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FACTORS OF SELF-REGULATED LEARNING IN THE ONLINE COMPONENT OF BLENDED LEARNING AMONG PRIVATE JUNIOR HIGH SCHOOL STUDENTS

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Acceptance Page

This paper prepared by **MARK BENLOR B. SY** with the title: **"Factors of Self-Regulated Learning in the Online Component of Blended Learning Among Private Junior High School Students"** is hereby accepted by the Faculty of Education, U.P. Open University, in partial fulfillment of the requirements for the Master of Distance Education.

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Certification of Final Thesis Manuscript Submission

I, Mark Benlor B. Sy declare that this Final Thesis Manuscript submission entitled **Factors of Self-Regulated Learning in the Online Component of Blended Learning Among Private Junior High School Students** is not more than 27,800 words in length including quotes and exclusive of tables, figures, appendices, bibliography, references, and footnotes. The thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Ethical considerations relevant to this study were reviewed by the researcher and the research panel prior to data collection, and all procedures were conducted in accordance with established principles of research ethics, including informed consent, confidentiality, and voluntary participation.

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Mark Benlor Sy February 06, 2026

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Abstract

Blended Learning has become an integral component of the Philippine education system, placing increased responsibility on learners to plan, monitor, and evaluate their own learning, particularly in the online component of this modality. This study examined the factors that facilitate and inhibit self-regulated learning (SRL) among private junior high school students engaged in blended learning environments. It also examined the mechanisms through which these factors influenced students' self-regulated learning behaviors and the essential student needs that emerged from them. Using an explanatory-sequential mixed-method design, the study administered the Self-Regulation for Learning Online (SRL-O) questionnaire to 442 students from two private schools to identify the key facilitating and inhibiting factors. This was followed by focus group discussions that explored how these factors shaped students' self-regulation in online learning contexts. Quantitative results revealed that *Online Social Support* and *Online Metacognition* emerged as the most prominent facilitating factors, while *Online Study Environment* and *Online Negative Achievement Emotion* surfaced as potential inhibiting factors. Qualitative findings further explained how online peer collaboration and metacognitive strategies supported students' SRL, while environmental constraints and negative achievement emotions hindered it. Synthesizing these findings enabled the study to identify key student needs that must be addressed to strengthen facilitating conditions and mitigate inhibiting one

INTRODUCTION

Background of the Study

Blended Learning has become an integral component in the Philippines education system. It "refers to the thoughtful integration of classroom face-to-face learning experiences with online learning experiences." (Garrison & Kanuka, 2004). While the onset of the COVID-19 pandemic initially prompted educational institutions in the Philippines to adopt alternative learning modalities, the more enduring impact has been the increased and consistent use of blended learning. For the school year 2022-2023 data from the Department of Education show that 6,867 out of 11,701 (58.69%) of private schools at the basic education level have implemented blended learning (Bautista, 2022). At the time of this writing, several institutions at both the basic and higher level have continued to implement blended learning as part of their learning delivery modality.

Reflecting this sustained shift, the Department of Education (DepEd) and Commission on Higher Education (CHED)—the two regulatory and governing agencies in basic and higher education in the Philippines—have integrated corresponding guidelines for the use and implementation of blended learning through Department Order (DO) No. 22 s. 2023 and CHED Memorandum Order (CMO) No. 04 s. 2023. These orders stipulate two key provisions that affirm the continued integration of blended learning: first, that blended learning may continue to be implemented in basic and higher education following the appropriate mix of in-person

and distance learning modalities; and second, that it be applied as an alternative mode of learning in circumstances where in-person classes are suspended or cancelled, due to calamities, emergencies, or any other condition that may endanger the health and safety of teaching and non-teaching personnel (Commission on Higher Education, 2023; Department of Education, 2023).

The second provision is particularly important in the context of the Philippines, where extreme weather conditions are experienced every year. For example, several public and private schools shifted to blended learning following the suspension of face-to-face classes caused by extreme heat, typhoons, and other calamities (Department of Education, 2025; Flores, 2025; Lena, 2025; Sevillano, 2024). This demonstrates how the blended learning modality can enable learning continuity despite extreme weather conditions that regularly occur in the country.

While the implementation of blended learning in the Philippines expanded in recent years, with policies and guidelines that support its integration in basic and higher education, the transition to this modality has not been without its challenges. For example, a March 2021 survey by the Social Weather Stations (SWS) revealed that 89 percent of Filipino families with members enrolled for the school year 2020-21 found blended learning “more difficult” than the regular face-to-face setup. In a study by Senn (2008), it was revealed that students perceived blended learning to have higher workload compared to traditional face-to-face. Other challenges highlighted by students in their experience with blended learning include: constant distractions caused by social media and household chores, low knowledge retention due to lack of guidance and discussion from teachers, unfamiliarity with

distance-based learning tools such as Google Classroom, Google Meet, and Google Chat, no or unstable internet connectivity, and insufficient learning resources (Balolong, 2022, Barroso et al., 2023; Eslit, 2023; Lumanglas 2020). Challenges related to skills such as self-management, self-discipline, and time management were highlighted by Barroso et al., (2023) and Eslit (2023). Students have also reported feelings of isolation and anxiety, resulting in low motivation (Balolong, 2022; Barroso et al., 2023; Eslit, 2023; Lumanglas, 2020).

