



# Technium.

43/2023

---

---

2023

A new decade for social changes

**Technium**

**Social Sciences**

Powered by

**PLUS**  
**COMMUNICATION**



## **Teachers' Teaching Style as Perceived by Students and its Influence on Students' Level of Self-Regulation and Motivation in Learning Psychology**

**Paul Adrian S. AVECILLA, Xyron Earl R. Capiña, Aliah Yvonne Javier**

Research Development Center, Dalubhasaan ng Lunsod ng San Pablo, Brgy. San Jose, San Pablo City

[paulsavecilla@gmail.com](mailto:paulsavecilla@gmail.com), [iboniiboni16@gmail.com](mailto:iboniiboni16@gmail.com)

**Abstract.** The emergence of COVID-19 resulted from educational institutions to adapt flexible mode of learning. In this type of modality, teacher's teaching styles is one of the crucial factors that may influence the student's motivation in learning. This quantitative descriptive-correlation study investigated both the students' perception on what type of teaching style their teachers have and students' level of motivation in learning Psychology subjects. Data was collected from 349 students taking BS Psychology from Dalubhasaan ng Lungsod ng San Pablo, a locally funded college in the City of San Pablo, Philippines. Results shows that as perceived by the students, 86% of their teachers used learner-centered approach while the remaining 14% used teacher-centered approach. Participation in the learning process is the most common approach used by teachers for specific teaching styles, followed by personalizing experience, relating to experience, and climate building, in that order. Students' motivation to learn psychology was found to be high to very high, as was their self-regulation level. Learner-centered, participation in the learning process, personalizing experience, relating to experience, and climate building was found to have low positive correlation to intrinsic motivation and task value but have negligible correlation to extrinsic motivation and self-regulation.

**Keywords.** Teaching Style, Motivation, Self-regulation, Psychology

### **The problem and its background**

#### **Introduction**

Corona Virus, also known as COVID-19, has become a global public health emergency. Over one million people have already died, and roughly 36 million had been afflicted by the fourth period of 2020. This equates to well almost 325,000 people infected and 6,000 deaths in the Philippines (Worldometer, 2021). To halt the spread of COVID-19, most organizations have designed and implemented quarantine protocols and temporarily close educational institutions. As a result, more than a billion students worldwide have been affected. Over 28 million Filipino students at all educational stages are obliged to remain at their residence and adhere to the Philippine government's quarantine initiatives (Joaquin, Biana, & Dacela, 2020)

To meet the educational needs of students, the country's Higher Educational Institutions (HEIs) have enacted comprehensive regulations to ensure that learning continues even after closure. These include a wide range of altered kinds of digital learning geared toward assisting students in developing into more successful learners. Online Education can be delivered via synchronous, asynchronous, blended, or flexible modes of delivery (Oztok, Zingaro, & Hewitt, 2013). Consider Dalubhasaan ng Lunsod ng San Pablo (DLSP), a community-supported college in San Pablo City, Laguna, where the researchers is currently employed.

DLSP has implemented flexible distance online learning, an approach of teaching that gives students the freedom to choose how, what, when, or where they learn. Flexible distance online learning structures consider physical space utilization, student groupings during teaching, and time allocation throughout the educational process (TOP HAT Glossary, n.d.). DLSP utilizes virtual classrooms, such as Google Classroom and Edmodo, where students can access teacher-posted learning materials. Flexible learning encourages users who cannot engage in online learning to complete degree requirements throughout the academic year.

The pandemic began a year ago, and instructors, like learners, have struggled to adapt to this new education system. They have been required to rethink how technology can keep students protected and actively involved in education during a pandemic. (Education in the Context of a Pandemic, 2021).

One of the goals of educators is to encourage students to learn, particularly during this pandemic, which necessitates more learner autonomy on the part of the students, as time spent on flexible learning is considerably shorter than time spent on face-to-face learning. The instructor must be aware of the specific characteristics of each learner and adjust instruction to meet those needs. Educators unavoidably experience several essential roles inside the classroom (Barberors, Gozalo, & Padayogyog, 2021).

It is critical to determine which instructional styles motivate learners to create self-regulated learners capable of efficiently handling their learning. In educational psychology, it has been demonstrated that self-regulation has a significant effect on academic achievement, and motivation influences self-regulation, which then, in turn, predicts academic performance. (Rakes, 2010; Onoda, 2014). To contribute knowledge on this subject, this evaluated teachers' teaching styles in virtual classrooms as perceived by students.

This study investigated teachers' teaching style as perceived by students and its influence on their level of self-regulation and motivation in learning Psychology in DLSP A.Y. 2021-2022. The goal was to help teachers and the school find an effective and appropriate pedagogy to help students with their flexible online distance learning during this pandemic.

### **Background of the Study**

Students' ability to maintain or boost their desire to engage in and finish educational tasks is crucial for understanding learning performance. Learners' motivation to accomplish academic tasks can fluctuate throughout the task's completion. Students may be eager to complete a particular activity at first. However, various distractions may arise. The activity may be regarded as being less valuable or valid than expected. Learning the content may become challenging or stressful, or the task may become too simple and boring. This is particularly true of today's students. As an online student, your classroom is frequently your home, making it nearly impossible to avoid these distractions. You are notified of new messages via social media and text messages, and the urge to react can call your attention. Even family members can be a

source of distraction by having a conversation with you and inquiring innocently (DeCandia, 2021).

Rakes and Dunn (2010) demonstrate that self-regulation and motivation significantly impact resolving one of the most common problems students encounter in online classes: procrastination. They do, however, recognize the importance of understanding how different teaching styles affect students' motivation and self-regulation. They proposed in their research that students should be exposed to various teaching styles to improve their self-regulation and motivation to learn. Additionally, the study recommended conducting additional research to determine the effect of various teaching styles on self-regulation and motivation.

Following the study's findings, the researchers searched for previous research on the relationships, impact, and effect of various instructional strategies or teaching styles on students' self-regulation and motivation to learn. While there are studies on teaching styles and student motivation, they tend to focus on a single subject, such as science, English, or mathematics. Additionally, the researchers discovered only a few studies on teaching styles and self-regulation, while others concentrated on teaching styles and self-efficacy, teaching styles and learning styles, and so forth... Thus, supporting Rakes & Dunn's (2010) recommendation that additional research is needed and be conducted to provide more information on the effect of instructional strategies on students' self-regulation and motivation to learn.

Recent research on instructional strategies, teaching styles, student motivation, and self-regulation has been conducted using traditional face-to-face instruction. This demonstrates how little is known about the effect of teaching styles on students' motivation and self-regulation. Additionally, this research can aid in the development of effective and appropriate pedagogy to assist students with their flexible learning during the pandemic.

### **Statement of the Problem**

The main problem of the study is to identify the teachers' teaching style as perceived by students and its influence on students' level of self-regulation and motivation in learning Psychology in Dalubhasaan ng Lunsod ng San Pablo A.Y. 2021-2022

It specifically sought to answer the following questions

1. What are the teaching styles of teachers as perceived by the students?
  - 1.1. Learner-centered or Teacher-centered
    - 1.1.1 Participation in the learning process
    - 1.1.2 Relating to experience
    - 1.1.3 Climate Building
    - 1.1.4 Personalizing Instructions
2. What is the level of students' motivation and self-regulation in learning Psychology?
  - 2.1 Motivation
    - 2.1.1 Intrinsic Motivation
    - 2.1.2 Extrinsic Motivation
    - 2.1.3 Task Value
  - 2.2 Self-regulation
3. Is there a significant relationship between teachers' teaching styles as perceived by the students and students' level of motivation and self-regulation in learning Psychology?
4. What program should be implemented to improved student's motivation and self-regulation?

### Hypothesis

**Ho:** There is no significant relationship between teachers' teaching styles as perceived by the students and students' level of motivation and self-regulation in learning Psychology.

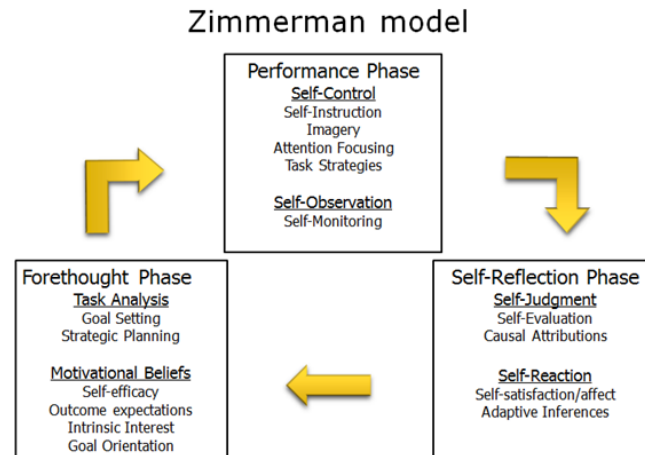
### Theoretical Framework

According to Albert Bandura's Social Cognitive Theory and Robert Zimmerman's Cycle of Self-regulated Learning, students' motivation is directly related to their capacity to self-regulate their learning activities. According to social cognitive theory, there are four processes of goal realization: (1) self-evaluation, the cognitive process whereby an individual compares their performance to the performance needed to fulfill a goal (Bandura, 1991); (2) self-observation, the cognitive process by which an individual observes and monitors their performance as they work toward their goal (Zimmerman, 2001); and (3) self-reaction, the cognitive process by which an individual reacts to their performance (Bandura, 1997), (4) and self-efficacy, a person's belief with his or her ability to carry out the behaviors required to achieve specific performance objectives (Bandura, 1997).



