METACOGNITIVE STRATEGY AND STUDENT COURSE ENGAGEMENT

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Abstract: This study aimed to determine which domain of metacognitive strategy best influences student course engagement. This study utilized the non-experimental quantitative research design using descriptive technique involving teachers in one District of Davao Occidental Division, Philippines. The study was conducted on the second semester of school year 2021-2022. Research instruments on metacognitive strategy and student course engagement were used as source of data. Using mean, pearson-r, and regression as statistical tools to treat the data, the study showed the following results: the level of metacognitive strategy is high, the level of student course engagement is high, there is a significant relationship between metacognitive strategy and student course engagement, and domain of metacognitive strategy best influence student course engagement is Perceived Academic Efficacy.

Keywords: Metacognitive Strategy, Student Course Engagement, Educational Management, Quantitative Research, Philippines

1. Introduction

One key to academic success is student engagement. This does not only increase retention of the students in their lesson but also it enhances their focus which can promote meaningful learning experiences. When students are highly engaged in their class, they become more motivated, and they can apply their learning in their life. However, teachers complain that student engagement has been a primary issue in school as manifested by low submission rate of modules and other academic requirements (Axelson & Flick, 2010).

Many teachers today have noticed the poor students course engagement especially that the learning environment has changed in this time of health crisis. For students, its seem like they are no longer interested to understand concepts of the lessons as they leave their learning activity sheets partially answered. They also do not submit on time with the other requirements such as the summative assessments and performance-based assessments. As a result, teachers spend more time connecting to these students to ensure that they can comply with the basic academic requirements in their grade levels (Trowler, 2010).

In some classes, teachers notice about the lack of interest of students to participate in the online class. There are several students who are passive while their teacher discusses the lessons and conduct activities. As a result, homework are not done and lessons are not mastered leaving the teacher to design learning activities that will help capture the students' interest. This requires teachers to design remediation activities to assist the needs of the students in order to increase engagement practice (Parsons & Taylor, 2011).

In the local context, there are students do not stay up with their tasks. There are even several students who disregard submissions of requirements. Also, there are students who are contented with whatever mark they get as they care less in their academic requirements. All these have resulted to poor examinations results and academic performance.

The problem-situations mentioned are the experiences of the students on student course engagement. The need to address the problem will ensure greater learning opportunities for the students. Hence, the researcher is prompted to conduct this study to address the knowledge gap in terms of finding relevant evidence in the local context regarding metacognitive strategy and student course engagement students as the researcher has rarely come across with the same study on the same topic in the local setting.

Research Objectives

This study aims to find out which domain of metacognitive strategy best influences student course engagement. Specifically, this study sought to answer the following objectives:

1. To describe the level of metacognitive strategy in terms of:
1.1. Metacognitive strategies;
1.2. Affect at school, and
1.3. Perceived academic efficacy.
2. To ascertain the level of student course engagement in terms of:
2.1 applied engagement;
2.2 goal-oriented engagement;
2.3 self-disciplined engagement, and
2.4 interactive engagement.

3. To determine the significant relationship between metacognitive strategy and student course engagement.
4. To determine which domains of metacognitive strategy best influences student course engagement.

Hypothesis

The following hypothesis will be treated at 0.05 level of significance.

1. There is no significant relationship between metacognitive strategy and student course engagement.
2. No domains of metacognitive strategy best influences student course engagement.

2. Methods

This study used a correlational approach to conduct non-experimental quantitative research. A major portion of quantitative educational research is non-experimental because many critical factors of interest are uncontrollable. Because non-experimental research is such an important strategy for many researchers, it is necessary to establish a classification system for non-experimental methods that is both highly descriptive of what we do and allows us to communicate effectively in an interdisciplinary research context. Correlational research designs determine the type and extent of a relationship between two naturally occurring variables.

3. Results

Level of Metacognitive Strategy

Presented in Table 1 is the level of Metacognitive Strategy with the overall mean of 3.95 with a descriptive equivalent of high indicating that all enumerated indicators were oftentimes manifested. The overall mean was the results obtained from the mean of the indicators for the specific items from the questionnaire intended for this particular indicator which is appended in this study. Among the enumerated indicators, Perceived Academic Efficacy obtained the highest mean score of 4.01 or high. As presented in the appended table, the mean ratings of the following items under this indicator were as follows: I'm certain I can master the skills taught in class this year, I can do even the hardest class work if I try, If I have enough time, I can do a good job on all my class work, I can do almost all the work in class if I don't give up, and Even if the work in class is hard, I can learn it.

The indicator Affect at School obtained the highest mean of 3.98 with a descriptive rating of high. As presented in the appended table, the mean ratings of the following items under this indicator were as follows: I like being in

my class, I am happier when I am at class than when I am not, most of the time, being in class puts me in a good mood, I don't feel bored in class l, and I am not angry when I'm at class.

