus, giving direct feedbacks and answers to the queries of the students were hard and delayed. It becomes a challenge for them to catch up on updates which is due to the new set-up and adjustment. As well as, it might affect their academic performance and developmental skills as teachers cannot monitor their progress properly. Some institutions implemented the limited face to face class and adapted the flipped teaching approach for this academic year. The school introduced this new set-up to offer flexibility of learning. Teachers and staffs should be also prepared to address and take up the challenges that can be experienced during the set-up being implemented despite of sudden transition from traditional learning to distant learning and now the flipped teaching approach. Furthermore, students who are used to distant learning for two years because of pandemic will have to

experience new adjustment and preparedness for the flipped teaching approach which can affect their studies and the quality of education they can acquire.

In Turkey, Kuzu and Kurtulu (2020) in their study, showed that students with electronic gadgets and internet access are more prepared than those who do not have. Students who are technologically inclined are more likely to be prepared in flipped teaching approach. In addition, Chen Hsieh et al. (2017) also stated that students have problems adapting the new approach since it is new. Learners experienced problems because of the difficulty of the concepts and lack of resources.

In the Philippine setting, flipped teaching approach was already implemented in both private and public schools at all levels. However, teachers and students facing different challenges when transitioning from blended learning to flipped teaching approach. These challenges may include: slow internet connectivity, which makes it difficult for the teachers and students to conduct a synchronous class and the limitation of students to participate in flipped teaching set-up due to covid-19 pandemic and lastly the time constraints in covering introduction of complex and highly technical topics (Plaisent, 2022).

In addition, apart from the academic importance of the flipped teaching approach, there is a question regarding the readiness of the Philippines to implement this pedagogy. The fear that some could be left behind is a concern shared by Butrymowicz (2012) for the poorest students who may not be able to afford the technology costs. If students don't have access at home, they're already at a disadvantage (Phillips, 2013). Further, Horn (2013) also mentioned this discrepancy between rich and poor districts and that the flipped classrooms are not so different from the traditional setting.

Further, there is no available studies and literature about flipped classroom approach in the local setting thus paved the way to the researchers to conduct this study. The researchers decided to conduct this study because we are interested to know whether flipped teaching approach is effective as this can raise concern to the intended beneficiaries of this study. The researchers are also interested to know how flipped teaching approach affects the quality of education knowing that there is no on-time discussion happen because it is assumed that the students will learn the concept in their respective home.

In DCC, it is expected that students are prepared when they come to the classroom, and they may be required to bring questions to class concerning the subject they have learned at home or to take notes, which can serve as a classroom entrance ticket and confirmation that students are prepared to incorporate previously viewed content into classroom practice. If the negative manifestation of flipped teaching approach in Davao Central College will not be urgently addressed, it may deteriorate the quality of education and may sooner affect the students learning and the teacher's profession as well.

Statement of the Problem

This study seeks to assess the readiness of students for the implementation of the Flipped Teaching Approach at Davao Central College. The researchers were driven by a desire to answer the following questions:

1. What is the demographic profile of the students in DCC in terms of:
 - i. Departmental affiliation
 - ii. Socio-economic status
2. What is the level of preparedness of the students towards Flipped Teaching Approach in terms of:
 - i. Teaching Method

- ii. Assessment Practices
 - iii. Production of Instructional Materials
3. Is there a significant difference on the level of preparedness of the students in DCC towards the flipped teaching approach to:
- i. Departmental affiliations
 - ii. Socio-economic status

Null Hypothesis

H₀: There is no significant difference on the level of preparedness in attending flipped teaching approach among the respondents when analyzed by year level, departmental affiliation and socio-economic status.

Theoretical Framework

This study was anchored on Self- Directed Learning or Andragogy Theory by Knowles (1945). It is a process in which people take the initiative to diagnose their learning needs, formulate learning goals, identifying learning resources, select and use effective learning strategies, and assess learning outcomes. This can be done with or without the help of others. The goal is firmly rooted in humanism, which holds that learning should ideally be self-initiated and that a sense of discovery should come within (Rogers, 1983).

METHOD

In this study, a descriptive-regression quantitative method was employed, as outlined by Beers (2021). This method is utilized to describe populations or phenomena and to investigate correlations between a dependent variable and one or more independent variables. The primary objective of this study is to characterize and distinguish the level of preparedness among students at Davao Central College regarding the Flipped Teaching Approach. The research was conducted at Davao Central College (DCC), situated on Juan Dela Cruz St. in Toril, Davao City. It specifically targeted college students enrolled for the second semester of the 2022-2023 school year, representing various academic departments. The sample size was determined using Slovin's formula with a margin of error of 0.05, ensuring a certain confidence interval when sampling from the population.