**Figure 1. Illustration of the process of goal realization (Agholor, 2019)**

While self-regulated learning is defined as being metacognitively, motivationally, and behaviorally active in one's learning processes and goal attainment (Eccles & Wigfield, 2002).



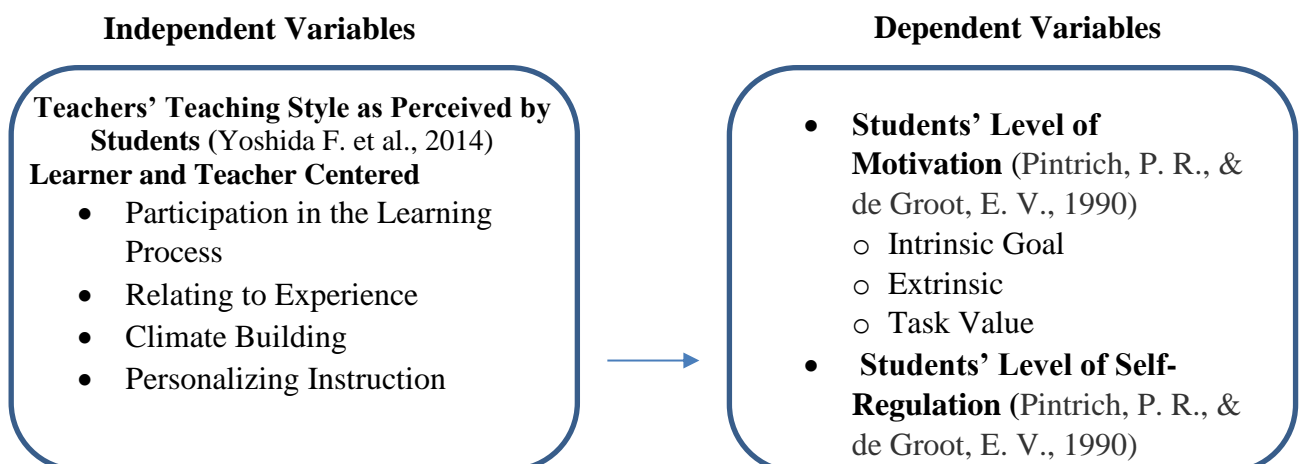
**Figure 2. Zimmerman Model of Self-regulation in Learning**

This framework is built on the presumption that motivation and learning strategies are not fixed characteristics of the learner but are rather complicated and context dependent. Learning strategies can be learned and impacted by the student. (2005) (Duncan & McKeachie).

In other words, students' motivations differ greatly based on the current class (e.g., their interest in the class, their ability to perform well during the class, their perception of the teaching styles that will be used in the course, and so on). Their learning strategies may also vary according to the course's nature

The researchers assessed college undergraduate students' level of motivation and self-regulation concerning their perceptions of their teachers' teaching styles using this framework as a foundation for this study. The objective of this study was to ascertain whether a particular teaching style can be used to motivate students to become self-motivated, independent learners.

### Conceptual Framework



**Figure 3. Conceptual framework of illustrating the independent and dependent variables of the study**

Using Social Cognitive Theory and Self-Regulated Learning as the framework of the study, the researchers assessed whether the teaching styles influence the dependent variables, which are the students' level of motivation and level of self-regulation in learning. The perceived teaching styles were derived from the study of Yoshida F. et al. (2014), while sub-variables level of motivation and self-regulation was based on the study of Pintrich, P. R., & de Groot, E. V. (1990)

### **Significance of the Study**

The study was conducted to determine the teachers' teaching style as perceived by students and its influence on students' level of self-regulation and motivation in learning Psychology.

It was conducted in Dalubhasaan ng Lunsod ng San Pablo and will benefit the following sectors:

**Students.** This study is significant and beneficial to students because the data gathered will help to improve the school's educational quality. Teachers' teaching styles would be aligned with the study's findings, potentially increasing students' motivation and self-regulation during the learning process.

**Teachers.** This study will benefit teachers significantly by identifying the most effective teaching styles to use in online distance learning in order to increase students' motivation and self-regulation throughout the learning process. Teachers would be able to maximize student engagement in class by employing an appropriate teaching style during online learning.

**Guidance Office.** This study will assist the office in better understanding the needs of students and developing programs to meet those needs. More precisely, a program that teaches students to be self-motivated and self-regulated learners.

**DLSP Administration.** This study will aid administration in planning and implementing teacher and student programs. They can establish a standard for the approaches used in Flexible online-distance learning by establishing a link between students' perceived teaching styles and their level of motivation and level of self-regulation in learning.

**Future Researchers.** The findings of this study will enable the researchers to determine the relationship between students' perceived teaching styles and students' level of motivation and self-regulation in learning. Thus, this data can be used as a starting point for future researchers to investigate similar topics.

### **Scope and Limitations**

This study investigated teachers' teaching styles as perceived by the students and its influence on students' level of motivation and level of self-regulation in learning Psychology. The relationship between the level of motivation and self-regulation will not be explored as it is already proven that the two variables have a significant positive relationship, as stated in the study of Rakes and Dunn (2010) and many other published studies.

The participants of the study were 349 B.S. Psychology students enrolled in Dalubhasaan ng Lunsod ng San Pablo during the first semester Academic Year 2021-2022 from 2<sup>nd</sup> to 4<sup>th</sup> year. Demographic profile of the students was not studied as the researchers aimed to provide an overall information regarding the topic. Likewise, the 1<sup>st</sup> year students were excluded during the data gathering as they are still new to the school and would not be able to assess their teachers' teaching style when the google form was distributed. They participants are chosen due to the preliminary survey and interview of the researchers. The evaluation of the

student's perceived teaching styles was limited to their Major Subject Teachers in B.S. Psychology program.

Google forms version of the instrument were utilized to gather data. It was sent to the advisers, and through them, the researchers were ensured that all students received the instrument.

### **Definition of Terms**

- ***Climate Building*** – teaching style that encourages interaction and discussion with other students, provides opportunities for breaks and removes barriers by leveraging existing student competencies. The teacher encourages experimentation, and mistakes are viewed as a natural part of the learning process.
- ***Extrinsic Goal Motivation*** refers to the degree to which a student believes he/she participates in a task for grades, rewards, performance, peer evaluation, and competition purposes.
- ***Flexible Online Learning*** - is a method of education in which students have complete control over how, what, when, and where they learn (Flexible Learning, n.d.). In DLSP, students can choose whether he wants a modular approach or join in synchronous and asynchronous classes.
- ***Intrinsic Goal Motivation*** - refers to the degree to which a student believes he/she is participating in a task for a challenge, curiosity, or mastery purposes.
- ***Learner-centered Activities*** - teaching style indicates the degree to which teachers foster a more collaborative learning environment by modeling behaviors that encourage students to take ownership of their learning. Students are the center of attention inside the classroom.
- ***Participation in the Learning Process*** – teaching style that reflects how much a teacher relies on students to identify the problems they wish to solve and allows students to participate in the selection of class topics.
- ***Personalizing Instructions*** – teaching style to which a teacher uses various strategies to tailor learning to each student's unique needs. Collaboration is emphasized over competition.
- ***Relating to Experience*** – teaching styles that incorporate learning activities take into account students' prior experiences and their relationship to new learning experiences.
- ***Self-regulation*** – is the capacity of students to plan, implement, and maintain planned behavior flexibly to accomplish one's goals.
- ***Task Value*** refers to the student's assessment of the task's interest, significance, and utility.

### **Review of Related Literature**

The chapter's overall objective was to establish the importance of the general area of study and then identify an area in which a novel impact could be made. The chapter spent most of its parts critically evaluating various methodologies and sources of information that could support the study and its findings.

### **Teaching and Teaching Styles**

Across contexts, teaching is the practice of attending to people's desires, experiences, and emotions and intervening to help them comprehend specific topics and move beyond the given through questioning, listening, providing information, illustrating a phenomenon,

demonstrating an ability or method, testing comprehension and capability, and encouraging learning experiences (What Is Teach). It is described as collaborating with students to assist them in comprehending and applying knowledge, concepts, and processes, and it entails the design, selection, delivery, assessment, and reflection of material (Christensen, Garvin, & Sweet, 1991).

Whereas teaching styles, alternatively referred to as teaching methods, refer to the overarching ideas, teaching strategies, and management strategies associated with professional advancement (Bohren, 2019). A teacher's teaching style is influenced by their educational value system and educational philosophy (Persaud, 2021). Additionally, it refers to the general principles, pedagogy, and management styles used in the classroom, given that the educator's educational theory determines the method of instruction chosen, classroom demographics, subject area(s), and school's mission and vision (Teaching Methods, 2020).