These challenges in blended learning persist, often due to students' inability to employ strategies that allow them to take active control of their learning process (Buot, 2023). In this light, Self-Regulated Learning (SRL) offers a framework through which students, particularly in online distance settings, can develop the capacity to plan, monitor, and evaluate their learning behaviors. Self-regulated learning "refers to the processes whereby learners personally activate and sustain cognitions, affects, and behaviors that are systematically oriented toward the attainment of personal goals" (Schunk & Zimmerman, 2011, p.1). Self-regulated learners view learning as a systematic and controllable process in which they overcome challenges, accept greater responsibility for their outcomes, and are metacognitively, motivationally, and behaviorally active participants in their own learning (Zimmerman, 1990, p. 4). Learners who exhibit high levels of self-regulation also demonstrate stronger motivation, study intent, automaticity, and better academic performance (Broadbent & Fuller-Tyszkiewicz, 2018). Studies have consistently shown benefits associated with SRL including increased levels of satisfaction, engagement, and motivation (Buot, 2023; Habibi et al., 2021; Zhao & Cao, 2023). These SRL attributes and benefits, when considered alongside the challenges that students encounter in

blended learning contexts, suggest the potential of SRL to foster learning autonomy, improve learning outcomes, and enable a more resilient and adaptive learning environment.

The importance of SRL becomes even more pronounced in the online component of blended learning, where greater control and regulation of the learning process shift from the teacher to the learner (Song & Hill, 2007). However, students differ in the extent to which they self-regulate, and these differences are shaped by specific factors (Broadbent et al., 2022). Examining these factors is therefore essential for understanding how they facilitate or inhibit students' self-regulation in online learning contexts. To identify the factors that facilitate or inhibit students' self-regulation in this online environment, this study employs the *Self-Regulation for Learning Online* (SRL-O) questionnaire (Broadbent et al., 2022). This instrument was specifically developed for online and blended learning contexts to capture a wide range of motivational beliefs and learning strategies across its ten-factor structure (Broadbent et al., 2022).

Statement of the Problem

Several studies have shown that SRL can positively impact learning engagement (Buot, 2023; Zhao & Cao, 2023) as well as learning outcomes (Broadbent, 2017; Tuilan, 2023; Zhu et al., 2016), but studies exploring the factors that facilitate or inhibit SRL among secondary education students engaged in blended learning environments remain limited, particularly in the context of the Philippines (Xu et al., 2023). Furthermore, studies that examine how SRL functions within the online component of blended learning remain limited (Rasheed et al., 2019).

As blended learning becomes more prevalent in the Philippines, it will be crucial to identify the factors and the mechanisms by which they facilitate or inhibit students' self-regulation. This insight will help inform the needs that must be addressed to mitigate inhibiting factors and enhance facilitating factors in students' self-regulated learning. This study aims to address these gaps and seeks to answer the following research questions:

- **Research Question 1**: What key factors facilitate or inhibit students' self-regulated learning in the online component of a blended learning environment as measured by the SRL-O instrument?
- **Research Question 2**: In what ways do these facilitating and inhibiting factors influence students' self-regulated learning processes in the online component of a blended learning environment?

- **Research Question 3**: What student needs emerge from the findings that should be addressed to reduce the inhibiting factors and enhance the facilitating factors in students' self-regulated learning?

Significance of the Study

Understanding which factors promote or inhibit self-regulation, how they operate, and what needs they reveal among learners will become increasingly essential as schools continue to implement the blended learning modality in the Philippines. This study aims to provide a contextual view of self-regulated learning as it applies to private junior high school students engaged in blended learning environments.

By determining the factors that most prominently facilitate and inhibit self-regulated learning (RQ1) and explaining how these factors operate (RQ2), this study provides insights into the mechanisms through which students self-regulate, particularly when engaging in the online component of blended learning. The study also offers a deeper understanding of the range of SRL strategies students employ to enhance their learning processes and overcome challenges in online learning. Furthermore, identifying the specific student needs that must be addressed to mitigate inhibiting factors and enhance facilitating factors (RQ3) provides institutions with valuable information for designing appropriate support mechanisms that can help foster self-regulated learning among their students.

Finally, this study contributes to the limited body of research on self-regulated learning among younger learners (Xu et al., 2023) within the Philippine context. It provides empirical evidence on why and how private junior high school students enact self-regulated behaviors in the online component of blended learning.