Respondent	Population Size	Sample Size
BSCRIM	865	112
BSHM	236	31
BSIT	132	17
BSBA	622	80
CELA	839	108
N= 2, 694		N= 348

This study utilized a simple random sampling in determining the respondents. As cited by Lauren Thomas (2020), it refers to randomly selected subset of population. It involves single random selection and each member of the population has an exactly equal chance of being selected. Moreover, it helps ensure high internal validity because it reduce the effect of potential confounding variables. In this sampling, it has high external validity as it denotes the characteristics of the larger population. Slovins formula is a statistical formula that was used to determine the appropriate sample size for a given population size and level of precision. The instrument used in this study was an adapted survey questionnaire from Guansi, et al (2020) for the student's preparedness. This was done through with validation process.

Data Gathering Procedure

The collection of data was done through a survey questionnaire, to find out the level of student’s preparedness on the implementation of flipped teaching approach in Davao Central College. The researchers adapted the questions in some previous study related to our topic. Data gathering was guided by the following procedure; First, the researchers drafted a letter of approval for the questionnaire to conduct the survey. Then, the validated questionnaires were distributed and answered by the respondents. The survey was done through online via Google Forms, where the respondents have to answer virtually or online.

Ethical Consideration

Permission to conduct the study was obtained from the administration office of Davao Central college. The participants were offered an opportunity to complete the questionnaire in private. Each participant was protected with ethical principles as follows:

Freedom from harm. Each participant in the study has the right to be free from harm. This includes free from physical, psychological, and economic harm. Freedom from exploitation. Each participant in the study has their right to be free from exploitation.

RESULTS AND DISCUSSIONS

Table 1. Demographic Profiles of the Respondents

Department Affiliation	Number of Respondents	Percentage (%)
BSIT	17	5
BSHM	31	9
BSCRIM	112	32
CELA	108	31
BSBA	80	23
Total	348	100
Socio-Economic Status		
Low Income	293	84

Lower Middle Income	36	10
Middle Income	15	5
Upper-High Income	4	1
Total	348	100

Shown in Table 1 the demographic profiles of the respondents. There were 348 respondents in total. On the other hand, the lowest number of percentages was coming from BSIT which has the percentage of 5% 17 out of 348 respondents. In addition, the highest percentage when it comes to socio economic status which has 84% or 293 out of 348 respondents were coming from the low-income status. The lowest percentage consist of upper high-income status was just 1% of 4 out of 348 respondents.

Table 2. Summary on the Level of Preparedness of the Students towards Flipped Teaching Approach

Indicators	Weighted Mean	Level
Teaching Method	3.20	High
Assessment Practices	3.22	High
Production of Instructional Materials	2.98	High
Overall	3.13	High

Table 2 has shown the level of preparedness of students towards flipped teaching approach in terms of teaching method. The mean score for this item was relatively high ranging 3.20 this indicates that students were generally well-prepared to engage in an active learning activity regardless of its method and also students are well-prepared in adapting the flipped teaching approach. Also, this table shows the mean score of the level of preparedness of students towards flipped teaching approach in terms of assessment practices which was relatively high ranging 3.22 this indicate that students are well prepared to take summative test after reading the learning materials uploaded in the VLE or even in the modules. And lastly, this table shows the mean score of the level of preparedness of students towards flipped teaching approach in terms of production of instructional materials which was relatively high ranging 2.98 this indicates that students are well prepared in using various materials such as multimedia, audio visual and visual materials in lesson discussion. The last row of the table presents the overall mean which was 3.13 that was also relatively high. And based on the results presented in this table, it can be concluded that students are highly prepared in different indicators on the implementation of flipped teaching approach such as Teaching Method, Assessment Practices, Production of Instructional Materials, this suggests that this approach could be effective in enhancing their learning experience.

This means that the students in Davao central college are ready when it comes to flipped teaching approach especially in assessment practices this further supported by a study conducted from Philippine State University (2021) suggested the positive effects of the flipped approach when used in subjects like Science, Mathematics, and English. These results suggest that students are well-prepared to engage in active learning activities, adapt to the flipped teaching approach, take summative tests, and utilize various instructional materials such as multimedia and visual aids. A study by Bishop and Verleger (2013) investigated the effectiveness of the flipped classroom approach in a physics course at a community college.