To safeguard and facilitate the transmission of knowledge, teachers should employ instructional styles that are tailored to specific objectives and competencies (Cardino & Ortega-Dela Cruz, 2020). Shivaramaiah (2018) emphasized the importance and effectiveness of traditional teaching methods, which include lectures, in which a professor condenses and organizes voluminous study material for his or her students. Over the last several decades, numerous educators have extensively used teacher-centered styles to impart knowledge to students. Traditional teaching was a long-established method of instruction in the Philippine educational system. Students were passive participants in a class, required only to sit quietly in their seats and listen to their teachers' didactic method (Balansag, 2018). Teachers impart to students their knowledge and comprehension of concepts and values (Chi-kin et al., 2008). This is referred to as "spoon-feeding." The students' only active participation is reciting and memorizing the lessons and completing written assignments at home. Their exams may consist of oral recitation, quizzes, and a major written exam, resulting in students developing only "declarative knowledge" in this set - up, where they memorize, define, narrate, explain, and classify the knowledge inputted by the teachers (Biggs & Tang, 2007). It is a task-oriented, teacher-centered approach in which the instructor's teaching preparation and style have the most significant influence on the learner's absorbed knowledge (Balansag, 2018).

Traditional teaching strategies have been developed significantly due to social, cultural, and technological changes that have resulted in the development of new teaching styles or methods. Five distinct teaching styles have emerged as the primary techniques used in the classroom by contemporary teachers: the Authority Style, the Delegator Style, the Facilitator Style, the Demonstrator Style, and the Hybrid Style (INNOVA, 2018). Additionally, Welcome (2019) defines the following teaching styles: teacher-centered, technology-based, student-centered, relaxed, flipped classroom, and facilitator-in-chief. Until now, public concern about the efficacy of teaching methods on student learning has piqued the interest of educational researchers.

The Department of Education (DepEd) has urged teacher education institutions (TEIs) to take a learner-centered approach to train the country's future educators, stating that the quality of teachers determines the quality of education at the national level (Montemayor, 2018). Teachers are supposed to provide a chance for learners to actively participate in their learning through interactive and collaborative activities as part of this program of learner-centered teaching and constructivist learning (Bongco & David, 2020). Differentiated instruction is necessary for diverse student populations. Additionally, teachers are expected to be sensitive to and inclusive of gender differences (D.O. 32, s. 2017 – Gender-Responsive Basic Education Policy | Department of Education, 2017).

Surprisingly, an estimated almost 30 million students at all levels are among those who must remain at home and abide by the Philippine government's quarantine initiatives due to the pandemic (Joaquin, Biana, & Dacela, 2020). Numerous countries' interventions, such as community lockdown and quarantine, have urged academic institutions, students, and teachers to work and study from home, paving the way for distance education. Distance learning, alternatively referred to as distance education, e-learning, or online learning, is a form of learning in which teachers and students are physically separated during instruction. Different methods are used to facilitate class discussion (Simonson, n.d.). As a result of people being forced to stay home due to the coronavirus pandemic, online education has grown in importance. Combining traditional education and e-learning is exceptionally beneficial, as the rapid growth of COVID-19 on a global scale has recently brought the conventional education system to a halt (Khalil, Humayun, & Zamar, 2021). According to Khemchandani (2020), it paved the way for a new method of delivering education by allowing teachers to adapt to various remote tools and resources in an online environment. Teachers are quickly adapting to this new environment to make the most of their virtual classrooms by using knowledge gained through their efforts. Making the transition from traditional to online education is a considerable undertaking for schools and teachers worldwide today. This transition enables schools to be more adaptable in their instructional methods by creating opportunities for new learning opportunities that result in substantial and beneficial effects outside of the classroom (Site Online Learning, 2020).

When the first COVID-19 case was found in the Philippines, the country's leaders reacted slowly. Senate Bill No. 1573, dubbed the Pandemic and All-Hazards Preparedness Act, was presented seven years ago but has not yet been passed (Tan, 2020). Educational leaders decided to establish a new academic standard in response to these circumstances. The Commission on Higher Education mandated that higher education institutions maintain academic freedom and make distance learning, e-learning, and other alternative modes of delivery available to students (Commission on Higher Education, 2020). The CHED chairman stated that universities and colleges are free to use whatever mode of instruction is most effective for them, adding that some would use only online instruction while others would use a combination of the two (Magsambol, 2020). These declarations are intended to promote lifelong learning. Nevertheless, private HEIs are left to develop their policies (Joaquin et al., 2020), and the majority have implemented comprehensive policies to ensure that education continues even if the institution closes. Moreover, these policies include various adapted modes of online learning to assist students in becoming more successful learners. According to CHED, the term "online learning" should be replaced with "flexible learning" — a pedagogical approach that accommodates time, place, and audience flexibility, which may include, but is not limited to, the use of technology (Commission on Higher Education, 2020).

Filipino educators work double shifts to sharpen their skills and acquire online platforms and substitutes (Filipino Teachers on Adjusting to Distance Learning, 2020). "Providing teachers across the country with the necessary tools to teach 21st-century learners is our sworn obligation to uphold our nation's goals and build a better future for our next generations," said Sarah Mae Columnas, a teacher at Mansasa National High School in Bohol (Filipino Teachers on Adjusting to Distance Learning, 2020). Additionally, some institutions have implemented Coursera, zoom, and other videoconferencing tools to ensure that teaching and learning occur, whether asynchronously or synchronously (Chua et al., 2020).

Students now have instant access to vast amounts of data and information through online courses, and learning is becoming more participatory, contextual, and productive.

Instructional techniques are tools that educators can use to create and facilitate instruction. They include learning contracts, discussions, lectures, self-directed learning, mentorship, small group work, projects, collaborative learning, case analysis, forums, panels, and conferences (Instructional Strategies for Online Courses - ION Professional ELearning Programs - UIS, n.d.). Present teaching techniques should build on traditional teaching methods, and students should not ignore them entirely when incorporating new ones. On the other hand, modern teaching methods are suited to the twenty-first century to adapt to changing environments and circumstances (Modern Teaching Methods | Importance and Application | Eduvoice, 2020).

Additionally, it is believed that students' ability to support or boost their willingness to engage in and complete academic activities is critical for comprehending learning and performance. Students' motivation to finish academic tasks can change throughout the task's finalization. Students may initially be enthusiastic about completing a particular activity. However, numerous diversions may emerge. The activity may be regarded as less valuable or meaningful than expected. Learning the material may become challenging or infuriating, or the task may be too easy and thus uninteresting. This is especially true for today's students. As an online student, the classroom is commonly one's own home, making avoiding these distractions nearly impossible. New messages are alerted via social media and text messages, and the urge to react can pique one's attention. Even family members can act as diversionary agents by interacting with you and innocently inquiring (DeCandia, 2021).

### **Students' Motivation and Self-regulation in Learning**

*Motivation* is frequently regarded as the process by which a person's personal needs and desires are initiated (Alexander & Murphy, 1998). Students face a daily lack of motivation at all levels, which is why motivation is essential for student learning (Pintrich & Schunk, 2002). It was challenging in all learning environments, but the online environment adds complexity even though students are more self-directed than in other modes of instruction. Learners' power to influence their motivation is crucial in light of these obstacles. (2005) (Wolters, Pintrich, & Karabenick). Academic motivation is defined as students' persistence, interest in the subject matter, and educational effort (DiPerna & Elliot, 1999), and it is also regarded as a crucial factor in academic achievement (Alexander, 2006)

*On the other hand, self-regulated learning* is defined as an essential phase in which students develop their own educational goals. Students are responsible for monitoring, regulating, and controlling their cognitive abilities, motivation, and behavior. They are motivated and constrained by their objectives and the unique characteristics of a given classroom environment (Wolters et al., 2005). According to Zimmerman (1989), self-regulated learners are "metacognitively, motivationally, and behaviorally actively participating in their very own learning experience" (p. 329). Self-regulation has been regarded as a desirable quality throughout history due to its beneficial effects on behavior and skill acquisition (Reid, 1993 in Self-Regulation | College of Education and Human Sciences, n.d.).

Rakes and Dunn (2010) stated that self-regulation and motivation contribute significantly to the elimination of procrastination, among the most common issues students face in online classes. They do, however, acknowledge the importance of understanding how students' motivation and self-regulation are affected by various teaching styles. It is supported by the study of Abun's (2021) research discovered that the STEM students at Divine Word Colleges' senior high school have a high level of self-regulation, indicating that they have a high level of external regulation, internalized regulation, identified regulation, and moderate intrinsic motivation. Villavicencio and Bernardo (2012) demonstrated that both enjoyment and pride

were significant predictors of grades and also acted as mediators in the relationship with both self-regulation and grades. In students who reported higher levels of positive emotions, self-regulation was positively associated with grades. On the other hand, self-regulation was not associated with grades in those who reported lower levels of pride and was associated with grades in those who reported lower levels of satisfaction. The findings in terms of how positive emotions are associated with positive assessments of task/outcome value, thereby reinforcing the positive associations for both cognitive/motivational variables and learning.