Metacognitive Strategies obtained a mean score of 3.87 or high. As presented in the appended table, the mean ratings of the following items under this indicator were as follows: I skim through the unit to see how it is organized before I read it thoroughly, If I become confused about something I read, I go back to my previous notes and sort it out, I try to determine which concepts I don't understand well, I try to determine the way I study according to the course requirements and the instructor's teaching style, and I set goals for myself in order to direct my study activities.

The high level of *Metacognitive Strategy* is due to the high level of rating given by the respondents to the indicators *Metacognitive Strategies, Affect at School,* and *Perceived Academic Efficacy*

The result of this study is aligned with the idea that states metacognitive strategies enable learners to play active role in the process of learning (Ajideh, 2009), to manage and direct their own learning and eventually to find the best ways to practice and reinforce what they have learned (Chari et al., 2010). This puts them in a privileged position to process and store new information and leads to better test performance, learning outcome, and better achievement (Mall-Amiri & Ahmadi, 2014).

Metacognition is the ability to be conscious of one's mental processes (Beran, Proust, Perner & Proust, 2012). Research shows that metacognitive learners who take conscious steps to understand what they are doing when they

Table 1. Metacognitive Strategy

Indicator	SD	Mean	Descriptive Level
Metacognitive Strategies	0.53	3.87	High
Affect at School	0.61	3.98	High
Perceived Academic Efficacy	0.58	4.01	High
Overall	**0.48**	**3.95**	**High**

learn tend to be the most successful learners (Rahimi & Katal, 2012). Metacognitive strategies oversee, direct and regulate the learning process (Lee & Mak, 2018).

Metacognition refers to knowledge about ones' own thinking and learning (Mahdavi, 2014), and generally subsumes a variety of self-regulatory processes and strategies for coordinating and controlling deliberate attempts to explain phenomena and solve problems (Sieck Smith & Rasmussen, 2013). The literature on scientific reasoning offers some clues about the metacognitive strategies that may enable a person to cope effectively with cultural surprises (Earley, Murnieks & Mosakowski, 2007; Sieck Smith & Rasmussen, 2013).

Level of Student Course Engagement

Presented in Table 2 is the level of *Student Course Engagement*. Computations revealed an overall mean score of 3.98 or *high,* indicating that all enumerated indicators were oftentimes manifested. The overall mean was the results obtained from the mean of the indicators for the specific items from the questionnaire intended for this particular indicator which is appended in this study.

Among the enumerated indicators, *Goal-oriented engagement* obtained a mean score of 4.08 or high. As presented in the appended table, the mean ratings of the following items under this indicator were as follows: getting a good grade, doing all the homework, doing well on the tests, and coming to class on time.

Self-Disciplined Engagement obtained a mean score of 4.05 or high. As presented in the appended table, the mean ratings of the following items under this indicator were as follows: looking over class notes between classes to make sure I understand the material, making sure to study on a regular basis, taking good notes in class, staying up on the tasks. *Applied Engagement* obtained a mean score of 3.95 or high. As presented in the appended table, the mean ratings of the following items under this indicator were as follows: applying course

Table 2. Level of Student Course Engagement

Indicator	SD	Mean	Descriptive Level
Applied Engagement	0.82	3.95	High
Goal-Oriented Engagement	0.88	4.08	High
Self-Disciplined Engagement	0. 74	4.05	High
Interactive Engagement	0.85	3.86	High
Overall	**0.78**	**3.98**	**High**

material to my life, finding ways to make the course material relevant to my life, and really desiring to learn the material.

Interactive Engagement obtained a mean score of 3.86 or high. As presented in the appended table, the mean ratings of the following items under this indicator were as follows: raising my hand or answering questions in class, participating actively in small group or discussion board discussions, having fun in class, and asking questions when I don't understand.

The high level of Student Course Engagement is due to the high level of rating given by the respondents to the indicators Applied Engagement, Goal-Oriented Engagement, Self-Disciplined Engagement, and Interactive Engagement

The result of this study is aligned with the statement that says student course engagement is necessary for a successful learning process. Course engagement is defined as the active participation of students in learning activities in their classes (Skinner et al., 2009). Course engagement is regarded as an important indicator of student achievement (Handelsman et al., 2005). It is believed that a low level of course engagement may have negative

effects on course performance and the learning process (Wang et al., 2014). Therefore, researchers are conducting studies on methods and tools that may be able to increase the students' level of course engagement.