Scope and Delimitations

Scope of the Study

This research examined the factors that facilitate and inhibit self-regulated learning among private junior high school students in the Philippines who are engaged in a blended learning modality. The investigation focused on two private schools in the Philippines, referred to as School A and School B. These schools have adopted and continue to implement blended learning as part of their learning modality. They were selected because they both implement blended learning but differ in the extent to which they use technology. School A's use of technology is integrated into their day-to-day learning delivery—whether in-person or online—with learners regularly accessing learning materials through a learning management system using digital devices. In contrast, School B limits its use of technology to the online component of its blended learning approach, while maintaining traditional teacher-led instruction during face-to-face classes. Both schools implement a 4+1—four days in-person and 1 day online—blended learning design. School A schedules Fridays as fully online, whereas School B schedules Wednesdays as fully online. During online learning days, asynchronous and synchronous modes are utilized for the subjects scheduled on designated days. The class schedules are rotated throughout the school year to ensure that each subject is alternately conducted during in-person and online sessions, preventing any subject from being consistently assigned to the scheduled online learning days.

Participants in this research were drawn from private junior high school students—Grade 7 through 10— enrolled in the school year 2024-2025. The data gathered from these students provide insights into the relevance and applicability of self-regulated learning among younger learners, where research remains limited (Xu et al., 2023). While both institutions offer programs at the junior and senior high school levels, this study focused only on junior high school students, as prior research (Habibi et al., 2021) has found that self-regulated learning among senior high school learners is already at a moderate level. Furthermore, the meta-analyses conducted by Xu et al. (2023) indicate that younger students demonstrate a greater capacity for developing and applying SRL strategies compared to older students, highlighting a critical window of opportunity for interventions during their formative years.

The study only included learners who are engaged in a specific type of blended learning that combines online and face-to-face instruction. Other forms of blended learning—such as face-to-face combined with television or radio-based instruction, face-to-face with modular distance learning, or face-to-face with video-tape or CD-ROM—were not included from this study. The investigation focused on the online component of blended learning, where the increased demand for autonomy and self-management presents the most significant challenge for students (Song & Hill, 2007). It is in this mode that control of learning shifts from educational institutions to the isolated learners (Fournier et al., 2014, as cited in Xu et al., 2023). In a survey administered to the participating schools for the 2023-2024 school year, the findings showed that students reported that the online learning modality contributed to their ability to learn independently compared to in-person

learning. This aligns with Broadbent and Poon's (2015) findings that independent and actively engaged learners are more likely to succeed in online learning. It also supports Xu et al.'s (2023, p. 2912) observation that the requirement for students to engage independently in online learning makes self-regulation increasingly essential. However, when asked about improvements in their overall performance, students reported that the in-person learning modality was more effective. This suggests that, while online learning fosters the development of independent learning skills, students perceive it to be less effective than in-person learning in enhancing overall academic performance.

Limitations of the Study

1. This research is limited to two private schools in the Philippines; therefore, the findings may not be directly applicable to other educational contexts, such as public schools or other private institutions.
2. The study will focus exclusively on private junior high school students who are engaged in a particular type of blended learning—online and face-to-face. Other blended learning variants, such as face-to-face and correspondence, face-to-face and modularized learning, or face-to-face and broadcast will not be examined. Therefore, the applicability of the findings may not be generalizable to other learner demographics and other blended learning types.
3. The motivational beliefs that will be examined in this study are limited to the four motivational factors of the SRL-O instrument: *Online Intrinsic Motivation*, *Online Extrinsic Motivation*, *Online Self-Efficacy*, and O*nline Negative Achievement Emotion*. The motivational factors were conceptually grounded in expectancy-value theory, which focuses on core motivational beliefs--expectancy (beliefs about ability), values (reasons why one wants to do a task), and affect (emotional reactions) (Broadbent et al., 2023, p. 137).
4. The study draws exclusively on data from student participants, excluding inputs from other stakeholders such as parents, teachers, and institutions. As a result, the views and experiences of these groups may not be reflected in the findings.

REVIEW OF RELATED LITERATURE

Review of Related Literature and Conceptual Framework

Blended Learning

The term blended learning can take on a variety of meanings. Driscoll (2002) has argued that the term itself can mean different things to different people. Driscoll (2002) referred to blended learning as encompassing four concepts: mixed modes of web-based technology; a combination of pedagogical approaches; a combination of instructional technology with actual job tasks; and a mix of any form of instructional technology with face-to-face instructor-led training. Graham (2006) offered this definition of the term: “Blended learning systems combine face-to-face instruction with computer-mediated instruction”. For the purpose of this study, the following operational definition was adopted: "Blended Learning refers to the thoughtful integration of classroom face-to-face learning experiences with online learning experiences” (Garrison & Kanuka, 2004).

