

ONLINE LEARNING READINESS AND STUDENT ENGAGEMENT
AMONG STUDENTS MAJORING MATHEMATICS IN UNIVERSITY
OF MINDANAO PANABO COLLEGE

A Thesis
Presented to
The Faculty of UM Panabo College
Panabo City

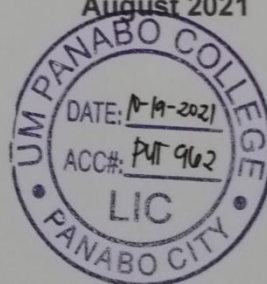
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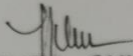
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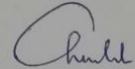


ACCEPTANCE SHEET

This thesis entitled "**Online Learning Readiness and Student Engagement among Students Majoring Mathematics in UM Panabo College**" prepared and submitted by **Reggie Mae G. Amor, Bernareme F. Babor, and Julie May P. Fuerzas** in compliance with the requirements in the Research Subject under the **Department of Teachers Education, UM Panabo College, Panabo City** is hereby accepted.



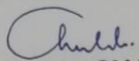
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APPROVAL AND ENDORSEMENTSHEET


This thesis entitled "**Online Learning Readiness and Student Engagement among Students Majoring Mathematics in UM Panabo College**" prepared and submitted by **Reggie Mae G. Amor, Bernareme F. Babor, and Julie May P. Fuerzas** in partial fulfillment of the requirements for the course Educational Research, has been examined and accepted, and is hereby endorsed.

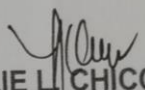

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ABSTRACT

The researchers aimed to determine the relationship between online learning readiness and student engagement among second year and third year majoring in mathematics students of UM Panabo College. The independent variable in the study was online learning readiness. The indicators of online learning readiness were expectations, self-direction, learning preferences, self-study habits, technology skills, and hardware/software. On the other hand, the dependent variable of this study was Student engagement. The indicators of student engagement were cognitive and affective. The researchers used a quantitative non-experimental correlation method, and statistical tools used were, Mean and Pearson-r. The result of the computation is P- value 0.945** is less than 0.05. Moreover, the null hypothesis rejected. In other words, there is significant relationship between online learning readiness and student engagement. It implies that online learning readiness has an impact on student engagement. In other words, online learning readiness could affect the student engagement among second year and third year majoring in mathematics students of UM Panabo College.

Keywords: *Online Learning Readiness, Student Engagement*

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-The Researchers-

DEDICATION

Every difficult task needs self-effort as well as the direction of elders, particularly those dear to my heart. This research is entirely devoted to my lovely and loving family, who have been a source of inspiration and courage when I was ready to give up, and who continue to provide moral, spiritual, emotional, and financial support. To my sister and brother, relatives, mentors, friends, and classmates who gave me guidance and encouraged me to complete my research. Finally, I dedicated this book to our Almighty God for his direction, strength, protection, knowledge, and talents, as well as for providing me with a healthy life every day.

- *Jing*

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- *Berna*

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TABLE OF CONTENTS

Title Page	i
Acceptance sheet	ii
Approval and Endorsement sheet	iii
Abstract	iv
Acknowledgement	v
Dedication	vi
Table of Content	vii
List of Tables	viii
List of Tables	ix
List of Figure	x
Chapter	Page
1 THE PROBLEM AND IT'S SETTINGS	
Background of the Study	1
Research Questions	2
Hypothesis	3
Theoretical and Conceptual Framework	3
Significance of the Study	6
Definition of Terms	7
2 REVIEW OF RELATED LITERATURE	
3 METHOD	
Research Design	20
Research Subject	21
Research Instrument	21
Data collection	23

4 PRESENTATION AND ANALYSIS OF FINDINGS

Level of Online Learning Readiness	24
Level of Student Engagement	29
Significant Relationship Between Online Learning Readiness and Student Engagement	32

**5 SUMMARY OF FINDINGS, CONCLUSION, AND
RECOMMENDATION**

Summary of Findings	35
Conclusions	35
Recommendations	36

REFERENCES

APPENDICES

- A Letter of Permission to conduct the study
- B-1 Letter of Request for Validation
- B-2 Letter of Request for Validation
- C-1 Validation Sheet
- C-2 Validation Sheet
- D Questionnaire
- E Certificate for Grammarian
- F Certificate

LIST OF TABLES

Table		Page
1	Level of Online Learning Readiness	26
2	Level of Student Engagement	30
3	Significant Relationship between the Online Learning Readiness and Student Engagement	33

LIST OF FIGURES

Figure

- 1 Conceptual Paradigm Showing the Variables of the Study.

Chapter 1

THE PROBLEM AND ITS SETTINGS

Background of the study

In contemporary world, some modifications happened and still happening when it comes to the educational system. There are aspects in education that alter to adapt to an ever-changing environment for innovation and development. Mainly, with the advent of technologies, the online modality of teaching and learning is prevalent. Further, the online modality has become one of the suggested alternative-platforms in distance learning delivery. However, students' engagement through active participation in online learning decreases since they may be afraid to use unfamiliar online programs, tools, and gadgets. Indeed, it is a great challenge for teachers to let their learners be engaged in virtual discussion and other related activities.

In the United States, the study of Wester, Walsh, Arango-Caro, and Callis-Duehl (2021) revealed that student engagement declines in STEM undergraduates. There were seventy-three undergraduate STEM students from throughout the country who answered five-point Likert-style surveys in these areas of student involvement before and after their science course went online in the spring of 2020. The overall behavioral engagement remained unchanged; students took part in lesser class discussions ($P = 0.0063$) but met with professors more frequently outside of class ($P = 0.0358$). There was no significant change in cognitive engagement, implying that, while students' sense of belonging and self-efficacy should increase over the semester, it did not work in this case. Further, there was a significant fall in emotional

engagement ($P = 0.0075$), as well as a substantial drop in favorable views toward science ($P 0.0001$).

In the Philippines, Bendejo, and Gempes (2019), in their study about the path of influence of contributory variables to student engagement, concluded that student engagement in learning became a primary problem faced by various teachers. They had 425 Grade 10 students of the English 10 subjects in 17 public secondary schools of Region XII, the Philippines, as their study respondents. It was found out that there were contributory variables such as school climate, classroom management strategies, and parental involvement. These significantly influence the engagement of the students and needed to be attained by the teachers.

In UM Panabo College, actual face-to-face interaction has been the learning and teaching modality through the years. Though the institution employed some supplemental activities with advanced technologies, the traditional way of instruction was still exceptional. The institution utilized the blended online modality of teaching and learning amidst pandemics. Almost, if not all, the teachers and students, were neophytes to this virtual mode. Hence, the researchers opted to study the online learning readiness and student engagement among students majoring in Mathematics at UM Panabo College.

Research Questions

This study aimed to determine if online learning readiness has an impact on student engagement. Specifically, it sought the answer to the following questions:

1. What is the level of online learning readiness in terms of

- 1.1 Expectations;
 - 1.2 Self-Direction;
 - 1.3 Learning Preferences;
 - 1.4 Self-Study Habits;
 - 1.5 Technology Skills; and
 - 1.6 Hardware/Software Requirements?
2. What is the level of student engagement in terms of
 - 1.1 Cognitive; and
 - 1.2 Affective?
3. Is there a significant relationship between online learning readiness and students' engagement?

Hypothesis

The null hypothesis was determined in the statement of problem number 3 and tested at 0.05 level which states that there is significant relationship between online learning readiness and student engagement.

Theoretical and Conceptual Framework

This study on online learning readiness and student engagement will be anchored on the Law of Readiness of Thorndike (1898) and the student engagement theory of Kuh et al. (2007). To be successful in learning, the law of readiness define that the learner must be ready and in good condition. Psychology and physical are requirements in preparedness. When the learner

is not in the sick condition it means that they are prepared in physic. If the learners do not have mental sickness and others, it means they are ready in psychology. In addition, mastering science and its basic competence, the learner must be prepared (Thorndike, 1898).