Mahmood's (2014) research demonstrates that students' motivation for English learning can be a rich source of awareness and information for implementing appropriate styles and activities that foster a motivating learning environment for students to develop into efficient language learners with most significant proficiency, as well as the asserted effect of a professor's teaching style on students. Each instructor has their own set of values, ideology, and teaching methods, and their teaching style ultimately influences their students' motivation in class (Mahmood, 2014). In addition, a study conducted by Catalyo et al. (2018) state that Math teachers' teaching methods have a direct impact on student motivation because they foster teacher-student interactions that enable participants to speak actively, proficiently, and confidently to math problems, even when students demonstrate limited participation at times. Astuty (2013) also researched the factors that influence students' ability to engage in speaking activities in a Speaking for Special Purposes class and discovered that five factors influenced students' motivation to participate in speaking activities: self-confidence; course-specific moving component parts; teacher-specific motivational components; and group-motivating components. According to the findings of Muhammad et al. (2012), numerous aspects of instructors' acts and teaching styles influence students' motivation to learn. Additionally, this study demonstrated that management sciences teachers can inspire their students effectively by utilizing the suitable methodology: structured lecture preparedness, lecture explanation, student therapy, de-emphasizing test scores, motivating active participation, and utilizing positive feelings.

Pitsi, Digelidis, and Papaioannou (2015) conducted a study in which they compared the effects of reciprocal, self-check, and command teaching styles on students' intrinsic-extrinsic motivation, enjoyment, and perceived motivational climate while teaching traditional Greek dances. They discovered that the self-check style significantly increases intrinsic motivation, self-regulation, enjoyment, and autonomy compared to the standard and command-teaching styles. Additionally, it is associated with a decrease in external motivation and amotivation. Male students appear to prefer the self-check style more than the other styles because it reinforces or reduces psychological factors more than the other styles. In contrast, female students also prefer the reciprocal style. When teaching traditional dances, the reciprocal and self-check styles encourage a better ambiance, which is crucial for an effective and qualitative lesson.

Additionally, Torio and Cabrillas-Torio (2015) conducted an experiment examining the effect of Whole Brain Teaching (WBT) — a brain-based teaching strategy based on concepts developed by Biffle (2013) and Hermann (1998) — on students' learning gains and motivation. They discovered that students gained an average of 20% in learning; those students were motivated on a scale of average to high, with intrinsic and extrinsic motivation ranking as the top two of the six components of motivation; and that using WBT as a teaching strategy can have a positive effect on academic performance and motivation. Similarly, Llanos (2020) assessed teachers' discipline strategies, teaching styles, self-regulation, and instructional performance at Saint Michael College of Caraga: Bluestein's (2012) *Your Discipline*

Philosophy: A Self-Assessment for Teachers, Grasha-(2016) Richmann's Teaching Style Survey, and Erickson et al. (2016) Self-Regulation. It indicated that the participants' discipline styles, teaching styles, and self-regulation are all "high." Apart from that, the respondents have a high level of teaching success with an explanatory value of "Very Satisfactory," and that there is no significant connection between the respondents' discipline styles, teaching styles, and self-regulation, and their teacher effectiveness.

The researchers discovered that most research on teaching styles and student motivation focuses exclusively on a single subject, such as science, English, or mathematics. Additionally, the researcher discovered several studies examining the relationship between teaching styles and self-regulation; others examining the relationship between teaching styles and self-motivation; and a few examining the relationship between self-regulation and motivation separately. That after researchers learned of the study's findings, the variables were merged. As a result, the researchers will address Rakes and Dunn's (2010) recommendation to research the effect of instructional strategies on students' self-regulation and motivation to learn.

Additionally, recent research on instructional strategies, teaching styles, student motivation, and self-regulation utilized traditional face-to-face instruction. This demonstrates an information gap regarding the effect of instructional styles on learners' motivation and self-regulation. Furthermore, this research can aid in the implementation of an appropriate and appropriate pedagogy that supports learners' adaptive learning during the pandemic.

### **Methods**

This chapter discusses the methodology used to answer the research questions - the research approach, selecting the participants, settings of the study, instruments for primary data collection, and data analysis techniques.

### **Research Design**

This research is quantitative in nature as it relies on statistical analysis to answer the research questions. Quantitative research is defined as "the collection and analysis of numerical data. It is useful for identifying patterns and averages, making predictions, examining causal relationships, and generalizing results to larger populations." (Bhandari, 2021).

The study used a descriptive-correlational method to describe students' perceptions of their teachers' teaching styles, as well as their motivation and self-regulation levels when it comes to learning Psychology subjects. Additionally, this method was used to examine the relationship between the variables and the difference in motivation and self-regulation in learning between males and females.

### **Participants**

Purposive sampling was used to select the participants for the study. They were 2<sup>nd</sup> year to 4<sup>th</sup> B.S. Psychology students, both male and female, from Dalubhasaan ng Lunsod ng San Pablo A.Y. 2021-2022. They were chosen as prospective participants following the researcher's preliminary survey and interview with students regarding the difficulties encountered during online distance learning. It demonstrated that one of their primary concerns was the variety of approaches used by various teachers. As a result, the researchers determined that DLSP's B.S. Psychology students were appropriate participants for the study.

### **Research Instruments**

#### *Modified "The Teaching Styles Assessment Scale (TSAS)"*

The researcher used a modified questionnaire based on "The Teaching Assessment Scale" developed by Yoshida et al. (2014) to assess the students' perceived teaching styles. It is a 30-item summated rating scale answerable using a 6-point likert scale ranging from always to never (0-Never, 1-Almost Never, 2-Seldom, 3-Often, 4-Almost Always, 5-Always). It aims to assess the perceived teaching styles of students into 5 categories which are (1) participation in the learning process, (2) relating to Experience, (3) climate building, and (4) personalizing instructions.

Cronbach's alpha was used to establish the reliability of the 30-item form of TSAS. It was calculated by using the 30 items from the 1,111 responses on TSAS. This procedure produced an alpha of .86 and a standardized item alpha of .87. These coefficients indicate strong internal consistency reliability for the final form of TSAS.

To score the TSAS, first reverse the score in items 4, 6, 10, 13, 20, and 21, which are negative items. After reversing the score for the negative items, get the total sum of all the scores. A score above 81 means there is a tendency toward a learner-centered mode, while a score below 81 indicates a teacher-centered approach. In computing the different factors, the same process can be applied (See appendix A).

#### *Motivated Learning Strategies Questionnaire*

The Motivated Strategies for Learning Questionnaire (MSLQ) is a self-report instrument developed to assess college students' motivational orientations and their use of various learning strategies during a college course. The MSLQ is founded on a broad cognitive understanding of motivation and learning strategies (Duncan & Mckeachie, 2015). For this study, the MSLQ's subscale intrinsic goal motivation, extrinsic goal motivation, and task value will be used to assess the students' motivation. Intrinsic goal motivation has 4-items. Likewise, extrinsic goal motivation 4-items, and task value has 6-items. The questionnaire is answerable using a Likert scale from 1- "not all true to me" to 7- "very true of me." It can be scored by first reversing the score on the items marked as reversed and getting the average score for each subscale.

In terms of reliability, Intrinsic goal motivation, extrinsic goal motivation, and task value have a reliability coefficient of Alpha = 0.74, 0.62, and 0.68 respectively. Confirmatory analysis results were  $\chi^2/df = 3.49$ , GFI = .77, RMR = .07, and CN = 122 (See appendix B).

#### *General Strategies of Learning Scale*

The General Strategies of Learning Scale (GSL) assesses learners' aptitude for engaging in academic self-regulation, using the processes of planning, monitoring, regulating, and resource management. In this case, academic self-regulation is best defined as a form of learning that is guided by metacognition, partially intrinsically motivated, and strategic in nature (Winne, 1997; Zimmerman, 1990, as cited in, Dunn et al. 2012). Confirmatory Analysis results were  $\chi^2(19) = 32.54$ ,  $p = .027$ ; GFI = .96; CFI = .93; SRMR = .062; RMSEA = .051, 90% confidence interval (CI) = .000-.089. This scale indicates one's aptitude for metacognitively and strategically managing resources and self-regulating learning in a manner that requires intrinsic motivation (See appendix C).

### Research Procedure

The researchers drafted and submitted an approval letter to the DLSP College President via the Vice President of Academic Affairs. Additionally, the researchers enlisted the assistance of the B.S. Psychology program's respective advisers in orienting and obtaining informed consent from participants. Students' perceptions of their teachers' teaching styles, their level of motivation, and self-regulation in learning and their contact information were collected online via Google Forms. At the end of the study, a copy of the findings was mailed to the participants' contact details.

### Statistical Statement

A frequency distribution table was used to help students understand their teachers' perceived teaching styles, their perceived motivation level, and their perceived self-regulation level while the mean was used to determine the students' perceived level of motivation and self-regulation during their Psychology studies. Furthermore, Pearson Product-Moment Correlation will be used to analyze the relationship between teacher's teaching style as perceived by the students and students' level of self-regulation and motivation in learning psychology. The Pearson coefficient is a form of correlation coefficient that shows how two variables measured on the same interval or ratio scale are related. The Pearson coefficient is a metric for determining the strength of a relationship between two continuous variables (Kenton, 2021).