Benefits and Challenges in Blended Learning

There have been a number of studies conducted on institutions that implemented blended learning in the Philippines (Balolong, 2022; Barroso et al., 2023; Eslit, 2023; Lumanglas, 2020). These studies provide valuable insights into the benefits and challenges that are commonly associated with this mode of learning. Specifically, the studies conducted by Balolong (2022), Barroso et al. (2023), Eslit (2023), and Lumanglas (2020), examined the benefits and challenges of blended learning as drawn from the perspectives of students, teachers, and parents.

From the students' perspective, the common benefits associated with blended learning include flexibility in terms of pace, place, and time; access to a diverse and wide range of learning resources; higher academic achievement; improvement in a variety of skills: technology, critical thinking, problem-solving; facilitation of personalized learning; encouraged self-management, self-paced, and independent learning. However, students also noted several challenges including: unstable and poor internet connectivity; constant distractions; minimal interaction; delayed feedback and support from teachers; access to and familiarity with ICT tools and devices; time-management; self-management; low motivation; and feelings of isolation and anxiety (Balolong, 2022; Barroso et al., 2023; Eslit, 2023; Lumanglas, 2020).

From the teachers' perspective, the common benefits associated with blended learning include: flexibility in the use of instructional strategies and innovative teaching methods; access to a diverse and wide range of teaching resources; development of technological capabilities; and creation of opportunities for professional development. On the other hand, teachers also faced challenges including: unstable and poor internet connectivity; limited resources and skill in designing and delivering engaging blended learning lessons; lack of experience and familiarity with online teaching tools; difficulty in monitoring student participation and engagement; and increase in workload (Balolong, 2022; Barroso et al., 2023; Eslit, 2023; Lumanglas, 2020).

From the parents' perspective, the common benefits associated with blended learning include greater flexibility in how they allocate time and adjust the support they provide, and increased involvement in their child's education. However, parents also cited challenges, including the higher costs associated with blended learning, limited skill and technical knowledge in supporting their child's learning, greater responsibility, and difficulty motivating their child to participate and engage in learning (Balolong, 2022; Barroso et al., 2023; Eslit, 2023; Lumanglas, 2020).

While these studies provide insights into the range of benefits that can be derived from the implementation of blended learning, they also highlight a number of challenges that are crucial to address. In traditional face-to-face learning, the regulation of learning predominantly rests with the teacher (Xu et al., 2023). This regulation encompasses the planning, monitoring, and evaluation of the learning process. In blended learning however, particularly in the online component of blended learning, the students' responsibility to initiate their learning process, set learning goals, monitor their learning progress, and evaluate their learning outcomes increases (Song & Hill, 2007). In a systematic review conducted by Rasheed et al. (2020), the challenges that students faced in the online component of blended learning were examined. The study revealed that the challenges that students face in the online component of blended learning can be organized into five categories: self-regulation, technological literacy and competency, student isolation, technological sufficiency, and technological complexity. Of the five categories, self-regulation challenges constituted the highest frequency, with a count of n = 18 reported challenges across the total sample of N = 30 selected studies. The self-regulation category was further broken down into subcategories that reflected

the following self-regulation related challenges: procrastination, online help-seeking, self-regulation skills, limited preparation before class, poor time management skills, and improper utilization of online peer learning strategies (Rasheed et al., 2020). These results further highlight the need to explore the role of self-regulation in addressing these challenges.

As the regulation of learning increasingly shifts from teachers to students in online learning contexts (Song & Hill, 2007), understanding how learners plan, monitor, and evaluate their learning becomes critical. This shift brings focus to the concept of self-regulated learning—a theoretical framework that explains how students exercise control over their thoughts, feelings, and actions to achieve learning goals.

Self-Regulated Learning

What is Self-Regulated Learning?

Self-regulated learning (SRL) “refers to the processes whereby learners personally activate and sustain cognitions, affects, and behaviors that are systematically oriented toward the attainment of personal goals” (Schunk & Zimmerman, 2011, p.1). SRL is viewed as a dynamic and iterative process that involves three cyclical phases: the *Forethought* phase, *Performance* phase, and the *Self-Reflection* phase (Zimmerman & Cleary, 2009).

The *Forethought Phase* is the first of the three cyclical phases in the social cognitive model of self-regulated learning. It is defined as “the self-regulatory processes that precede efforts to act and set the stage for it” (Zimmerman & Cleary,

2009, p. 248). This phase involves how a learner prepares and plans their approach to a learning task. It consists of two main components: **task analysis** and **self-motivation beliefs**. In task analysis, learners set learning goals and strategically plan to attain their desired learning outcomes. In self-motivation beliefs, learners reflect on their self-efficacy, form beliefs about the outcomes of their performance, their appreciation of the task's inherent value, and their orientation toward learning goals. Research shows that the forethought phase of self-regulated learning is crucial for academic success. Without clear intention and direction at the outset, learners may flounder, lose motivation, and give up in online or blended learning environments (Xu et al., 2023).