According to the studies cited by Francis (2017) that students have a unique 17 capacity to work with classmates due to the availability of tools and the user-friendly nature of technology (teachers and students alike). Students can use Google Drive and Google Docs to engage on a collaborative project (equivalent to databases) with one or more co-authors in different places (Eckstein, 2009). Weblogs (or blogs for short) provide users with similar options, allowing them to post comments and thoughts on a public platform on which readers can respond. This form of technology will enable students to share their ideas and views regarding their learning, much like they would in a classroom discussion (Eckstein, 2009).

As shown in figure 1, the independent variable is online learning readiness, with the following indicators: expectations, self-direction, learning preferences, self-study habits, technology skills, hardware/software. (Vicki Williams 2017). *Expectations* are defined as a strong belief that something will occur or occur in the future; *self-direction* refers to self-directed or guided, primarily as a self-employed individual; *learning preferences* refers to a learner's choice for particular educational modalities over others, such as watching a video online versus receiving in-person teaching; *self-study habits* means that without direct supervision or attendance in a class, the study of anything on one's own, like reading books, records, etc.; *technology skills* refer to your capacity to use computer-based technologies and other related

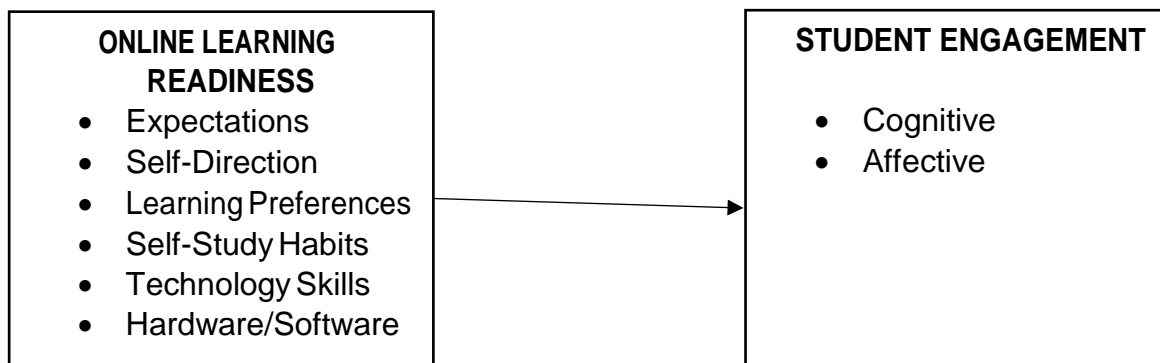
INDEPENDENT VARIABLE**DEPENDENT VARIABLE**

Figure 1: Conceptual Paradigm showing the variables of the study

technologies to interact and complete tasks; *hardware/software* defined as a collection of codes loaded on your computer's hard disk, whereas hardware is any physical object utilized in the system.

As shown in figure 1, the dependent variable is student engagement, with the following indicators: cognitive, and effective. (Viega, F.H. 2012) *Cognitive* refers to the mental process of knowing, learning, and comprehending information; *affective* refers to provide an account of feeling or attitudes toward a person, notion, or idea.

Significance of the Study

This study is vital to all that is a concern in doing education work, considering the differences of mathematical learning strategies of students. It will open avenues to enhance mathematics teaching and learning strategies.

School Administrators. This will be an eye opener that will guide them to develop a program for students' engagement in online learning modalities.

Mathematics Teachers. These serve as guidelines that may give the teachers ideas on the delivery of their lessons, how they should teach students to arrange and use their time well and students' study environment.

Students. This study will help them engage in the learning process, especially in the mode of online learning.

Future Researchers. The study's findings will serve as baseline information for their research directly or indirectly related to this research undertaking.

Definition of terms

For a better understanding of this study, several words are conceptually and operationally defined.

Online Learning Readiness. It refers to cognitive awareness and maturity that a student develops for successful learning in a web-based environment. It manifests in the attributes of recognizing the self-directed nature, formulating learning strategies, obtaining technology competencies, adjusting to digital etiquettes, and being open for help-seeking (Liu, J.C. & Kaye, E.R. 2016). This study represents expectation, self-direction, learning preferences, self-study habits, technology skills, and hardware-software requirements.

Student Engagement. It refers to when students make a psychological investment in learning, and they try hard to learn what the school offers and take pride not simply in earning the formal indicators of success (grades) (Newmann, F. 1992). This study, it represents cognitive and practical.

Chapter 2

REVIEW OF RELATED LITERATURE

This chapter will present different concepts and ideas of the various authors and institutions related to this study.

Online Learning Readiness

The study of Chung, Subramaniam, and Dass (2020) on online learning readiness among university students amidst Covid-19 revealed that the majority of the respondents did not want to imminently pursue the online mode of learning if they were to choose. They also favored pre-recorded lectures uploaded to Google Classroom and YouTube when learning online because of the struggles in connecting to the internet and understanding the subject content. Further, there was a necessity to improve internet access throughout the country and ensure that lessons are well presented. Javier (2020) cited that the online learning phenomenon has carried educational institutes to a significant upswing from traditional instruction. Related frontier of Filipinos way of learning making them non-existent as information and communication technologies pass through its practice. However, all academic levels in the Philippines struggle to level up to its most application of online learning systems and strategies to educational institutions, especially in the scenery.

Moreover, Gregorio et al. (2021) revealed that if the student attitude towards online classes is low, the level of online game engagement will also be below. It demonstrated that the human brain could easily be out of focus, and one of the reasons is technology.

The instrument for readiness scale for online learning is developed by Hung et al. (2010). The questionnaire is a recent and sufficient measurement tool that includes both dimensions of online learning. When studies on readiness in online learning are examined, it is seen that readiness affects many variables (2012). Moreover, Dray, Lowenthal, Miskiewicz, Ruiz-Primo, and Marczyński (2011), readiness for online learning should be measured in two dimensions: technology and student attributes.

More technologically prepared students have a more favorable attitude toward technological learning material and creative communication venues. Students who are uncomfortable or insecure about using technology may take longer to become influential users of online learning systems. Students must complete online learning tasks while also participating in in-class learning activities in a blended learning environment. Student variables such as computer self-efficacy and motivation for t-learning effectively meet the prerequisites for online courses. (Moftakhari, 2013; Demir, 2015; Hao, 2016).

Parkes, Stein, and Reading (2015), unprepared learners cannot participate meaningfully and are incapable of critical reasoning skills. They looked at how university students felt about their readiness for online learning through a learning management system, or LMS. The students were prepared to engage in e-learning technologies. Still, according to the results, they were unprepared for such activities as being clear and concise in responses, reading, and writing, synthesizing concepts, planning strategies, holding conversations, and cooperating with other students.

Expectation. Several researchers have investigated the internal and environmental elements that influence online course retention (Berge & Huang,

2004; Martinez, 2003; Swan, 2001). Online learning readiness is beyond the limit of students' expectations that affect both internal and external factors that affect how the students focused on their studies. Traditionally, education has an inside-out approach, with those on the inside presuming that they know what children require and what the instructor should provide. Successful service, on the other hand, has been demonstrated that industries think outside. They scrutinize what customers expect from the company. They then work to ensure that the service satisfies the customer's expectations. (Zeithaml et al., 1990, p. 51).