Size of Correlation	Interpretation
.90 to 1.00 (-.90 to -1.00)	Very high positive (negative) correlation
.70 to .90 (-.70 to -.90)	High positive (negative) correlation
.50 to .70 (-.50 to -.70)	Moderate positive (negative) correlation
.30 to .50 (-.30 to -.50)	Low positive (negative) correlation
.00 to .30 (.00 to -.30)	negligible correlation

**Figure 4. Strength of correlation coefficient**

### Results and disussions

This chapter deliberated the data gathering, analysis and interpretation of the findings on the basis of the problem outstretched. Precisely, it presents the descriptive and inferential data about teachers' teaching styles as perceived by the students, level of self-regulation, and motivation of students in learning psychology as well as the relationship among the mentioned variables.

**Table 1. Teacher's' teaching style as perceived by the students**

Teaching styles	Frequency	Percentage
Learner-centered	299	86%
Teacher-centered	50	14%

Table 1 shows that 299 or 86% percent of the students perceived that the teaching styles of their teachers in Psychology is learner-centered, while the remaining 50 or 14% of the students perceived that their Psychology teachers use teacher-centered approach. This implies

that most of the students perceived that their teachers focus on student engagement, active learning, and other approaches that include students in their own learning.

This is in line with article III, section 3 of Commission on Higher Education's (CHED) CMO-34-s-2007: Policies and Standard for Undergraduate Programs in Psychology, which stated that Higher Educational Institutions use a learner-centered/outcome-based approach.

**Table 1.1. Specific teacher's teaching styles as perceived by the students**

Teaching Styles	Frequency	Rank
<b>Participation in the Learning Process</b>	325	<b>1</b>
<b>Relating to Experience</b>	232	<b>3</b>
<b>Climate Building</b>	156	<b>4</b>
<b>Personalizing Instructions</b>	296	<b>2</b>

The frequency with which specific teaching styles of Psychology subject teachers as perceived by students was ranked. This implies that the higher the frequency, the more students perceived their teachers to be using that specific teaching style. However, this does not imply that the teachers only use one teaching style. Teachers may employ multiple teaching styles at the same time.

The result shows that as perceived by the majority of the students with a frequency of 325, their major subject teachers in Psychology focus on the participation in the learning process of the students. It is followed by personalizing instructions with a frequency of 295, relating to experience with 232, and climate building with 156.

This implies that teachers rely on students to identify problems that they want to solve and allow students to participate in the selection of class topics. Teachers also used various strategies to tailor learning to each student's unique needs, with a focus on student collaboration rather than competition. Furthermore, teachers, as perceived by students, take into account their prior experience and incorporate new activities that relate to their new learning experiences.

Hinosolango (2014) stated that the more learner-centered the teacher is the more learning skills and strategies are developed among the students. Learner-centered teaching should be integrated and sustained in the faculty development program for teachers to be updated on the current learner-centered teaching strategies and techniques so that students are engaged in meaningful activities from which they develop their knowledge and skills for life-long learning.

**Table 2. Level of student's motivation and self-regulation**

	Intrinsic	Extrinsic	Task Value	Self-Regulation
Very Low	0	0	0	0
Rather Low	0	2	0	1
Low	8	8	1	1
Neither Low or High	41	28	23	39
High	92	72	62	67
Rather High	120	118	120	118
Very High	88	121	143	123
<b>Total</b>	<b>349</b>	<b>349</b>	<b>349</b>	<b>349</b>

Table 2 shows that majority of the respondents got high to very high level of intrinsic, extrinsic and task value motivation in learning psychology. For intrinsic motivation, 92 scored high, 120 scored rather high and 88 scored very high. For extrinsic motivation, 72 scored high, 118 scored rather high, and 121 scored very high. For task value, 62 got high, 120 score high, and 143 score very high.

This implies that the majority of respondents place a high value on learning in their major subjects. They are highly motivated not only by high grades, rewards, and recognition, but also by the challenge presented, their curiosity, and their desire to master the subjects.

Adamma (20) stated that students who are highly intrinsically motivated can also be extrinsically motivated in terms of future goal orientations. Extrinsically motivated students are more concerned with getting better grades, receiving rewards, and being accepted by their peers. Extrinsic motivational factors in students, when combined with positive future goals, can actually facilitate their present value and intrinsic motivation.

Aside from the motivation of students, their level of self-regulation in learning was also measured. Table 2 illustrates that students' level of self-regulation is the same with their motivation with high to very high level. 67 students scored high, 118 scored rather high, and 123 score very high level of self-regulation. This suggests that students are able to observe and evaluate themselves and adjust depending on the situations. Students with high self-regulation are capable of monitoring their internal states, have high-order aspects of decision-making, and attention control.

According to Xiao (2019), self-regulated learner must be able to both internally regulate, monitor, evaluate, and modify the learning process, as well as be aware of and manage contextual factors such as course and instructor demands, where and when to study, who, when, and where to seek assistance.

However, given the findings that students have high to very high level of motivation and self-regulation in learning, there are still students who scored neither low or high and low level for the motivation and self-regulation.

**Table 3. Correlation between teachers' teaching style as perceived by the students and students' motivation and self-regulation**

		<b>Intrinsic</b>	<b>Extrinsic</b>	<b>Task Value</b>	<b>Self-Regulation</b>
<b>Participation in...</b>	Pearson Correlation	.369**	.268**	.402**	.290**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	349	349	349	349
<b>Relating to...</b>	Pearson Correlation	.390**	.198**	.341**	.256**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	349	349	349	349
<b>Climate...</b>	Pearson Correlation	.331**	.268**	.402**	.290**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	349	349	349	349
<b>Personalizing...</b>	Pearson Correlation	.368**	.190**	.329**	.262**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	349	349	349	349

<b>Overall Teaching...</b>	Pearson Correlation	.380**	.240**	.392**	.290**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	349	349	349	349

\*\**. Correlation is significant at 0.01 level (2-tailed)*

A Pearson correlation coefficient was computed to assess the linear relationship between teaching styles and students' motivation and self-regulation.

It was found that participation in the learning process has a significant low positive correlation with intrinsic motivation ( $r(349) = .369, p < .01$ ) and task value ( $r(349) = .402, p < .01$ ). However, even though participation in the learning has a positive correlation with extrinsic motivation ( $r(349) = .268, p < .01$ ) and self-regulation ( $r(349) = .290, p < .01$ ), the coefficient is small and considered as negligible correlation.

Furthermore, relating to experience has low positive correlation with intrinsic motivation ( $r(349) = .390, p < .01$ ) and task value ( $r(349) = .341, p < .01$ ) but has a negligible correlation with extrinsic motivation ( $r(349) = .198, p < .01$ ) and self-regulation ( $r(349) = .256, p < .01$ ).

Additionally, climate building has also significant low positive correlation between intrinsic motivation ( $r(349) = .331, p < .01$ ) and task value ( $r(349) = .402, p < .01$ ), but have a negligible correlation to extrinsic ( $r(349) = .268, p < .01$ ) and self-regulation ( $r(349) = .290, p < .01$ )

Likewise, personalizing instructions has a significant positive correlation between intrinsic motivation ( $r(349) = .369, p < .01$ ) and task value ( $r(349) = .329, p < .01$ ), but also have a negligible correlation to extrinsic motivation ( $r(349) = .190, p < .01$ ) and self-regulation ( $r(349) = .262, p < .01$ )

Lastly, the general teaching styles in which indicated in the instrument's manual that a the higher the score you have, the more the teacher leans towards a learner-centered approach. It has been deduced that general teaching styles has a significant low positive correlation with intrinsic motivation ( $r(349) = .380, p < .01$ ) and task value ( $r(349) = .392, p < .01$ ), but have a negligible correlation with extrinsic motivation ( $r(349) = .240, p < .01$ ) and self-regulation ( $r(349) = .290, p < .01$ )

The findings suggest that the more teachers use inductive teaching and learning, as well as put a focus on active and cooperative learning of the students, the more the students view the subject as important and significant and are motivated to participate in different tasks to challenge themselves and master the subjects.

In a study conducted by Cheang (2009), with the implementation of the learner-centered approach, students became more intrinsically goal-oriented and demonstrated improvement in their learning beliefs that their personal efforts were responsible for learning outcomes. The majority of students also reported that their learning ability had improved. Furthermore, literature review suggests that prior degrees, cumulative GPA, and gender had only a minor impact on motivation and learning strategies. These findings imply that the current course structure and environment (i.e., the learner-centered teaching approach) were more important predictors of students' motivation and learning strategies than prior academic success or gender.

## **Summary of findings, conclusion and recommendations**

### **Summary of Findings**

This chapter presents the summary of the research work undertaken, the conclusions drawn, and the recommendations made as an outgrowth of this study. This study entitled

***“Teachers’ Teaching Style as Perceived by Students and its Influence on Students’ Level of Self-Regulation and Motivation in Learning Psychology”*** was conducted to assess the effect of teaching styles to the motivation and self-regulation of the students in learning Psychology subjects. The data was gathered using standardized questionnaire. Pearson r was used to compute the relationship among the variables.