The next phase, following the Forethought Phase, is the *Performance Phase*. It is defined as "the self-regulatory processes that occur during motoric efforts and affect attention and action (Zimmerman & Cleary, 2009, p. 248)". In this phase, learners actively implement their strategies and monitor their progress. It consists of two main components: **self-control**, and **self-observation**.

In the self-control component, learners employ various self-regulated learning strategies to maintain learning engagement and optimize performance. Studies show that self-control strategies of avoiding distraction, focusing on learning, and using time effectively were found to be important for student success in online learning environments (Zhu et al., 2016). Learners who reported higher levels of self-control capability achieved better learning outcomes (Zhu et. al, 2016, p. 54).

In self-observation, learners monitor their performance in real-time and keep records to ensure that their actions are aligned with their goals. This process supports Bandura's (1986) view that learning from observing one's own behavior and its outcomes is among the most influential methods for increasing learner's perception of self-efficacy and improving knowledge retention. This type of feedback loop enables learners to determine whether specific strategies work effectively for them, which in turn motivates the continued use and refinement of successful learning strategies.

The third phase in the cyclical model of self-regulated learning, following the learner's implementation of plans during the Performance Phase, is the *Self-Reflection Phase*. It is defined as "the self-regulatory processes that occur after performance efforts and influence a person's response to that experience" (Zimmerman & Cleary, 2009, p. 248). In this phase, learners evaluate their performance against established goals or standards. It also includes their emotional responses to the results of their performance and the adjustments they make to their goals and strategies based on those results. It consists of two main components: **self-judgment** and **self-reaction**.

In the self-judgment component, learners evaluate their performance relative to specific standards and make causal attributions on their performance. The qualitative study of Vanslambrouck et al., (2018) revealed that students judge their learning in three forms: first, through self-evaluation tactics such as writing bullet points of what they remembered from their course (*e.g.* "What have I remembered?" or "What did I just read?"); second, by judging their cognition through statements

about their level of knowledge (*e.g.* “I know the content”, “It is not clear”); and third, by assessing their cognition in relation to online learning (*e.g.* “I do not get it as much as in face to face”, “I forget it a lot faster”).

In the self-reaction component, learners reflect on their satisfaction with their performance and take actions that are influenced by their emotional responses. The outcomes of the self-reflection phase, in turn, inform the forethought phase, influencing subsequent effort and motivation, thus completing the self-regulatory feedback cycle (Zimmerman & Cleary, 2009, p. 248).

The three phases of self-regulated learning—Forethought, Performance, and Self-Reflection—provide the theoretical framework for understanding how learners manage and direct their own learning. However, to effectively measure and analyze the extent to which students engage in self-regulated learning, particularly in online learning contexts, a specialized assessment instrument is needed. The Self-Regulation for Learning Online (SRL-O) questionnaire was developed to capture the range of motivational beliefs and learning strategies employed in these contexts (Broadbent et al., 2022). The final version of the instrument includes ten specific factors organized into two primary dimensions: *Motivational Beliefs* and *Learning Strategies*. These dimensions represent the two essential components of effective learning regulation (Broadbent et al., 2022, p. 136). Motivational beliefs explain the *why*—the drive and commitment that initiate learning—while learning strategies represent the *how*—the methods and processes used to carry out and evaluate learning tasks. The following section provides an overview of these two dimensions and the factors that constitute each.

Motivational Beliefs

To capture **why** students choose to self-regulate, the SRL-O further segments motivational beliefs into four key factors. These factors were conceptually grounded in the expectancy-value theory, which focuses on core motivational beliefs of expectancy (*i.e*., beliefs about ability), values (*i.e.,* reasons why one wants to do a task), and affects (*i.e.,* emotional reactions) (Broadbent et al., 2023, p. 137). The following sections sequentially introduce and discuss these four factors.

Self-Efficacy

Self-Efficacy is a factor that refers to the student's perceived abilities and belief in academic success in online courses (Broadbent et al., 2022, p. 155). Within Zimmerman and Cleary's (2009) model of SRL, Self-Efficacy is a key component of the Forethought phase where students' motivation to engage in learning tasks is influenced by their own beliefs and capabilities to succeed. Students who have low self-efficacy for a particular learning task are more likely to avoid it compared to those who have higher levels of self-efficacy. Furthermore, students who believe that they can be effective tend to exert effort and demonstrate more resilience in the face of setbacks or challenges compared to those who do not (Bandura, 1977). It is important to note that students' beliefs about their self-efficacy change depending on the domain of learning, meaning that high self-efficacy in one domain does not necessarily translate to high self-efficacy in another (Bandura, 1977).