Montaldi, D. & Kafkas, A. (2018), the effects of the stimuli's expectation level on familiarity and recollection performance, the two types of memory that underpin recognition memory, were found to be contrary. Expected stimuli significantly boosted later familiarity performance during encoding (Experiments 1a and 1b), while unexpected inspirations selectively enhanced subsequent recollection. Similarly, everyday stimuli were more likely to be regarded familiar than random stimuli at retrieval (Experiments 2a and 2b), whereas unexpected inspirations were more likely to be recollected than expected stimuli. These findings show that there are two unique memory-enhancing processes at work: one that is sensitive to and modulates memory accuracy for the contextually distinct or unexpected, and the other that is not.

However, research into the use of cognitive and metacognitive methods has produced mixed findings in student academic accomplishment, which has been related to motivational stimuli, individual perceptions of ability, and future outcome expectation, according to Bandura's social cognitive theory (Nabizadeh, S., Hajian, S., Sheikhan, Z., & Rafiei, F., 2019).

The authors provide a unique probabilistic grammatical representation for estimating expectation-driven learning updates and two learning algorithms that use these updates. On an extensive test system with concealed metrical structure, the methods outperform existing error-driven learning models. The research then demonstrates that the learning procedures are fully universal and can be successfully applied to learning completely other types of hidden structures formed by unknown underlying representations. (Jarosz G., 2015)

Self-Direction. Nasim.S & Tahere. E (2016) stated that in self-directed learning (SDL), learners assume control and accountability for their learning. Individuals choose, manage, and evaluate their learning activities, which they can do at any time, in any location, using any method, and at any age. Self-directed learning is a process in which people diagnose their learning requirements, formulate learning goals, discover human and material resources for learning, choose and apply appropriate learning strategies, and evaluate learning outcomes on their own, with or without the help of others".

Self-coordinated students effectively participate in the learning interaction and can embrace appropriate learning systems as per the picking upsetting. An innovation-rich learning climate can give students incredible freedoms and capacities to act naturally coordinated in their learning (Fahnoe and Mishra, 2013). Self-coordinated learning (SDL) alludes to the mental cycles of students that purposively immediate themselves to acquire information and see how to take care of issues (Long, 1994). Self-coordinated students typically more effectively take part in learning errands, such as perusing web-based learning material, finishing homeroom jobs, arranging and assessing learning achievements. Undeniable level self-administration is significant in SDL, and

students have to embrace various procedures in managing different issues (Lee and Teo, 2010).

Learning Preferences. Nabizadeh, S., Hajian, S., Sheikhan, Z., & Rafiei, F. (2019) predict academic achievement based on learning strategies and outcome expectations among medical students. Learning is a highly customized process that involves complicated interactions between personal features, prior knowledge, values, and various other factors. Cognitive preferences, which are broadly manifested as personality, drive study behaviors. Learning styles are specific learning preferences that serve as consistent indicators of how learners perceive and interact with learning environments. Though individuals may use various learning strategies at times, learning style can be viewed as the preferred method of acquiring information.

Zimmerman, B. (2011) revealed from their study on Handbook of self-regulation of learning and performance. Routledge that learners, rather than relying on lecturers, parents, or other educational authorities, control their efforts, encouraging students to establish their study habits and enhance their presentation. Mental review, semantic expansion, and information organization are some of the cognitive processes used by students.

Geng, S., Law, K.M.Y. & Niu, B. (2019) stated on investigating self-directed learning and technology readiness in blending learning environment that learning inspiration is the process whereby objective coordinated action is induced and maintained. It is reflected in close-to-home ventures and intellectual, passionate, and social commitment in learning exercises (Fredricks, Blumenfeld, and Paris, 2004). Exploration on students' learning uncovers that self-adequacy and objective settings are exceptionally identified

with learning inspiration (Che-Ha, Mavondo, and Mohd-Said, 2014; Law and Breznik, 2017; Law, Lee, and Yu, 2010; Ngan and Law, 2015).

Self-Study Habits. Digal, Neil & Walag, Angelo Mark. (2019) assert from their study self-efficacy, study habits, and teaching strategies and its influence on student science performance that a study habit is a pattern of behavior that students adopt to study and serves as a vehicle for learning (as cited Crede & Kuncel, 2008). According to the degree to which the student engages in a regular basis of studying, study habits include proper studying routines such as frequency of studying sessions, review of lessons, and many others that occur in an environment conducive to learning (Mendezabal, 2013). Furthermore, a consistent pattern of conduct can lead to learning, which leads to achieving a learner's goal (Owusu-Acheaw & Larson, 2014).

Shazia, S. (2014) asserts that adapted teaching methods and the material students learn to influence their study habits. As a result, teachers must make an effort to instill good study habits in their students. Such habits are the best tools they have for living and leading their lives with confidence. If habits are formed at an early age, they will undoubtedly treasure the pleasures of their fruits for the rest of their life because an adult has developed a habit of doing specific things. As a result, changing their habits and behaviors is challenging for them. As a result, developing study habits at a young age is preferable. It is the right time and age to start developing study habits.

Technology skills. The role of technology in the field of education is fourfold, according to Raja and Nagasubramani (2018) in their studies on the Impact of Modern Technology in Education: it is included as a part of the curriculum, as an instructional delivery system, as a means of aiding

instructions, and as a tool to enhance the entire learning process. Education has evolved from being passive and reactive to becoming participatory and aggressive due to technological advancements. In both corporate and academic environments, education is critical. Education or training is employed in the former to assist workers in doing things differently than they did previously. In the latter, education is aimed at instilling curiosity in pupils' minds. In any situation, the use of technology can assist pupils in improved understanding and retention of topics.

Koehler and Mishra's (2009), as cited by Watulak, S. L., & Kinzer, C. K. (2013) in their study entitled *beyond technical skills*, posited that along with its holistic focus on technology alongside pedagogy and content knowledge, the technological, pedagogical, and content knowledge (TPACK) framework is increasingly being employed to overcome flaws in this approach. While critical and reflective elements are mostly missing from contemporary skills-based conceptions of technology instruction in teacher education, TPACK does not directly address either of these issues. Pre-service educators and others who expect future teachers to model successful engagement in a digital society and teach their students to be technologically literate in the broadest sense may be concerned.

Stambler (2013), these literacy abilities – Information Literacy, Media Literacy, and Technology Literacy – assist students in gaining knowledge through reading and the use of media and technology. These abilities also help students in developing media and technology as well as creating knowledge through writing.

Omonboevich, P. N. (2020) revealed that based on improving students' digital technology abilities, developing a model for better module teaching, and developing digital technologies. The industry's representatives must grow into mature, competitive individuals. This study will help to carry out the resolution's tasks on enhancing the management and control system in the sphere of research, usage, and protection.

Students must possess specific technological abilities and be prepared to learn online for the benefit of online learning. Since students learn in different ways, understanding their learning processes is a crucial variable in gathering information on the quality of the learning environment. Techniques, devices, or examples help aid a student's understanding of learning content and strategies (Hong, Y. & Gardner, L. (2018).

Hardware/Software Requirements. Hoo, S. C., & Ibrahim, H. (2019) assert on Biometric-based attendance tracking system for education sectors: A literature survey on hardware requirements that the technical specifications of technology are referred to as hardware, while the information side of technology is referred to as software. This involves using a PC or laptop with an internet connection and a web browser such as Internet Explorer or Firefox as the software. When consumers see the benefits of e-learning, they accept the mode and believe it to be beneficial in the second phase.

Both software and hardware components are required to set up biometric-based attendance systems. An overview of the different types of hardware that are employed. The microcontroller platform, a biometric sensor, communication channel, database storage, and other components are then

highlighted to aid future researchers in the hardware design of biometric-based attendance systems(Mosa,2016).

Teachers should educate pupils for the knowledge society by teaching them how to process information using ICT. The availability of technology resources, skilled and confident teachers, and other internal and external elements that directly or indirectly affect teachers' wellbeing and morale are all essential considerations in using ICT in the classroom. In this regard, teachers' ideas of technology potential, opportunities to use, and training to experiment are all aided by technical instruments. (Bowes, J. 2011). Similarly, ICT has the potential to revolutionize the way teachers educate, particularly in student-centered models that promote collaboration and high-level skills. (Haddad W., 2011).