### **Findings Suggest:**

1. The majority of students, or 86%, believed that their teachers in major subjects in Psychology used a learner-centered approach to teaching.
2. Participation in the learning process is the most common approach used by teachers for specific teaching styles, followed by personalizing experience, relating to experience, and climate building, in that order.
3. Students' motivation to learn psychology was found to be high to very high, as was their self-regulation level.
4. Learner-centered, participation in the learning process, personalizing experience, relating to experience, and climate building was found to have low positive correlation to intrinsic motivation and task value but have negligible correlation to extrinsic motivation and self-regulation.

### **Conclusion**

Based on the data gathering and interpretation of results, the researchers concluded the following:

1. Teachers in DLSP-BS Psychology program are using a learner-centered approach as perceived by the students. They are complying with article III, section 3 of Commission on Higher Education’s (CHED) CMO-34-s-2007: Policies and Standard for Undergraduate Programs in Psychology which stated that instructors of the program must use an outcome based/learner centered approach
2. Teachers in the DLSP-BS Psychology program prioritize student learning over teaching, process over content, demonstration over instruction, and collaboration over competition.
3. The majority of respondents can understand and adjust to their environment, which in this case is the current educational system and COVID-19. Furthermore, they were motivated to learn Psychology subjects not for the sake of rewards or grades, but because they saw it as necessary and important for their growth, and they strived to challenge themselves to learn and master the subject.
4. The null hypothesis is rejected in part. There is a weak positive association between learner-centered teaching approaches, intrinsic and task-value motivation, and an insignificant correlation between extrinsic and self-regulation motivation. This demonstrates the critical importance of teachers in motivating students to learn. They not only have the ability to educate, but also to encourage students appreciate the worth of each lesson and to be driven to study for the sake of acquiring new knowledge. While self-regulation was found to have a minor and insignificant correlation with teaching approaches, it was established through published publications that motivation and self-regulation are inextricably linked.

### **Recommendations**

In line with the results of study, the researchers would like to recommend the following:

- **Teachers.** Teachers who use a learner-centered approach should not concentrate on a single strategy or technique. One must be knowledgeable about various approaches and adjust their teaching style based on the characteristics and abilities of the students. Teachers who are still using a teacher-centered approach, on the other hand, may switch to a learner-centered approach, as research has shown that learner-centered is better. They could attend seminars and workshops to learn new outcome-based learning techniques.
- **DLSP Administration.** Faculty development must be supported by the administration. They could begin by incorporating outcome-based learning seminars and workshops into their in-service training seminars. Conduct observations and evaluations of teachers to determine what needs to be improved while also ensuring that effective techniques/approach are maintained. Furthermore, the administration may support teachers' training outside of Pamantasan, particularly if the training is for their area of specialization and could not be provided by the school.
- **Office of Guidance and Counseling.** Provide guidance programs to assist students in setting clear goals. According to the American Counseling Association, research has shown that achieving goals has an impact on motivation, self-efficacy, and learning, making goal-setting essential for improving self-regulation skills. Goals make it easier for people to self-evaluate and comprehend their progress. Furthermore, teaching students about adaptability and coping with stressful or emotional events - to help your clients see changes objectively and analyze the various ways they can respond. Working with this model will assist the guidance in re-framing the students' negative thoughts and re-framing change as a positive opportunity for self-development.
- **Students.** Learn to manage your time by delegating and eliminating unnecessary activities that do not motivate or excite you in order to maximize your time and focus your energy on achieving your goals. Set specific and measurable objectives. Setting goals increases motivation and trains the brain to focus only on specific and measurable things. We are much happier when we are making real progress toward our goals. We are energized and inspired. Furthermore, students could keep a journal in which they list their key plans and priorities; this is one of the most effective ways to increase self-awareness and track progress. The journal could also be used to write down things that happened to you during the day and use it to internalize the good and bad. This may aid in self-evaluation and self-improvement.
- **Future Researcher.** This study was limited to Psychology students, teachers, and major subjects and was carried out during the Pandemic, which means that teachers and students were evaluated during the implementation of Flexible online learning. Future researchers could replicate this research on the face-to-face settings and compare the data if there are significant changes. Also, future researchers could also look on other aspects that could affect or influence students' motivation and self-regulation.

## References

- [1] Abun, D. (2021). Academic Self-Regulation of STEM of Senior High School Students of Divine Word Colleges in Region I, Philippines and Their Academic Performance. SSRN Electronic Journal. Published. <https://doi.org/10.2139/ssrn.3807851>
- [2] Adamma, O., Ekwutosim, O., & Unamba, E. (2018). Influence of Extrinsic and Intrinsic Motivation on Pupils Academic Performance in Mathematics. *Supremum Journal of Mathematics Education*. 2(2). DOI: <https://doi.org/10.5281/zenodo.1405857>
- [3] Alexander, P. A. (2006). *Psychology in learning and instruction*. Upper Saddle River, NJ: Pearson.
- [4] Alexander, P. A., & Murphy, P. K. (1998). The research base for APA's learner-centered psychological principles. In N.M. Lambert, & B.L. McCombs (Eds.), *How students learn: Reforming schools through learner-centered education* (pp. 25-60). Washington D. C.: American Psychological Association.
- [5] Astuty, R. R. (2013, September 3). | Astuty | Jurnal Pendidikan dan Pembelajaran Khatulistiwa. *JURNAL PENDIDIKAN DAN PEMBELAJARAN KHATULISTIWA*. <https://jurnal.untan.ac.id/index.php/jpdpb/article/view/3090>
- [6] Balansag, S. (2018). Improvement of the Teaching Style. From Traditional Teacher-Centered to Student-Centered Teaching Style. GRIN. <https://www.grin.com/document/496335>
- [7] Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, 50(2), 248-287. Retrieved from <http://search.proquest.com.ezaccess.libraries.psu.edu/docview/618100683?accountid=13158>
- [8] Bandura, A. (1997). *Self-efficacy: The exercise of control* W H Freeman/Times Books/Henry Holt & Co, New York, NY. Retrieved from <http://search.proquest.com.ezaccess.libraries.psu.edu/docview/619147930?accountid=13158>
- [9] Barberors, M., Gozalo, A., & Padayogyog, E. (2021). The Effect of the Teacher's Teaching Style on Students' Motivation. Retrieved from New York University: <https://steinhardt.nyu.edu/departments/teaching-and-learning/research/practitioner-action-research/effect-teachers-teaching>
- [10] Bhandari, P. (2021, February 15). An introduction to quantitative research. Retrieved from Scribbr: <https://www.scribbr.com/methodology/quantitative-research/>
- [11] Biggs, J., & Tang, C. (2007). *Teaching for Quality Learning at University* Maidenhead. Open University Press/McGraw Hill.
- [12] Bohren, A. (2019, July 15). Teaching Styles: Everything you need to know about teaching methods. CogniFit. <https://blog.cognifit.com/teaching-styles/?amp>
- [13] Bongco, R., & David, A. (2020). Filipino teachers' experiences as curriculum policy implementers in the evolving K to 12 landscape. ResearchGate. [https://www.researchgate.net/publication/339325091\\_Filipino\\_teachers'\\_experiences\\_as\\_curriculum\\_policy\\_implementers\\_in\\_the\\_evolution\\_of\\_K\\_to\\_12\\_landscape](https://www.researchgate.net/publication/339325091_Filipino_teachers'_experiences_as_curriculum_policy_implementers_in_the_evolution_of_K_to_12_landscape)
- [14] Cardino, J. M., & Ortega-Dela Cruz, R. A. (2020). Understanding of learning styles and teaching strategies towards improving the teaching and learning of mathematics. *LUMAT: International Journal on Math, Science and Technology Education*, 8(1). <https://doi.org/10.31129/lumat.8.1.1348>
- [15] Cataylo, K., Crodua, P. J., Denila, G. G., & Doña, J. M. (2018, March). THE EFFECT OF THE NEGROS ORIENTAL STATE UNIVERSITY SENIOR HIGH SCHOOL