Intrinsic Motivation

Intrinsic Motivation is a factor that refers to the internal reasons why a learner wants to engage in their learning. In particular, it measures whether the learner

perceives themselves to be participating in a task for reasons such as interest, challenge, curiosity, enjoyment, and mastery (Broadbent et al., 2022, p. 155). Students who are genuinely interested in the subject matter for intrinsic reasons rather than extrinsic reasons—such as obtaining high grades—are more likely to be actively involved in their learning (Pintrich et al., 1991). Moreover, intrinsic motivation has been found to be a positive predictor of enhanced student SRL in online learning environments based on eight studies that were featured in Dong et al.'s (2023) review.

Extrinsic Motivation

Extrinsic Motivation is a factor that refers to the external reasons why a learner wants to engage in their learning. In particular, it measures whether the learner perceives themselves to be participating in a task for reasons such as grades, rewards, performance, evaluation by others, or competition (Broadbent et al., 2022, p. 156). Students who have high extrinsic motivation engage in learning tasks as a means to an end. Their engagement in a learning task is not directly tied to the task itself but rather the outcome they get from accomplishing the task, such as rewards, praise, and grades (Pintrich et al., 1991). In a study by Wolters (1999), increased motivation was observed among students who focused on attaining good grades rather than the students who depended on their inner desire to learn, indicating that learning task interest or value is not the only source of motivation. Extrinsic Motivation is a component in the Forethought phase of Zimmerman and Cleary’s (2009) model of SRL.

Negative Achievement Emotion

Negative Achievement is a factor that refers to negative activating emotions such as anxiety and shame, as well as negative deactivating emotions such as hopelessness and boredom (Broadbent et al., 2022, p. 156). Negative deactivating emotions can have a detrimental impact on motivation, mental processing, and can increase worry and mental distraction. Negative activating emotions may prompt effort but may also reduce intrinsic motivation and increase rigid strategy use (Broadbent et al., 2022, p. 156). Students who perceive learning tasks as stressful, meaningless, or boring may experience reduced effort and resilience. They are more inclined to focus on negative outcomes and the consequences of such outcomes, which further fuel their feelings of anxiety and task avoidance behaviors (Alonso-Tapia et al., 2014).

Learning Strategies

While motivation provides the catalyst to begin, academic success relies on the effective use of learning strategies (Broadbent, 2017; Xu et al., 2023). These strategies represent the '*how'* of self-regulated learning, providing the tools and methods for managing cognition and resources during the learning process (Broadbent et al., 2022, p. 136). To capture how students self-regulate, the SRL-O further segments learning strategies into six key factors, namely: *Planning and Time Management, Metacognition, Study Environment, Effort Regulation, Social Support,* and *Task Strategies*. The following sections sequentially introduce and discuss these six factors.

Planning and Time Management

Planning and Time Management is a factor that refers to how a learner structures and organizes their efforts and time towards online study. This involves scheduling, planning, and setting goals (Broadbent et al., 2022, p. 157). Planning involves identifying the appropriate strategies for a given learning task while time management involves estimating the time requirements for a given learning task and monitoring progress towards its completion (Zimmerman & Cleary, 2009). In a study by Buot (2023), it was found that students who are adept at planning are more likely to feel fulfilled and satisfied with their learning progress. Moreover, studies by Broadbent (2017) and Habibi et al. (2021) revealed that time management and effort regulation are among the most utilized learning strategies by students and that they have a positive correlation with their academic performance.

Metacognition

Metacognition is a factor that refers to how a learner metacognitively plans, monitors, and evaluates their thinking while engaged in a learning task (Broadbent et al., 2022, p. 157). Online metacognitive planning includes goal setting and task analysis, which make organizing and comprehending learning resources easier. Online metacognitive monitoring includes reflecting, questioning, and self-testing while studying. In contrast, online metacognitive evaluation refers to adjusting and correcting one's cognitive activities and behaviors in response to one's own evaluation of performance during a task (Broadbent et al., 2022, p. 157). Metacognition is essential for the development of students' critical thinking, particularly in online learning environments where there is greater demand for

learning independence and control compared to traditional in-person learning (Garrison & Kanuka, 2004).

Study Environment

Study Environment is a factor that refers to how a learner prepares a learning environment that is quiet and distraction-free (Broadbent et al., 2022, p. 158). Several strategies highlighted by Zimmerman (1989) include the arrangement of a quiet study area at home for completing school work, eliminating noise, ensuring adequate lighting, and securing a dedicated workspace. Students' ability to optimize their environment is essential for successful learning, especially during online learning. For instance, Dong et al.'s (2023) review of five studies on the effect of study environments on students' self-regulation revealed that quiet learning environments were the most important predictor of effective resource management strategies in online learning.