Student Engagement

Trowler V. (2010) revealed in their study on student engagement literature review: The higher education academy that students with high levels of engagement were motivated in their university studies. They perceive their learning environment as responsive, encouraging, and challenging, and they view teaching professionals as accessible. Coates (2007), as cited by Trowler (2010), added that an autonomous engagement style is characterized by a more intellectually and professionally focused approach, a less socially oriented approach to learning, students who indicate an independent learning style. Participants in the study consider themselves as members of a supportive learning community. They are noticed as personable, receptive to student needs, and encouraging and motivating. They were establishing the legitimacy

of student reflection and feedback. On the other hand, these students are less likely to collaborate with other students in or outside of class or participate in enriching events and activities at school.

Axelsson R. D. & Flick A. (2010) stated in their study on Defining student engagement. *Change: The magazine of higher learning* that the term "student engagement" has evolved to refer to how involved or interested students appear to be in their knowledge, as well as their connections to their classrooms, institutions, and peers. Student engagement at a college or university is increasingly considered a good sign of institutional success than traditional features like the number of books in the college library or Nobel laureates on the faculty. Based on the current NSSE's definition of engagement, it is mostly a matter of student conduct, which can be seen. The NSSE enables learners to estimate their degrees of involvement in educationally effective practices throughout the previous year to determine how much time they spend doing so.

Kahn, P. E. (2014), theorizing student engagement in higher education; while this approach may aid in selecting instructional techniques, it leaves the underlying concept of student engagement underdeveloped. Kuh & Schneider (2008), as cited by Kahn, P. E. (2014), identified academic difficulty, active and collaborative learning, student-faculty contact, and a supportive campus climate led to student engagement, but without attempting to theorize how these elements interact to produce various types of gains. Beer, Clark, and Jones (2010), while some studies took participation into account when assessing online learning, this assessment does not represent the students'

online learning process. It does not provide information about the quality of online learning.

Cognitive. When students were allowed to update their initial problem-solving reports, their problem-solving scores improved significantly in both scenarios. Furthermore, the expert modeling technique was found to positively impact students' reasoning and problem-solving processes in the study. Designing web-based scaffolding to support students' problem-solving strategies has ramifications, which are highlighted. (Ge, X. et al. 2010)

This article describes the Genetics Cognitive Tutor, a new intelligent learning environment that aids in solving genetics problems. The tutor is built around a cognitive model of the knowledge required to solve challenging, multi-step issues. Genetics is a unifying issue in biology that presents a significant challenge for students at various post-secondary schools due to the complexity of the problems. Thanks to this embedded cognitive model, the tutor can provide step-by-step support and retain a model of the student's problem-solving knowledge. A. Corbett, L. Kauffman, B. Maclaren, A. Wagner, and E. Jones (2010)

Affective. According to Kahu, E. R. (2013), the psychological method has an advantage in the affective dimension of engagement. There is an emotional intensity associated with the experience of learning that is often underestimated. Some people confuse engagement with attachment, focusing on whether or not children feel like they belong. Others think about more immediate emotions like pleasure and enthusiasm in work. The affective component emphasizes the difference between instrumental and intrinsic drive.

Students with motivation had to participate cognitively and behaviorally. In the latter case, the learner is motivated to learn because they enjoy it.

Effective classroom assessment should go beyond affect and cognition states (du Boulay, Benedict, et al. 2010); it should be a continuous feedback loop between teaching and learning that offers early feedback before students are graded, allowing for necessary adjustments. Long and Siemens (Siemens, George, and Phil Long 2011). Make a convincing argument that big data and analytics will have the most significant impact on how people learn and educate in the future. While they can still rely on their intuition and experience, research (Duval, Erik & Erik Brynjolfsson, Lorin M. Hitt, and Heekyung Hellen Kim 2011) reveals that tutoring judgments are based on data and evidence will significantly enhance organizational production and product.

In its most basic form, Gano-Phillips, S. (2009), affective learning refers to the emotional aspect of learning as expressed in learners' beliefs, values, interests, and behaviors. When it comes to affective learning, it is all about how students feel when they're learning and how learning experiences are internalized so that they might influence a learner's future attitudes, views, and actions.

As affective learning also relates to psychological and internal processes that are difficult to see, examine, and evaluate, the link between affective learning and social learning may have emerged. Due to these challenges, it is frequently assessed using self-reported questionnaires that evaluate student-like rather than learning. Teachers must focus on what pupils do to achieve this. However, there is less agreement on what teachers should monitor pupils doing in the affective domains (Witt, 2015).

Chapter 3

METHOD

This chapter presented the discussions of the research method: research design, research subject, research instruments, data collection, population and sampling, statistical tool.

Research Design

The researchers utilized a quantitative non-experimental correlation research design to investigate the relationship between online learning readiness and student engagement. As an outcome, data is used to measure reality objectively. Quantitative research gives significance to the information it collects by demonstrating objectivity. Quantitative analysis uses inquiry tactics like experiments and surveys to collect data on preset instruments that provide statistical information. Quantitative research findings can be predictive, explanatory, and confirming (Cresswell, 2003)

This is non-experimental correlation research because it provides an accurate depiction or description of the qualities of a particular individual circumstance or group. Moreover, the participants' situations, conditions, or experiences are not manipulated in any way. The correlation approach is used to look at relationships between variables. Researchers use it to define and assess the degree of correlation between two or more variables or sets of scores (Cresswell, J.A. 2008). It was related to a checklist questionnaire designed to focus on the responses that lead to the desired outcomes.

Research Subject

The respondents of this study were the second-year and third-year BSED- Mathematics students in UM Panabo College for the S.Y. 2020- 2021. The intended respondents had a total population of 27. However, this research had a sample of 11 respondents, which was composed of 7 males and four females instead. Some of the respondents were not able to answer it brought by matters on internet connection and interest.

Research Instrument

The instrument of the study was a standardized questionnaire and duly modified and validated by panel members. This questionnaire consists of 24 items for online learning readiness by Vicki Williams (2017), four items for the indicator expectations, self-direction, learning preferences, self-study habits, technology skills, and hardware/software requirements. The dependent variable, student engagement by Viega, F.H. (2012), has 18 items: 9 items for cognitive and affective indicators. The questionnaire will serve as the steppingstone of the study—the researchers schedule dates for collecting the data from the respondents.

This scale below was used in determining the level of online learning readiness among students majoring in mathematics.

Range of Means	Description	Interpretation
4.21 – 5.00	Very High	The online learning readiness of the students is highly evident.

3.41 – 4.20	High	The online learning readiness of the students is evident.
2.61 – 3.40	Moderate	The online learning readiness of the students is moderately evident.
1.81 – 2.60	Low	The online learning readiness of the students is less evident.
1.00 – 1.80	Very Low	The online learning readiness of the students is not evident.

This scale below was used in determining the level of student engagement among students majoring in mathematics.

Range of Means	Description	Interpretation
4.21 – 5.00	Very High	The student engagement is highly evident.
3.41 – 4.20	High	The student engagement is evident.
2.61 – 3.40	Moderate	The student engagement is moderately evident.
1.81 – 2.60	Low	The student engagement is less evident.
1.00 – 1.80	Very Low	The student engagement is not evident.

Data Collection

The steps taken to collect data for this study were as follows:

Permission to conduct. The researchers sent a letter to the school's dean requesting permission to conduct the survey and distribute the survey questionnaire to second and third-year majoring in mathematics students.

Administration of the questionnaire. Due to the pandemic, the researchers conducted the study using the google form format, one of the safest ways to do research.

Retrieval of the questionnaire. All of the survey questionnaires were collected through the generated result from the google form.