- MATH TEACHER'S TEACHING STYLE ON STUDENTS' MOTIVATION. ResearchGate. [https://www.researchgate.net/profile/Craig\\_Refugio/project/Math-Education-2/attachment/5b0fde5b4cde260d15e2179a/AS:632313184526336@1527766619407/download/Mathspec+11+Crodua+et+al+%28Advance+Statitics-Research%29.pdf?context=projectUpdateDetail](https://www.researchgate.net/profile/Craig_Refugio/project/Math-Education-2/attachment/5b0fde5b4cde260d15e2179a/AS:632313184526336@1527766619407/download/Mathspec+11+Crodua+et+al+%28Advance+Statitics-Research%29.pdf?context=projectUpdateDetail)
- [16] Cheang, K. (2009). Effect of Learner-Centered Teaching on Motivation and Learning Strategies in a Third-Year Pharmacotherapy Course. *American Journal of Pharmaceutical Education*. 73(3). doi: [10.5688/aj730342](https://doi.org/10.5688/aj730342)
- [17] Chi-Kin, C., Chun-wah, C., Kim-fai, H., Wai-cheung, I., Heung, W., Ka-fai, Y., & Shung-chi, Y. (2008, September). Assessing generic outcomes of AMA Programmes (2007–08/OBA/AMA2). University Guide to OBE. <https://www.polyu.edu.hk/ama/o/be/comparison.htm>
- [18] Christensen, C., Garvin, D., & Sweet, A. (1991). *Education for judgment: The artistry of discussion leadership*. Boston, Mass.: Harvard Business School Press.
- [19] Chua, E., Sibbaluca, B., Miranda, R., Palmario, G., Moreno, R., & Solon, J. P. (2020). THE STATUS OF THE IMPLEMENTATION OF THE E-LEARNING CLASSROOM IN SELECTED HIGHER EDUCATION INSTITUTIONS IN REGION IV-A AMIDST THE COVID-19 CRISIS. *Journal of Critical Reviews*, 7(11). <https://doi.org/10.31838/jcr.07.11.41>
- [20] Commission on Higher Education (2020). COVID-19 Updates – Advisory 6. Quezon City, P.H.: CHED. <https://ched.gov.ph/covid-19-updates/>
- [21] Conti, G. (1985). Assessing Teaching Style in Adult Education: How and Why. *Lifelong Learning: Omnibus of Practice and Research*, 7-11.
- [22] DeCandia, C. (2021, April 6). Managing Distractions as an Online Student. Retrieved from Affordable Colleges Online: <https://www.affordablecollegesonline.org/college-resource-center/managing-distractions-for-online-students/>
- [23] DiPerna, J. & Elliot, S., (1999). Development and validation of the Academic Competence Evaluation Scales. *Journal of Psychoeducational Assessment*, 17, 207-225.
- [24] D.O. 32, s. 2017 – Gender-Responsive Basic Education Policy | Department of Education. (2017, June 29). GOV.PH. <https://www.deped.gov.ph/2017/06/29/do-32-s-2017-gender-responsive-basic-education-policy/>
- [25] Duncan (2015). *Motivated Strategies for Learning Questionnaire (MSLQ) Manual*
- [26] Duncan, T. G., & McKeachie, W. J. (2005). The Making of the Motivated Strategies for Learning Questionnaire. *Educational Psychologist*, 40(2),117-128. [https://doi.org/10.1207/s15326985ep4002\\_6](https://doi.org/10.1207/s15326985ep4002_6)
- [27] Duncan, T., & Mckeachie, W. (2015). *Motivated Strategies for Learning Questionnaire (MSLQ) Manual*. ResearchGate, 5.
- [28] Dunn, K. E., Lo, W., Mulvenon, S., Sutcliffe, R., (2012). Revisiting the Motivated Strategies for Learning Questionnaire: A Theoretical and Statistical Reevaluation of the Metacognitive Self-Regulation and Effort Regulation Subscales. *Educational and Psychological Measurement* 72(2) 312–331
- [29] Eccles & Wigfield (2002). *Motivational Beliefs, Values, and Goals*. Institute for Social Research, University of Michigan, Ann Arbor, Michigan 48106. From [https://www.researchgate.net/publication/281345525\\_Motivational\\_Beliefs\\_Values\\_and\\_Goals](https://www.researchgate.net/publication/281345525_Motivational_Beliefs_Values_and_Goals)

- [30] Education in a Pandemic. (2021). Retrieved from PINNGUAQ: [https://pinnguaq.com/learn/the-root-stem-podcast/education-in-a-pandemic?gclid=Cj0KCQjw4ImEBhDFARIsAGOTMj\\_P-I2jpTdd\\_PxhlKC1Dwg8WqN0DI7tziAbmiIY-dgsYcAvAls9jIsaAjpgZEALw\\_wcB](https://pinnguaq.com/learn/the-root-stem-podcast/education-in-a-pandemic?gclid=Cj0KCQjw4ImEBhDFARIsAGOTMj_P-I2jpTdd_PxhlKC1Dwg8WqN0DI7tziAbmiIY-dgsYcAvAls9jIsaAjpgZEALw_wcB)
- [31] Ervin, B. (2012). LEARNER-CENTERED EDUCATION: BRIDGING THE GAP BETWEEN IDEAL AND ACTUAL PRACTICE. 51.
- [32] Filipino teachers on adjusting to distance learning. (2020, September 5). Manila Standard. <https://manilastandard.net/mobile/article/333348>
- a. Flexible Online Learning is Better Learning. (2017, February 15). Retrieved from diversity: <https://iversity.org/blog/flexible-online-learning/>
- [33] Hinosolango, M., Dinagsao, A. (2014). The Impact of Learner-Centered Teaching on Student's Learning Skills and Strategies. *International Journal for Cross-Disciplinary Subjects in Education*. 5(4)
- [34] INNOVA. (2018, January 4). How Effective are these Five Teaching Styles? Innova Design Group. <https://www.innovadesigngroup.co.uk/news/how-effective-are-these-five-teaching-styles/>
- [35] Instructional Strategies for Online Courses - ION Professional eLearning Programs - UIS. (n.d.). The University of Illinois Springfield. Retrieved May 10, 2021, from <https://www.uis.edu/ion/resources/tutorials/pedagogy/instructional-strategies-for-online-courses/>
- [36] Joaquin, J. J. B., Biana, H., & Dacela, M.A. (2020). The Philippine Higher Education Sector in the Time of COVID-19. *Frontiers*. <https://www.frontiersin.org/articles/10.3389/feduc.2020.576371/full#B45>
- [37] Khalil, M., Humayun, M., & Zamar, N. (2021, February). COVID-19 Impact on Educational System Globally. *Research Gate*. [https://www.researchgate.net/publication/349419205\\_COVID-19\\_Impact\\_on\\_Educational\\_System\\_Globally](https://www.researchgate.net/publication/349419205_COVID-19_Impact_on_Educational_System_Globally)
- [38] Kenton, W. (2021) Pearson Coefficient. Investopedia. Retrieved from <https://www.investopedia.com/terms/p/pearsoncoefficient.asp>
- [39] Llanos, R. D. (2020). Classroom Management Techniques and Teaching Performance. *The Philippine E-Journals*. <https://ejournals.ph/article.php?id=15565>
- [40] Mahmood, N. (2014, January). Effect of Different Teaching Styles on Students' Motivation towards English Language learning. *ResearchGate*. [https://www.researchgate.net/profile/Nasir-Mahmood-17/publication/334626377\\_EFFECT\\_OF\\_DIFFERENT\\_TEACHING\\_STYLES\\_ON\\_STUDENTS%27\\_MOTIVATION\\_TOWARDS\\_ENGLISH\\_LANGUAGE\\_LEARNING\\_AT\\_SECONDARY\\_LEVEL/links/5d36dd084585153e59199d5c/EFFECT-OF-DIFFERENT-TEACHING-STYLES-ON-STUDENTS-MOTIVATION-TOWARDS-ENGLISH-LANGUAGE-LEARNING-AT-SECONDARY-LEVEL.pdf](https://www.researchgate.net/profile/Nasir-Mahmood-17/publication/334626377_EFFECT_OF_DIFFERENT_TEACHING_STYLES_ON_STUDENTS%27_MOTIVATION_TOWARDS_ENGLISH_LANGUAGE_LEARNING_AT_SECONDARY_LEVEL/links/5d36dd084585153e59199d5c/EFFECT-OF-DIFFERENT-TEACHING-STYLES-ON-STUDENTS-MOTIVATION-TOWARDS-ENGLISH-LANGUAGE-LEARNING-AT-SECONDARY-LEVEL.pdf)
- [41] Magsambol, B. (2020, July 22). FAST FACTS: CHED's flexible learning. *Rappler*. <https://www.rappler.com/newsbreak/iq/things-to-know-ched-flexible-learning>
- [42] Modern Teaching Methods | Importance and Application | Eduvoice. (2020, October 29). Eduvoice | The Voice of Education Industry. <https://eduvoice.in/modern-teaching-methods/#22-traditional-t-eaching-methods->
- [43] Montemayor, M. T. (2018, November 9). Teacher education must be learner-centered: DepEd exec. *Philippine News Agency*. <https://www.pna.gov.ph/articles/1053507>