Effort Regulation

Effort Regulation is a factor that refers to a learner's ability to persist in completing tasks even when they are uninteresting, when distractions are present, or when there are more interesting things to do (Broadbent et al., 2022, p. 159). It requires learners to remain committed to their study goals, control their efforts, and implement a range of strategies (Broadbent et al., 2022, p. 158). In online and blended learning contexts, academic procrastination has become a common issue (Rasheed et al., 2020). Habibi et al.'s (2021) study revealed that academic procrastination has been found to have a significant negative correlation with effort regulation, indicating that higher effort regulation is associated with lower academic

procrastination, and vice versa. In a meta-analysis of SRL strategies, Richardson et al. (2012) found that effort regulation, along with time management, was among the strongest predictors of success in academic performance. Similarly, separate studies by Broadbent (2017) and Habibi et al. (2021), revealed that these two strategies are among the most utilized strategies by students in online and blended learning contexts.

Social Support

Social Support is a factor that refers to the learner's willingness to seek help from and collaborate with peers and teachers through the internet (Broadbent et al., 2022, p. 158). Peer collaboration, a form of online social support, has been found to have a significant and positive impact on academic performance and on students' SRL (Lim et al., 2020). In addition, several studies have found that social support improves learners' SRL levels (Karaoğlan Yılmaz et al., 2018; Yu & Zhou, 2022, as cited in Done et al., 2023). This suggests that access to a supportive online environment can help foster collaborative learning, thereby enhancing academic performance and self-regulation.

Task Strategies

Task Strategies is a factor that refers to the strategies that learners use to integrate and connect new information with prior knowledge, select appropriate information, construct connections among ideas, and apply previous knowledge to new situations (Broadbent et al., 2022, p. 159). Vanslambrouck et al.'s (2018) identified organization and rehearsal as two of the main recurring strategies that students employ in blended learning environments. Organization strategies that help

students structure information effectively include summarizing information, highlighting keywords, organizing folders, creating charts, and taking notes (Vanslambrouck et al., 2018). In addition, a meta-analysis by Broadbent and Poon (2015) highlighted the importance of elaboration strategies, which encourage students to move beyond rote memorization and actively engage with learning resources, leading to increased retention, understanding, and application of knowledge. Examples of elaboration strategies that help students connect information to existing knowledge include creating their own examples, reading repeatedly, and explaining concepts using their own words (Vanslambrouck et al., 2018).

Filipino Cultural Values, Familial Dynamics, and their Influence on Self-Regulated Learning

While many of the literature on self-regulated learning is grounded in Western contexts that highlight individual autonomy and agency, Filipino learners are situated within a socio-cultural environment that are fundamentally shaped by relational values, familial obligations, and virtue ethics. These cultural dynamics influence how students regulate emotions, seek help, and interpret academic success.

Tablan's (2021) study explored the concept of meaningful work from a virtue-ethics framework that is contextualized to Filipino realities and their cultural heritage. The study highlights the values such as *pakikisama* (getting along), *pakikiramdam* (sensitivity to others), *malasakit* (concern), *hiya* (sense of propriety), and *utang na loob* (debt of gratitude). In Tablan's (2021) virtue ethics framework, meaningful engagement and effort are not driven solely by individual goals but by

maintaining harmonious relationships with others. In the context of SRL, this suggests that Filipino learners do not regulate purely as isolated individuals. Instead, regulation is socially mediated, where peers, teachers, and family members function as external regulators.

Help-seeking in Filipino culture is shaped by *hiya*, trust, and relational safety. Pantaleon et al. (2023), found that learners overwhelmingly prefer informal help from peers and family rather than professional support because asking for help from authority figures may be perceived as burdensome. Students are more likely to seek support when they feel understood and emotionally safe. This suggests that help-seeking is not merely a learning strategy, but a behavior that is guided by culturally embedded relational expectations.

Filipino students' motivation is also shaped by strong familial expectations. Retuya et al. (2017) demonstrated that priming Filipino students with "family obligation" increased academic performance compared to priming mastery or performance goals. This indicates that academic achievement is often framed as a means of honoring family sacrifices rather than exclusively for personal gain.

While *utang na loob* fosters gratitude and resilience, it may also heighten emotional strain. Dizon et al. (2025) found significant relationships between *utang na loob*, perceived academic pressure, and anxiety levels among Filipino students. The findings reveal that the traditional debt of gratitude or "utang na loob" can create psychological strain and anxiety when combined with high parental pressure. This

often leads to toxic levels of stress as students feel an involuntary burden to succeed.

These Filipino cultural values and familial dynamics play a critical role in shaping how students self-regulate. The studies highlight how Filipino learners regulate within a deeply social environment where family, peers, and cultural expectations form part of the regulatory system.