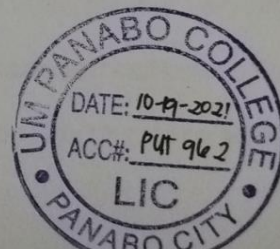
Analysis of the data. The researcher checked, tabulated, and consolidated the results for analysis.

Statistical Treatment of Data

The gathered data were analyzed and interpreted using appropriate statistical treatments as follows:

Mean. This was used to measure the level of online learning readiness and student engagement among the second-year and third-year students majoring in mathematics at UM Panabo College.

Pearson-r. It was used to determine the relationship between online learning readiness and student engagement among BSED- Math in UM Panabo College.



Chapter 4

PRESENTATION AND ANALYSIS OF FINDINGS

This chapter presents the data and analysis of the responses of respondents. It was sequenced based on the variable and the concerns of this study. The independent variable is online learning readiness; the dependent variable is student engagement and the relationship between online learning readiness and student engagement.

Level of Online Learning Readiness

The level of online learning readiness among second-year and third-year BSED- Mathematics students in terms of online learning readiness and student engagement is shown in table 1. The result was based on a standardized questionnaire with twenty-four questions for online learning readiness and eighteen questions for student engagement. The grand mean of online learning readiness is 4.38 with a very high descriptive equivalent, which means that students are highly evident in online learning readiness.

Table 1 further indicates the result of the twenty-four questions in online learning readiness. Out of four questions in the expectation, data reveals that both item no. 1 *student understand that learning is their responsibility*. No. 2 *students know that an online class is not more accessible than a traditional class* with a mean score of 4.50 with a descriptive equivalent of *very high*, which means students are highly evident in online learning readiness. Item no. 3 *students understand that they cannot complete an online course with a*

smartphone containing a second highest mean score of 4.30 interpreted as *very high*, which means students are high evident in online learning readiness. Item number 4, *students willing to send e-mails to or have online discussions with people they never meet in person* got the lowest mean score of 4.20, with the descriptive equivalent of high, which means that the level of students is evident in online learning readiness.

The second indicator is self-direction, with an overall mean of 4.30 with a descriptive equivalent of very high. It means that students are highly evident in online learning readiness. Item no. 2 *students self-motivated* the highest mean score of 4.5 described as very high. This implies that students are highly evident in online learning readiness. Both item no. 3 *students work on projects through completion*, and no. 4 *students keep themselves on track and meet deadlines* got the second highest mean score of 4.30 with the descriptive equivalent of very high which means that students are highly evident in online learning readiness. On the other hand, item no. 1, *students good at setting goals and deadlines for themselves*, revealed the lowest mean score of 4.20 interpreted as high, which means that students are evident in online learning readiness.

The third indicator is learning preference, with an overall mean of 4.38 and a very high descriptive equivalent. This means that students are highly evident in online learning readiness. Both item no. 2 *students can learn from auditory content, such as lectures, recordings, or podcasts*, and no. 4 *students can learn on their own but can benefit from working in a group as well* mean score of 4.5 described as very high. This implies that students are highly evident in online learning readiness. Item no. 3 *students comfortable communicating through writing* got the second highest mean score of 4.30 with the descriptive

Table 1. Level of Online learning readiness

Expectation	Mean	Descriptive Equivalent
1. the students understand that learning is their responsibility	4.5	Very High
2. students understand that having an online class is not more accessible than a traditional class	4.5	Very High
3. students understand that they cannot complete an online course with a smartphone	4.3	Very High
4. students willing to send e-mails to or have online discussions with people that they never meet in person	4.2	High
Over-all Mean	4.38	Very High
Self-Direction		
1. students good at setting goals and deadlines for themselves	4.1	High
2. students self-motivated	4.5	Very High
3. students work on projects through completion	4.3	Very High
4. students keep themselves on track and meet deadlines	4.3	Very High
Over-all Mean	4.3	Very High
Learning Preference		
1. students enjoy reading and can retain information studying in this manner	4.2	High
2. students can learn from auditory content, such as lectures, recordings, or podcasts	4.5	Very High
3. students comfortable communicating through writing.	4.3	Very High
4. students can learn on their own but can benefit from working in a group as well	4.5	Very High
Over-all Mean	4.38	Very High
Self-Study Habit		
1. Students have dedicated study space where they can read and work on assignments without distraction	4.3	Very High
2. students can spend 8.5+ hours a week for a 3-credit course	4.3	Very High
3. students can organize my coursework in a computer folder for easy reference	4.5	Very High
4. students can dedicate a specific time of day or night to work on their studies	4.6	Very High
Over-all Mean	4.43	Very High

Technology Skills

1. student reasonably good at using a computer and sending email	4.5	Very High
2. students comfortable using the web browser and navigating the internet	4.5	Very High
3. students can download files and add attachments	4.5	Very High
4. students can use word processing software	4.5	Very High
Over-all Mean	4.5	Very High

Hardware/Software Requirements

1. Students have a computer that runs reliably on Windows or Mac OS	4.6	Very High
2. students have internet access with a fairly fast, reliable connection	4.6	Very High
3. students have a printer	3.8	High
4. students have headphones or speakers and a microphone if a class has video conference	4.2	High
Over-all Mean	4.3	Very High
Grand Mean	4.38	Very High

Legend:**Scale**

4.21-5.00
 3.41-4.20
 2.61-3.40
 1.81-2.60
 1.00-1.80

Descriptive Equivalent

Very High
 High
 Moderate
 Low
 Very Low

equivalent of very high which means that students are highly evident in online learning readiness. On the other hand, item no. 1 *students enjoy reading and can retain information studying in this manner* revealed the lowest mean score of 4.20 described as evident.

The fourth indicator is self-study habit, with an overall mean of 4.43 and a very high descriptive equivalent. This means that students are highly evident in online learning readiness. Item no. 4 *students can dedicate a specific time of day or night to work on their studies*; a mean score of 4.6 is interpreted as very high. This implies that students are highly evident in online learning readiness. Item no. 3 *students can organize their coursework in a computer folder for easy reference* got the second highest mean score of 4.50 with the descriptive equivalent of very high which means that students are highly evident in online learning readiness. On the other hand, both item no. 1 *students have a dedicated study space where they can read and work on assignments without distraction*, and no. 2 *students can spend 8.5+ hours a week for a 3-credit course* revealed the lowest mean score of 4.30. Both are described as very high, which means that students are highly evident in online learning readiness.

The fifth indicator is technology skills, with an overall mean of 4.50 and a very high descriptive equivalent. This means that students are highly evident in online learning readiness. All the items from no. 1 *students fairly good at using a computer and sending email*, no. 2 *students comfortable using web browsers and navigating the Internet*, no.3 *students can organize their coursework in a computer folder for easy reference*. No. 4 *students can use word processing software* has a mean score of 4.5 interpreted as very high. This implies that students are highly evident in online learning readiness.

The sixth indicator is hardware/software requirements, with an overall mean of 4.30 with a descriptive equivalent of very high. This means that students are highly evident in online learning readiness. Both items no. 1 *student have a computer that runs reliably on Windows or Mac OS* and no. 2 *students have Internet access with a fairly fast, reliable connection* mean score of 4.6 described as very high. This implies that students are highly evident in online learning readiness. Item no. 4 *students have headphones or speakers and a microphone if a class has a videoconference* got the second highest mean score of 4.20 with the descriptive equivalent of high which means that students are evident in online learning readiness. On the other hand, item no. 3 *students have a printer* revealed the lowest mean score of 3.80 described as high, which means that students are evident in online learning readiness.