Correlations between Measures

Illustrated in Table 3 were the results of the test of relationship between the variables involved in the study. The overall correlation had a computed r- value of 0. 438 with a probability value of 0.01 which is significant at 0.05 level rejecting the null hypothesis that there is no significant relationship between metacognitive

Table 3. Significance of the Relationship between Metacognitive Strategy and Student Course Engagement

Metacognitive Strategy	*Student Course Engagement*				
	Applied Engagement	Goal-Oriented Engagement	Self-Disciplined Engagement	Interactive Engagement	**Overall**
Metacognitive Strategies	0.243* (0.005)	0.148 (0.072)	0.126* (0.038)	0.015 (0.053)	**0.325** (0.048)
Affect at School	0.128* (0.001)	0.149* (0.021)	0.128* (0.005)	0.328* (0.031)	**0.271*** (0.001)
Perceived Academic Efficacy	0.348* (0.002)	0.548 (0.1218)	0.143* (0.032)	-0.058 (0.528)	**0.293** (0.436)
Overall	**0.208*** (0.000)	**0.216*** (0.000)	**0.428*** (0.000)	**0.142*** (0.01	**0.438*** (0.000)

*Significant at 0.05 significance level.

strategy and student course engagement. The significant relationship between the two variables is an indication that the increase in the level of metacognitive strategy led to the increase in student course engagement.

There is a significant relationship between significant relationship between *Metacognitive Strategy* and *Student Course Engagement*. The result of this study is aligned with the statement that says student engagement is also an indicator of the quality of education and whether active learning is taking place in classes (Robinson & Hullinger, 2008). Scholars agree that student engagement is fundamental to success in higher education (Muray, 2018). They insist that students' active involvement and student engagement are essential in transforming higher education institutions into sustainable enterprises (Lee, Song & Hong, 2019). While a significant focus of campus sustainability requires student engagement, student engagement indicators for sustainability remain understudied. Given that student engagement is recognized as an important factor that positively affects learning and an indicator of the quality of education, an appropriate measuring instrument for student engagement is needed (Kahu, 2013).

Significance of the Influence of the Domain of Metacognitive Strategy on Student Course Engagement

Presented in Table 4 is the regression analysis showing the predictive ability of metacognitive strategy on the student course engagement. The analysis shows that when metacognitive strategy was regressed on student course engagement, it generated an F-value of 58.62 with 0.01. The value of this regression is 58.62 with 0.01. It can be stated that metacognitive strategy influenced student course engagement. Among the indicators of metacognitive

Table 4. Regression Analysis Showing the Extent of the Influence of Predictor Variables on Student Course Engagement

Student Course Engagement				
Metacognitive Strategy	**β (Standardized**	**B (Unstandardized**	**t**	**Sig.**

	Coefficients)	Coefficients)		
Constant	1.8325	0.2894	3.85	0.000
Metacognitive Strategies	-0.04981	0.05693	-0.2	0.591
Affect at School	0.79452	0.089327	0.63	0.001
Perceived Academic Efficacy	0.09745	0.08741	3.26	0.693
R	0.763			
R^2	0.975			
F	58.62			
p	0.000			

strategy only one gave significant influence on student course engagement which is *Perceived Academic Efficacy*, t=3.26, P=0.001.

Among the indicators of *Metacognitive Strategy*, only one gave significant influence on student course engagement, only one gave significant influence on *Student Course Engagement* which is *Perceived Academic Efficacy*. Academic self-efficacy is one of the important factors affecting academic performance. It describes the beliefs and attitudes of students towards their ability to achieve academic success, as well as their ability to perform academic tasks and their ability to successfully learn. Bandura's social cognitive theory argues that individuals have the ability to control their actions through self-regulation (Bandura, 2000). According to this theory, individuals can overcome the difficulties of the tasks they face with their self-efficacy and determination. Self-efficacy can increase self-regulated behavior through motivation. At this point, past mastery performance contributes to an increase in learning and positive behavior by strengthening the expectation of future success.

CONCLUSION

With considerations on the findings of the study, conclusions are drawn in this section. The level of metacognitive strategy is high, the level of student course engagement is high, there is a significant relationship between metacognitive strategy and student course engagement, and domain of metacognitive strategy best influence student course engagement is *Perceived Academic Efficacy*.

The results of this study revealed that the level of metacognitive strategy is high. The researcher recommends that the District Office of Schools Division Office of Davao Occidental where the study was conducted may conduct training that will help improve the aspects of Metacognitive Strategies.

Meanwhile, the study revealed a high level of student course engagement. The researcher recommends that the district office may provide Learning Action Cell among the teachers on the topic Interactive Engagement.

The study found a significant relationship between *Metacognitive Strategies* and *Student Course Engagement*. The researcher therefore recommends that the District Office may consider the provision of trainings or activities relative to the variables under study to help the school heads and teachers enhance on the indicators which are among the lowest in the indicators of the variables under study.

The study found that indicators of *Metacognitive Strategies* that best influences student *Course Engagement* is *Perceived Academic Efficacy*. The researcher recommends that school heads may provide sessions in Learning Action Cell among teachers for improvement.

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