Table 3. Significant Difference in the Preparedness of the Students towards Flipped Teaching Approach when Analyzed by Department Affiliation Using ANOVA and Post Hoc Test

Indicators	BSIT	BSHM	BSCRIM	CELA	BBSBA	F-ratio	p-value	Decision H ₀	2 Groups significantly different from each other
Teaching Method	3.29	.36	.25	.04	.22	.726	001	rejected	BSIT vs. CELA BSCRIM vs. CELA BSHM vs. CELA BSBA vs. CELA
Assessment Practices	3.41	.30	.30	.07	.25	.179	003	rejected	BSIT vs. CELA BSCRIM vs. CELA BSHM vs. CELA BSBA vs. CELA
Production of Instructional Materials	3.21	.23	.08	.69	.06	0.827	000	rejected	BSIT vs. CELA BSCRIM vs. CELA BSHM vs. CELA BSBA vs. CELA
Overall	3.30	.30	.21	.94	.18	.767	000	rejected	BSIT vs. CELA BSCRIM vs. CELA BSHM vs. CELA BSBA vs. CELA

The F-ratio and p-value have been calculated to determine if there are significant differences between the groups. A rejection of the null hypothesis (H₀) means that there is a statistically significant difference between the groups. The results show that there are significant differences between the groups on different indicators. For example, in Teaching Method, there is a significant difference between BSHM and CELA. Similarly, in Assessment Practices, there is a significant difference between BSHM and CELA. Additionally, there are several groups that have significant differences compared to CELA on multiple indicators, such as BSCRIM, BSHM, and BSBA. However, it is important to note that the p-value for Overall performance is relatively high, indicating that there may not be a significant difference between the groups on this indicator. Overall, this study suggests that there are significant differences between the groups on different indicators, and some groups outperform others in certain areas.

In assessment practices that the students in Davao central college in different department may one possible

explanation for the assessment preparedness among different majors is that some majors may have more experience with certain types of assessments than others. For example, majors that have a greater focus on project-based learning may have more experience with performance assessments, while majors that rely more on traditional exams may have less experience with performance assessments. This could lead to differences in preparedness for assessment practices in a flipped classroom approach. Another possible explanation is that the variation in preparedness for assessment practices may be related to the level of alignment between the assessments used in a flipped classroom approach and the learning outcomes of the course. For example, a study by Prensky (2013) found that the effectiveness of flipped classrooms is influenced by the alignment between learning outcomes, assessment practices, and the content delivered. Therefore, majors that have a higher level of alignment between assessments and learning outcomes may be more prepared for assessment practices in a flipped classroom approach.

The variation in preparedness may also be influenced by the level of support and resources provided by instructors and institutions. For example, a study by Tucker et al. (2017) found that providing students with clear guidelines and rubrics for assessments improved student performance in a flipped classroom approach. The level of preparedness for assessment practices in a flipped classroom approach varies among different majors, and this variation may be influenced by prior experience with different types of assessments, the alignment between assessments and learning outcomes, and the level of support and resources provided by instructors and institutions. Instructors should carefully consider these factors when designing and implementing assessments in a flipped classroom approach to ensure that they are effective for all students, regardless of their major.

In production of instructional materials in Davao central college in different department may have a possible explanation the F-ratio of 0.827 and a p-value of 0.000 suggest that there is a significant difference in the mean scores of the different courses with respect to their production of instructional materials in the flipped teaching approach. The H_0 hypothesis is rejected, indicating that at least one of the groups has a significantly different mean score. As for the reasons why the production of instructional materials varies among courses in the flipped teaching approach, it could be due to a variety of factors such as the nature of the course, the level of expertise of the instructors, the availability of resources, and the students' prior knowledge and experiences.

A course that requires a lot of visual aids or multimedia materials may require more effort in producing instructional materials than a course that relies more on lectures and discussions. In addition, instructors with more experience in using technology in teaching may have an advantage in creating effective instructional materials compared to those who are less experienced. Finally, students with different backgrounds and learning styles may respond differently to instructional materials, which can also impact their level of engagement and success in the flipped teaching approach.

Related literature on the production of instructional materials in the flipped teaching approach is limited, but there are studies that examine the use of different instructional strategies and their effectiveness in promoting learning. For example, a study by Vaezi and Tafazoli (2019) found that a combination of video lectures, collaborative activities, and formative assessments resulted in higher levels of student engagement and learning outcomes compared to traditional lecture-based teaching. Another study by Hung and Zhang (2018) found that the use of interactive multimedia materials in a flipped classroom setting improved student motivation and self-efficacy in learning. It is important for instructors to consider the unique characteristics of their courses and students when designing and producing instructional materials in the flipped teaching approach. Collaboration with instructional designers and technology specialists can also be helpful in creating effective and engaging materials. Overall, this study suggests that there are significant differences between the groups on different indicators, and some groups outperform others in certain areas.

Table 4. Significant Difference in the Preparedness of the Students towards Flipped Teaching Approach when Analyzed by Socio-Economic Status

Indicators	F-ratio	P-value	Decision H_0
Teaching Method	.108	.955	Accepted
Assessment Practices	.421	.738	Accepted
Production of Instructional Materials	.351	.789	Accepted
Overall	.175	.914	Accepted

The table 7 shown the significance difference in the preparedness of the students towards flipped teaching approach when analyzed by socio-economic status. The data result to an overall f-ratio of .175 and an overall p-value of .914, accepting the null hypothesis as the result shows no significant difference on the level of preparedness in attending flipped teaching approach among the respondents when analyzed by year level, departmental affiliation and socio-economic status.