- [44] Muhammad, A. T., Muhammad, F. S., Muhammad, A., Shahid, I. D., & Hassan, D. A. (2012). Influence of Teacher on Student' Learning Motivation in Management Sciences Studies. *American Journal of Scientific Research*, 67. <http://www.eurojournals.com/ajsr.htm>
- [45] Onoda, S. (2014). Examining the Relationships between Self-efficacy, Effort Regulation Strategy Use, and English Vocabulary Skills. *Studies in Self-Access Learning Journal*, 357-371.
- [46] Oztok, M., Zingaro, D., & Hewitt, J. (2013). Exploring asynchronous and synchronous tool use in online courses: computer and education.
- [47] Persaud, C. (2021, February 3). Teaching Styles: The Ultimate Guide. Top Hat. <https://tophat.com/blog/teaching-styles/>
- [48] Pintrich, R. R., & DeGroot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance, *Journal of Educational Psychology*
- [49] Pintrich, P. R., & Schunk, D. H. (2002). *Motivation in Education: Theory, research, and applications*. Englewood Cliffs, NJ: Prentice-Hall Merrill.
- [50] Pitsi, A., Digelidis, N., & Papaioannou, A. (2015). The effects of reciprocal and self-check teaching styles in students' intrinsic-extrinsic motivation, enjoyment, and autonomy in teaching traditional Greek dances. *Journal of Physical Education and Sport*, 15(2). <https://doi.org/10.7752/jpes.2015.02053>
- [51] Rakes & Dunn (2010). The Impact of Online Graduate Students' Motivation and Self-Regulation on Academic Procrastination. *Journal of Interactive Learning*
- [52] Self-Regulation | College of Education and Human Sciences. (n.d.). The University of Nebraska-Lincoln. Retrieved May 12, 2021, from <https://cehs.unl.edu/secd/self-regulation/>
- [53] Shivaramaiah, G. (2018, June 1). Teaching Learning Methods: Traditional vs. Modern vs. Peer-Assisted Learning. Xavier University School of Medicine Aruba - Caribbean. <https://xusom.com/uncategorized/teaching-learning-methods-traditional-vs-modern-vs-peer-assisted-learning/>
- [54] Simonson, M. (n.d.). Distance learning | Education. Encyclopedia Britannica. Retrieved May 10, 2021, from <https://www.britannica.com/topic/distance-learning>
- [55] Site Online Learning. (2020, July). Strategies to Mitigate Online Learning Obstacles in Schools | Site Online Learning Philippines - [ph.siteonlinelearning.com](http://ph.siteonlinelearning.com). Site Online. <http://ph.siteonlinelearning.com/blog/strategies-to-mitigate-online-learning-obstacles-in-schools>
- [56] Tan, J. (2020, March 31). Miriam Santiago filed a bill to prepare the Philippines for pandemics years ago. MSN News. <https://www.msn.com/en-ph/news/national/miriam-santiago-filed-a-bill-to-prepare-the-philippines-for-pandemics-years-ago/ar-BB11WbdV?li=BB8zL6>
- [57] Teaching Methods. (2020). Teach100. <https://teach.com/what/teachers-know/teaching-methods/>
- [58] TOP HAT Glossary. (n.d.). Retrieved from TOP HAT: <https://tophat.com/glossary/f/flexible-learning/>
- [59] Torio, V. A. G., & Cabrillas-Torio, M. Z. (2015). Whole-brain teaching in the Philippines: Teaching strategy for addressing motivation and academic performance. *International Journal of Research Studies in Education*, 5(3). <https://doi.org/10.5861/ijrse.2015.1289>

- [60] Villavicencio, F. T., & Bernardo, A. B. I. (2012). Positive academic emotions moderate the relationship between self-regulation and academic achievement. *British Journal of Educational Psychology*, 83(2), 329–340. <https://doi.org/10.1111/j.2044-8279.2012.02064.x>
- [61] Welcome, A. (2019, April 4). The 6 Main Teaching Styles and How They Impact Students. Adam Welcome. <https://mradamwelcome.com/teaching-styles/>
- [62] What is teaching? A definition and discussion – infed.org: (2016, April 21). Infed.Org. <https://infed.org/mobi/what-is-teaching/>
- [63] Wolters, C. A., Pintrich, P. R., & Karabenick, S. A. (2005). Assessing academic self-regulated learning. In K. A. Moore and L. H. Lippman (Eds). *What do children need to flourish?* (pp. 251-270). New York: Springer.
- [64] Worldometer. (2021, April 03). Retrieved from Coronavirus Update. Worldometer: <https://www.worldometers.info/coronavirus/>
- [65] Xiao, S., Yaon, K., & Wang, T. (2019). The Relationship of Self-regulated Learning and Academic Performance. SHS Web Conference
- [66] Yoshida, F., Conti, G. J., Yamauchi, T., Iwasaki, T. (2014) Development of an Instrument to Measure Teaching Style in Japan: The Teaching Style Assessment Scale, *Journal of Adult Education*, Volume 43, Number 1
- [67] Zimmerman, B. J. (2001). Theories of self-regulated learning and academic achievement: An overview and analysis. *Self-regulated learning and academic achievement: Theoretical perspectives* (2nd ed.). (pp. 1-37) Lawrence Erlbaum Associates Publishers, Mahwah, NJ. Retrieved from <http://search.proquest.com.ezaccess.libraries.psu.edu/docview/619618456?accountid=13158>
- [68] Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81(3), 329-339.

## Appendices

### Appendix A

#### Modified “The Teaching Styles Assessment Scale”

Read the descriptions and rate from 0 to 5: 0–Never, 1–Almost Never, 2– Seldom, 3–Often, 4–Almost Always, and 5–Always

No.	Description	Scale
1	Our teacher allows students to participate in developing the criteria for evaluating our performance in class.	
2	Our teacher allows older students more time to complete assignments when we need it.	
3	Our teacher helps students diagnose the gaps between our goals and our present level of performance.	
4	Our teacher provides knowledge rather than serve as a resource person.	
5	Our teacher participates in the informal counseling of students.	
6	Our teacher uses lecturing as the best method for presenting their subject material to adult students.	
7	Our teacher makes sure that the online classroom is organize so that it is easy for students to interact.	
8	Our teacher plans learning episodes to take into account students' prior experiences.	
9	Our teacher allows students to participate in making decisions about the topics that will be covered in class.	
10	Our teacher uses one basic teaching method because he/she have found that most students have a similar style of learning.	
11	Our teacher uses different techniques depending on the students being taught.	
12	Our teacher encourages dialogue among students.	
13	Our teacher uses written tests to assess the degree of academic growth in learning rather than to indicate new directions f earning.	
14	Our teacher utilizes the many competencies that most adults already possess to achieve educational objectives.	
15	Our teacher accepts errors as a natural part of the learning process.	
16	Our teacher has individual conferences to help students identify their educational needs.	
17	Our teacher let each student work at his/her own rate regardless of the amount of time it takes him/her to learn a new concept	
18	Our teacher helps students develop short-range as well as long-range objectives.	
19	Our teacher allows students to take periodic breaks during the class.	
20	Our teacher uses methods that foster quiet, productive deskwork.	
21	Our teacher uses tests as chief method of evaluating students.	

22	Our teacher plans activities that will encourage each student's growth from dependence on others to greater independence.	
23	Our teacher gears instructional objectives to match the individual abilities and needs of the students.	
24	Our teacher encourages students to ask questions about the nature of their society.	
25	Our teacher allows a student's motives for participating in continuing education to be a major determinant in the planning or earning objectives.	
26	Our teacher let students identify their own problems that need to be solved.	
27	Our teacher organizes adult learning episodes according to the problems that my students encounter in everyday life.	
28	Our teacher uses different materials with different students.	
29	Our teacher helps students relate new learning to their prior experiences.	
30	Our teacher teaches units about problems of everyday living.	

\*Yoshida, F., Conti, G. J., Yamauchi, T., Iwasaki, T. (2014) Development of an Instrument to Measure Teaching Style in Japan: The Teaching Style Assessment Scale, *Journal of Adult Education*, Volume 43, Number 1

## **Appendix B**

### **Motivated Learning and Strategies Questionnaires (MLSQ)**

Please rate the following items based on your behavior in this class. Your rating should be on a 7point scale where **1= not at all true of me** to **7=very true of me**.

1. I prefer class work that is challenging so I can learn new things.
2. It is important for me to learn what is being taught in this class
3. I think I will be able to use what I learn in this class in other classes
4. I often choose paper topics I will learn something from even if they require more work
5. I am sure I can do an excellent job on the problems and tasks assigned for this class
6. I think I will receive a good grade in this class
7. My study skills are excellent compared with others in this class
8. I think that what we are learning in this class is interesting
9. When I take a test, I think about how poorly I am doing
10. When I study for a test, I try to put together the information from class and from the book
11. When I do homework, I try to remember what the teacher said in class so I can answer the questions correctly
12. It is hard for me to decide what the main ideas are in what I read
13. When work is hard I either give up or study only the easy parts
14. When I study for a test, I try to remember as many facts as I can

\*Pintrich, R. R., & DeGroot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance, *Journal of Educational Psychology*, 82, 33-40.

## Appendix C

### General Strategies for Learning (GSL)

GSL item	Statement	Scale
1	When reading for this course, I make up questions to help me focus my reading.	
2	If course materials are difficult to understand, I change the way I read the material.	
3	I work hard to do well in this class even if I don't like what we are doing.	
4	I ask myself questions to make sure I understand the material I have been studying in this class.	
5	Even when course materials are dull and uninteresting, I manage to keep working until I finish.	

\*Dunn, K. E., Lo, W., Mulvenon, S., Sutcliffe, R., (2012). Revisiting the Motivated Strategies for Learning Questionnaire: A Theoretical and Statistical Reevaluation of the Metacognitive Self-Regulation and Effort Regulation Subscales, *Educational and Psychological Measurement* 72(2) 312–331