Level of Student Engagement

The level of student engagement among second-year and third-year BSED-Mathematics students is shown in table 2 with the cognitive and affective indicators. The grand mean of student engagement is 4.29 with a very high descriptive equivalent, which means that the student engagement among second-year and third-year BSED-Mathematics students is highly evident. The first indicator is cognitive got a total mean of 4.40. They are described as very high, which indicates that student engagement is highly evident. Item no. 2 *students try to understand how the things they learned are related to each other* described as very high, indicating that student engagement is highly evident. Item no.3 *when students learning at school, they try to connect them to other things they learn in other classes*. No. 5 *when students study, they try to*

Table 2. Level of Student Engagement

Cognitive	Mean	Descriptive Equivalent
1. students relate the things I know with the things they trying to learn at school	4.4	Very High
2. student understand how the things they learned are related to each other.	4.6	Very High
3. When students learn things at school, they relate them to other things learnt in other classes.	4.5	Very High
4. students try to think on themes and decide what is expected to those students to learn from them	4.2	High
5. when students study, they try to understand best the class material relating it to the things they already know	4.5	Very High
6. when students study, they try to combine the class materials in different and new ways	4.2	High
7. students like what their learning in school	4.4	Very High
8. students like to learn new things in class	4.4	Very High
9. students interested in learning things	4.4	Very High
Over-all Mean	4.4	Very High

Affective

1 student proud to belong school they have	4.60	Very High
2 students happy to be in the school they have	4.40	Very High
3 students like their school	4.40	Very High
4 their school is a place where students feel integrated	4.50	Very High
5 their school is a place where students feel involved or included	3.80	High
6 their school is a placed where students feel comfortable	3.30	Moderate
7 their school is a place where it feels like other students like them	4.10	High
8 their school is a place where students make friends easily	4.10	High
9 their school is a place where students feel happy	4.40	Very High
Over-all Mean	4.18	High
Grand Mean	4.29	High

Legend:

Scale	Descriptive Equivalent
4.21-5.00	Very High
3.41-4.20	High
2.61-3.40	Moderate
1.81-2.60	Low
1.00-1.80	Very Low

understand best the class material relating it to the things they already know got the second highest mean score of 4.50 with the descriptive equivalent of very high which means that student engagement is highly evident. On the other hand, the lowest score is both items no. 4 *students try to think on themes and decide what it is expected to that students to learn from them* and no. 6 the descriptive equivalent of very high which means that student engagement is highly evident. On the other hand, the lowest score is both items no. 4 *students try to think on themes and decide what it is expected to them to learn from them*. No. 6 *When students study, they try to combine the class materials in different and new ways* with a mean of 4.20 as high, which indicates that student engagement is evident.

Significant Relationship Between Online Learning Readiness and Student Engagement

Table 3 shows the significant relationship between online learning readiness and student engagement. The computed r-value is 0.945**, and the p-value was 0.000, which is less than 0.05; thus, the null hypothesis is rejected. This implies a significant relationship between online learning readiness and student engagement among second-year and third-year BSED-Mathematics students.

It states that online learning readiness affects student engagement. Therefore, we conclude that the correlation between online learning readiness and student engagement has a significant relationship.

Table 3**Significant Relationship Between Online Learning Readiness and Student Engagement**

Correlation Coefficient

	Student Engagement
Online Learning Readiness	0.945**

P-value (0.000) < 0.05 SIGNIFICANT

The result of the study confirmed the anchored theory of Thorndike (1898) from the Law of Readiness and the student engagement theory of Kuh et al. (2007) that online learning readiness and student engagement have a relationship to be successful in learning the law of readiness define that the learner must be ready and in good condition. Psychology and physical are a requirement in preparedness. When the learner is not in the sick condition, it means that they are ready in physic. If the learners do not have mental sickness and others, it means they are prepared in psychology. In addition, mastering science and its basic competence, the learner must be ready.

According to the studies cited by Francis (2017) that students have a unique 17 capacity to work with classmates due to the availability of tools and the user-friendly nature of technology (teachers and students alike). Students can use Google Drive and Google Docs to engage on a collaborative project (equivalent to databases) with one or more co-authors in different places (Eckstein, 2009). Weblogs (or blogs for short) provide users with similar options, allowing them to post comments and thoughts on a public platform on which readers can respond. This form of technology will enable students to share their ideas and views regarding their learning, much like they would in a classroom discussion (Eckstein, 2009).

Chapter 5

SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATION

Presented in this chapter is the summary of findings, conclusions, and recommendations of the study.

Summary of findings

Based on the result formulated from the data collected, the researcher found out the following:

1. The online learning readiness among 2nd year and 3rd-year BSED mathematics students of UM Panabo College has an overall mean of 4.38, interpreted as highly evident.

2. The student engagement among 2nd year and 3rd-year BSED mathematics students of UM Panabo College has an overall mean of 4.29, described as highly evident.

3. The computed r-value of online learning readiness and student engagement is 0.945 and a p-value of 0.000 less than 0.05. It implies that the null hypothesis is rejected.

Conclusions

The following conclusions are drawn based on the findings of the study:

1. The level of online learning readiness among 2nd year and 3rd-year BSED mathematics of UM Panabo College is very high

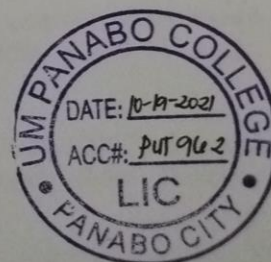
2. The level of student engagement among 2nd year and 3rd-year BSED mathematics of UM Panabo College is very high

3, There is a significant relationship between online learning readiness and student engagement among 2nd year and 3rd-year BSED mathematics students.

Recommendations

Based on the findings and conclusions of the study, the researchers drew the following recommendations:

1. The students must set higher direction, particularly on setting goals, school obligations, and enhancing their skills in digital technology. To have a great understanding of learning, that is their responsibility. They are having self-motivation and enthusiasm for this generation's educational opportunities.
2. The students may demonstrate very high engagement, particularly affective that students feel involved or included in their educational environments, allowing them to participate in class discussions. Moreover, students must build their self-esteem and confidence to feel at ease when studying online, as if they were in school.
3. Future researchers may conduct the related study with another variable that could influence student engagement.



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Appendix A

Letter of permission to Conduct the Study

March 18, 2021

DR. CELSO L. TAGADIAD
Director
UM Panabo College


Dear Sir:

Greetings!


We, **Reggie Mae G. Amor, Bernareme F. Babor and Julie May P. Fuerzas** are currently conducting a study entitled "**Online Learning Readiness and Student Engagement among Students Majoring in Mathematics in UM Panabo College:** as one of the requirements for the subject MTH 314.

In line with this, we would like to request for your approval to conduct the study to the selected college students in UM Panabo College. The respondents of this study are the 2nd and 3rd year BSED-Math Students. The data that will be gathered from the respondents shall be dealt with high confidentiality in relation to data privacy act.

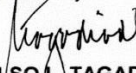
Respectfully yours,


BERNAREME F. BABOR
Representative
Researcher

Noted by:


LIEZEL V. CHAN, Ph. D
Adviser

Approved by:


CELSO L. TAGADIAD, Ph.D.
Director
UM Panabo College

Appendix B-1 Validation Letter

February 26, 2021

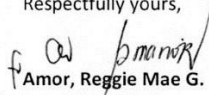
DR. AMELIE L. CHICO
Research Coordinator
UM Panabo College

Dear Ma'am:

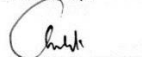
We, **Reggie Mae G. Amor, Bernareme F. Babor and Julie May P. Fuerzas** are pleased to inform you that you are chosen as one of our validators on the questionnaire duly modified and prepared by the undersigned. This will be used in the conduct of our study entitled: **Online Learning Readiness and Student Engagement among Students Majoring in Mathematics in UM Panabo College.**

To this, we attached the following: Validation Sheet and the questionnaire for your reference. The expertise and experience you will share to us will give great advantage to our endeavor.