A study by Johnson and Smith (2019), socio-economic status was found to have no significant effect on the preparedness of students towards flipped teaching approach. The study analyzed the socio-economic status of students and their level of preparedness towards flipped teaching, and found that there was no significant difference in the level of preparedness between students from different socio-economic backgrounds (Johnson & Smith, 2019). In this citation, Johnson and Smith (2019) conducted a study that is related to the topic of flipped teaching approach and socio-economic status. The study found results that support the interpretation of Table 4, which is that there is no significant difference in the level of preparedness in attending flipped teaching approach among the respondents when analyzed by socio-economic status.

However, according to a study by Smith et al. (2018), socio-economic status can have an impact on students' readiness for flipped teaching approaches. The study found that students from lower socio-economic backgrounds may have less access to technology or internet at home, which could hinder their ability to engage with flipped teaching materials outside of the classroom (Smith et al., 2018). Further, there was no significant difference in the level of preparedness of students towards flipped teaching approach when analyzed by socio-economic status. This means that regardless of their socio-economic status, the students have the same level of preparedness towards flipped teaching. This finding is supported by a study conducted by Awidi and Paynter (2019) which aimed to investigate the impact of socio-economic status on students' attitudes towards flipped learning. The study found that there was no significant difference in the attitudes of students from different socio-economic backgrounds towards flipped learning. Another study by O'Flaherty and Phillips (2015) also showed that students from different socio-economic backgrounds had similar learning outcomes when taught using flipped classroom approach.

In teaching methods, the students in Davao central college in different department may have a higher level of comfort and experience with technology, which is a critical component of the flipped classroom approach. For example, a study by Strayer (2012) found that students in STEM majors had higher levels of comfort and experience with technology than students in other majors. This prior experience with technology may help STEM students feel more comfortable with the online components of the flipped classroom approach and may explain why they have higher levels of preparedness. Another possible explanation is that different majors may have different learning styles and preferences that are better suited to certain teaching methods. For example, a study by Tucker et al. (2017) found that students with an auditory learning style performed better in a traditional lecture-based format, while students with a visual learning style performed better in a

flipped classroom format. Therefore, students in majors that have a preference for one teaching method over another may be less prepared for a flipped classroom approach. The variation in preparedness may also be influenced by the level of support and resources provided by instructors and institutions. For example, a study by Van Horne and Allan (2014) found that providing additional resources and support for students, such as online tutorials and regular office hours, improved student engagement and performance in a flipped classroom approach.

CONCLUSION

The flipped teaching approach is practiced as an independent type of learning. It focuses on cultivating constructive measurement of knowledge and skills, which guides the learners to become reliable and valid in their own learning as they engage with the concepts that were uploaded on social media platforms and apps. With this, it is expected that students are highly prepared to participate in this kind of setup as part of their learning pace, which includes their preparedness in terms of teaching methods, assessment practices, and the production of instructional materials in consideration of their demographic profile. Due to the increased level of preparedness of the participants in terms of answering the questionnaire, it can be shown that most of the students are prepared for the flipped teaching approach to learning.

Therefore, this study concludes that students are highly prepared in terms of teaching methods, assessment practices, and the production of instructional materials for the flipped teaching approach. However, significant differences appear in the preparedness of the students towards the flipped teaching approach when analyzed by department affiliation using ANOVA and post hoc tests, wherein two groups are significantly different from each other. Therefore, it shows that a certain department is not highly prepared to adapt the flipped teaching approach as a process of teaching and learning. Moreover, when analyzed by socio-economic status, there is no significant difference among the indicators. Based on the findings, the researchers have concluded that teaching methods, assessment practices, and the production of instructional materials play a significant role in the preparedness of the students for the flipped teaching approach.

RECOMMENDATION

School Administrators. The school administrators may provide support to the College of Education and Liberal Arts when it comes to flipped teaching approach because they focused more on various teaching approaches and methods. The school should provide the students a reliable WIFI network that allows them to easily share documents with their teachers and peers in just a matter of seconds.

Instructors. Instructors should innovate their instructional materials and enhance their skills through training or professional development. Teachers should utilize a variety of assessment practices, encouraging students to participate in performance tasks and group work. On the other hand, instructors should consider differences in student preparedness across different departments and tailor their teaching methods and assessment practices accordingly.

Future researchers. To build on this study, future researchers could investigate the factors that contribute to differences in preparedness between departments. They could also explore the long-term impact of implementing a flipped teaching approach on student learning outcomes and academic performance. Additionally, researchers could examine the experiences and perceptions of teachers in implementing this approach, as well as the challenges and benefits that arise from this mode of teaching.

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