Respectfully yours,


Amor, Reggie Mae G.
Representative
Researcher

Noted by:


LIEZEL V. CHAN
Adviser

Appendix B-2

Validation Letter

February 26, 2021

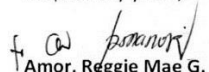
DR. MARIESEL A. LAUREL
BSED-Program Head
UM Panabo College

Dear Ma'am:

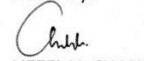
We, **Reggie Mae G. Amor, Bernaremie F. Babor and Julie May P. Fuerzas** are pleased to inform you that you are chosen as one of our validators on the questionnaire duly modified and prepared by the undersigned. This will be used in the conduct of our study entitled: **Online Learning Readiness and Student Engagement among Students Majoring in Mathematics in UM Panabo College.**

To this, we attached the following: Validation Sheet and the questionnaire for your reference. The expertise and experience you will share to us will give great advantage to our endeavor.

Respectfully yours,


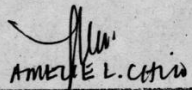

Amor, Reggie Mae G.
Representative
Researcher

Noted by:


LIEZEL V. CHAN
Adviser

Appendix C-1

Questionnaire Validation Sheet

 The University of Mindanao	RESEARCH AND PUBLICATION CENTER [] Main [] Branch _____ QUESTIONNAIRE VALIDATION SHEET																																																
Title of Research: <u>"Online Learning Readiness and Student Engagement among Students Majoring in Mathematics in UMM Panabo College."</u> Proponents : <u>Amor, Reggie G., Bator, Bernadette F., Fuentes, Julie May P.</u>																																																	
To the Evaluator: Please check the appropriate box for your ratings. Point Equivalent: 5 – Excellent 2 – Fair 4 – Very Good 1 – Poor 3 – Good																																																	
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;"></th> <th style="width: 15%;">5</th> <th style="width: 15%;">4</th> <th style="width: 15%;">3</th> <th style="width: 15%;">2</th> <th style="width: 15%;">1</th> </tr> </thead> <tbody> <tr> <td> 1. CLARITY OF DIRECTION AND ITEMS The vocabulary level, language structure and conceptual level of the questions suit the level of respondents. The test directions and items are written in clear and understandable manner. </td> <td style="text-align: center;">/</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> 2. PRESENTATION/ORGANIZATION OF ITEMS The items are presented and organized in logical manner. </td> <td style="text-align: center;">/</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> 3. SUITABILITY OF ITEMS The items appropriately represent the substance of the research. The questions are designed to determine the conditions, knowledge, perceptions and attitude that are supposed to be measured. </td> <td></td> <td style="text-align: center;">/</td> <td></td> <td></td> <td></td> </tr> <tr> <td> 4. ADEQUATENESS OF ITEMS PER CATEGORY The items represent the coverage of the research adequately. The number of questions per area category is representative enough of all the questions needed for the research. </td> <td style="text-align: center;">/</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> 5. ATTAINMENT OF PURPOSE The instrument as a whole fulfills the objectives for which it was constructed. </td> <td style="text-align: center;">/</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> 6. OBJECTIVITY Each item questions require only one specific answer or measures only one behavior and no aspect of the questionnaire suggest bias on the part of the researcher. </td> <td></td> <td style="text-align: center;">/</td> <td></td> <td></td> <td></td> </tr> <tr> <td> 7. SCALE AND EVALUATION RATINGS SYSTEM The scale adapted is appropriate for the items. </td> <td></td> <td style="text-align: center;">/</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		5	4	3	2	1	1. CLARITY OF DIRECTION AND ITEMS The vocabulary level, language structure and conceptual level of the questions suit the level of respondents. The test directions and items are written in clear and understandable manner.	/					2. PRESENTATION/ORGANIZATION OF ITEMS The items are presented and organized in logical manner.	/					3. SUITABILITY OF ITEMS The items appropriately represent the substance of the research. The questions are designed to determine the conditions, knowledge, perceptions and attitude that are supposed to be measured.		/				4. ADEQUATENESS OF ITEMS PER CATEGORY The items represent the coverage of the research adequately. The number of questions per area category is representative enough of all the questions needed for the research.	/					5. ATTAINMENT OF PURPOSE The instrument as a whole fulfills the objectives for which it was constructed.	/					6. OBJECTIVITY Each item questions require only one specific answer or measures only one behavior and no aspect of the questionnaire suggest bias on the part of the researcher.		/				7. SCALE AND EVALUATION RATINGS SYSTEM The scale adapted is appropriate for the items.		/			
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 _____ Signature Above Printed Name																																																	

Appendix D

Questionnaire on Online Learning Readiness and Student Engagement

A Survey Questionnaire

Survey Questionnaire on Online Learning Readiness and Student Engagement

Feliciano H. Veiga (2012)

Part 1. Profile of the respondents

Name: _____ Gender: _____

Year and program: _____

Instruction: Please give answers on the space provided and tick check (/) in the box that matches your response to the questions on mathematics anxiety.

To what extent do you agree with the following regarding student engagement.

(5) Strongly agree (4) Agree (3) Moderately Agree
(2) Disagree (1) Strongly Disagree

Part 2. Online Learning Readiness

	5	4	3	2	1
EXPECTATIONS					
1. I understand that learning is my responsibility.					
2. I understand that an online class is not easier than a traditional class.					
3. I understand that I cannot complete an online course with a smartphone.					
4. I am willing to send e-mails to or have online discussions with people I may never meet in person.					

SELF-DIRECTION					
1. I am good at setting goals and deadlines for myself.					
2. I am self-motivated.					
3. I can work on projects through completion.					
4. I can keep myself on track and meet deadlines.					
LEARNING PREFERENCES					
1. I enjoy reading and can retain information studying in this manner.					
2. I can learn from auditory content, such as lectures, recordings, or podcasts.					
3. I am comfortable communicating through writing.					
4. I can learn on my own but can benefit from working in a group as well.					
SELF-STUDY HABITS					
1. I have a dedicated study space where I can read and work on assignments without distraction.					
2. I can spend 8.5+ hours a week for a 3 credit course.					
3. I can organize my coursework in a computer folder for easy reference.					
4. I can dedicate a specific time of day or night to work on my studies.					
TECHNOLOGY SKILLS					
1. I am fairly good at using a computer and sending email.					
2. I am comfortable using web browsers and navigating the Internet.					
3. I can download files and add attachments.					

6. When I study I try to combine the class materials in different and new ways.					
7. I like what I'm learning in school.					
8. I like to learn new things in class.					
9. I really interested in learning things.					
AFFECTIVE					
1. I'm proud to belong to the school I am.					
2. I'm happy to be in the school / am.					
3. I like my school.					
4. My school is a place where I feel integrated.					
5. My school is a place where I feel marginalized or excluded.					
6. My school is a place where I feel displaced and uncomfortable.					
7. My school is a place where it feels like other students like me.					
8. My school is a place where I make friends easily.					
9. My school is a place where I feel happy.					

Appendix E

Grammarly Certification

CHAPTER-4

CHAPTER 4
PRESENTATION AND ANALYSIS OF FINDINGS

This chapter presents the data and analysis of the responses of respondents. It was sequenced based on the variable and the concerns of this study. The independent variable is online learning readiness; the dependent variable is student engagement and the relationship between online learning readiness and student engagement.

Level of Online Learning Readiness

The level of online learning readiness among second-year and third-year BSED- Mathematics students in terms of online learning readiness and student engagement is shown in table 1. The result

Great job!

Correctness: Looking good
Clarity: Very clear
Engagement: Very engaging
Delivery: Just right

Overall score: 99

Go back to All Suggestions

CHAPTER-3

CHAPTER 3
METHODS

This chapter presented the discussions of the research method: research design, research subject, research instruments, data collection, population and sampling, statistical tool.

Research Design

The researchers utilized a quantitative non-experimental correlation research design to investigate the relationship between online learning readiness and student engagement. As an outcome, data is used to measure reality objectively. Quantitative research gives significance to the information it collects by demonstrating objectivity. Quantitative analysis uses inquiry tactics like experiments and surveys to collect data as research instruments that

Give yourself a pat on the back!

Go back to All Suggestions

Correctness: Looking good
Clarity: Very clear
Engagement: Very engaging
Delivery: Just right

Overall score: 99

Go back to All Suggestions

CHAPTER-1

CHAPTER 1 THE PROBLEM AND ITS SETTINGS

Background of the study

In contemporary world, some modifications happened and still happening when it comes to the educational system. There are aspects in education that alter to adapt to an ever-changing environment for innovation and development. Mainly, with the advent of technologies, the online modality of teaching and learning is prevalent. Further, the online modality has become one of the suggested alternative-platforms in distance learning delivery. However, students' engagement through active participation in online learning decreases since they may be afraid to use unfamiliar online learning tools and devices. Indeed, it is most unfortunate that...

1,248 words

You made that look easy!

Great job! See performance

Goals Adjust goals

All suggestions

Correctness Looking good

Clarity Very clear

Engagement Very engaging

Delivery Just right

Plagiarism

CHAPTER-2

CHAPTER 2 REVIEW OF RELATED LITERATURE

This chapter will present different concepts and ideas of the various authors and institutions related to this study.

Online Learning Readiness

The study of Chung, Subramaniam, and Dass (2020) on online learning readiness among university students amidst Covid-19 revealed that the majority of the respondents did not want to imminently pursue the online mode of learning if they were to choose. They also favored pre-recorded lectures uploaded to Google Classroom and YouTube when learning online because of the...

3,016 words

That's quite an improvement

Go back to All Suggestions

Great job! See performance

Goals Adjust goals

All suggestions

Correctness Looking good

Clarity Very clear

Engagement Very engaging

Delivery Just right

Plagiarism

CHAPTER 5 (1) | (10) Messenger | Facebook | +

app.grammarly.com/docu/1259433558

CHAPTER-5 (1) | Saved | All suggestions

CHAPTER 5
SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATION
Presented in this chapter is the summary of findings, conclusions, and recommendations of the study.

Summary of findings
Based on the result formulated from the data collected, the researcher found out the following:

1. The online learning readiness among 2nd year and 3rd-year BSED mathematics students of UM Panabo College has an overall mean of 4.38, interpreted as highly evident.
2. The student engagement among 2nd year and 3rd-year BSED mathematics students of UM Panabo College has an overall mean of 4.29, described as highly evident.

Nothing can stop you now!

Formatting tools are disabled. Try Grammarly for MS Office. 317 words

Hide Assistant
Great job! See performance
Goals Adjust goals
All suggestions
Correctness Linking words
Clarity Linking words
Engagement Linking words
Delivery Linking words
Plagiarism

Chell.
LIEZEL V. CHAN, Ph.D
Adviser

Appendix F



UM Panabo College
Research Office
Arguelles St. San Francisco
Panabo City

Certificate

This is to certify that thesis manuscript/feasibility study /business plan entitled "Online Learning Readiness and Student Engagement among Students Majoring Mathematics in UM Panabo College" prepared and submitted by Amor, Reggie Mae G., Babor, Bernareme F., Fuerzas, Julie May P. has been reviewed and edited by the undersigned according to the format and standard prescribed by the UMPC Research.


LIEZEL V. CHAN Ph.D
Name and Signature of Editor

Plagiarism Result

The screenshot shows a plagiarism report interface. On the left, a document titled 'CHAPTER 1 THE PROBLEM AND ITS SETTINGS' is displayed. The text under 'Background of the study' reads: 'In contemporary world, there are some modifications happened and still happening when it comes to the educational system. There are aspects in education that alter in order to adapt to an ever-changing environment for the purpose of innovation and development. Mainly, with the advent of technologies, online modality of teaching and learning is prevalent. Further, online modality become one of the suggested alternative-platforms in distance learning delivery However, engagement of students through active'. On the right, a 'Match Overview' panel shows a total match percentage of 19%. Below this, a list of matches is provided:

Match Number	Source	Match Percentage
1	Feliciano H. Vega "Pro... Publications	2%
2	oppraxis.org Internet Source	1%
3	Emma R. Wester, Lisa L. Publication	1%
4	educationaltechnology Internet Source	1%
5	www.ijet.org Internet Source	1%
6	Alex Kafkas, Daniela M... Publication	1%
7	www.tandfonline.com Internet Source	1%

AMOR BABOR FUERZAS

CONGRATULATIONS PASSED PLAGIARISM

(August 17, 2021)

FIRST RUN PLAGIARISM RESULT 19 PERCENT


DR. AMELIE L. CHICO
RESEARCH COORDINATOR

CURRICULUM VITAE



Reggie Mae G. Amor

Prk.B, Brgy. Kauswagan, Panabo City
Jingamor05@gmail.com
0930-717-7761

PERSONAL INFORMATION

Nickname : Jing-jing
Age : 29
Date of birth : January 05, 1992
Place of birth : Panabo City
Gender : Female
Marital Status : Married
Religion : Roman Catholic
Nationality : Filipino
Height : 5'0"
Weight : 58 kg

EDUCATIONAL BACKGROUND

Tertiary: **UM Panabo College**
Bachelor of Secondary Education

Administration
Major in Mathematics
Arguiles St. Panabo City
2021-2022

Secondary: **Malativas National High School**
Brgy. Malativas, Panabo City
2007-2008

Elementary: **Consolacion Elementary School**
Brgy. Consolacion, Panabo City
2003-2004

**SKIL
L:**

- Computer literate

AFFILIATIONS:

- Rodolfo Z. Raymundo Law Office Cleck
- BCOW President-Brgy. Kauswagan, Panabo City
- PCCOW-Panabo Chapter-Secretary
- {SM²} Officer – Secretary



Bernareme F. Babor

Prk. 2, Matarlo, Mahayag, Bunawan,
Davao City, Davao del Sur bernaremeb@gmail.com@gmail.com
09385810995

PERSONAL INFORMATION

Nickname : Dayen
Age : 30
Date of birth : May 27, 1991
Place of birth : Panabo City
Gender : Female
Marital Status : Single
Religion : Born Again
Nationality : Filipino
Height : 5'2"
Weight : 50 kg

EDUCATIONAL BACKGROUND

Tertiary: **UM Panabo College**
Bachelor of Secondary Education

Administrati
on **Major in**
Mathematics Arguiles
St. Panabo City 2021-
2022

Secondary: **F. Bustamante National High
School Tibungco, Davao City**
2006-2007

Elementary: **Buhisan Elementary
School Buhisan, Davao
City**
2005- 2006

**SKIL
L:**

- Computer literate

**AFFILIATIO
NS:**

- {SM²} Officer –PIO



Julie May P. Fuerzas

Prk.2 Barangay Mabunao , Panabo City

Juliemayfuerzas2@gmail.com

09082494447

PERSONAL INFORMATION

Nickname : Julie
Age : 27
Date of birth : May 29, 1994
Place of birth : Panabo City
Gender : Female
Marital Status : Single
Religion : Filipinista
Nationality : Filipino
Height : 5'0"
Weight : 52 kg

EDUCATIONAL BACKGROUND

Tertiary: **UM Panabo College**
Bachelor of Secondary Education

Administrati
on **Major in**
Mathematics Arguiles
St. Panabo City 2021-
2022

Secondary: **Bernardino B. Bosque Sr. National High School**

Bunawan, Davao City
2010-2011

Elementary: **Mabunao Elementary**
School Prk4. Mabunao,
Panabo City 2005-2006

SKIL
L:

- cooking

AFFILIATIO
NS:

- {SM²} Officer – Asst. treasurer