As discussed in the preceding sections, the continued implementation of blended learning places greater responsibility on learners to plan, monitor, and evaluate their own learning (Song & Hill, 2007). Equipping students with frameworks such as self-regulated learning (SRL) can help them effectively manage the cognitive, motivational, and behavioral demands of online learning (Broadbent & Fuller-Tyszkiewicz, 2018; Zimmerman, 1990). Understanding how students currently self-regulate, the cultural and familial conditions that shape this regulation, and the extent to which they do so provides an important basis for identifying and designing contextually meaningful forms of support that may enhance their learning. The Self-Regulation for Learning Online (SRL-O) instrument provides a structured way to examine these through its two dimensions—motivational beliefs and learning strategies (Broadbent et al., 2022). The conceptual framework that follows integrates these dimensions to address the study's research questions on the factors, mechanisms, and needs that influence students' self-regulated learning in the online component of blended learning.

Conceptual Framework

The conceptual framework of this study is anchored on Zimmerman and Cleary's (2009) social-cognitive model of self-regulated learning (SRL) and the Self-Regulation for Learning Online (SRL-O) instrument developed by Broadbent et al. (2022). In Zimmerman and Cleary's model, self-regulated learning is viewed as a dynamic and iterative process that involves three cyclical phases: the *Forethought phase*, *Performance phase*, and the *Self-Reflection phase*. These phases together represent how learners exercise agency over their thoughts, emotions, and actions *before learning* (Forethought), *during learning* (Performance), and *after learning* (Self-reflection) as they work toward personal learning goals. These three phases are depicted as "Cyclical Phases of Self-regulated Learning Process" on the left side of the framework as shown in **Figure 2**.

As outlined in the earlier sections, the Self-Regulation for Learning Online (SRL-O) instrument complements this model by specifying ten factors, organized into two dimensions that describe the motivational beliefs and learning strategies students employ when learning in online contexts. In Figure 2, these ten factors are represented conceptually in the boxes labelled "Facilitating Factors as measured by the SRL-O" and "Inhibiting Factors as measured by the SRL-O".

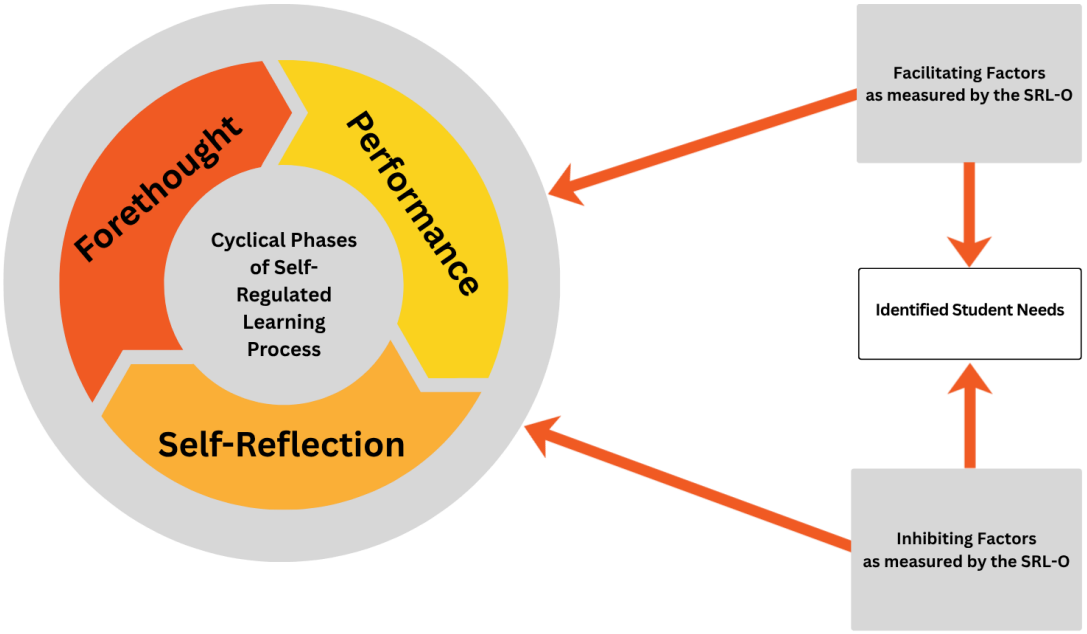
At the conceptual level, the framework assumes that some of these SRL-O factors function as facilitating factors, while others operate as inhibiting factors of students' self-regulated learning in online contexts. This expectation is shown through the arrows from the boxes labelled "Facilitating Factors as measured by the SRL-O" and "Inhibiting Factors as measured by the SRL-O" that point toward the

SRL cycle as shown in **Figure 2**. The quantitative phase of the study examines which of the ten SRL-O factors emerge as prominent facilitating factors, and which emerge as potential inhibitors of students' SRL in online learning.

The box labelled "Identified Student Needs" in **Figure 2** represents the outcome derived from the synthesis of the quantitative and qualitative findings. After the study determines which factors facilitate or inhibit SRL and how they influence students' self-regulated learning processes in the online component of a blended learning environment, specific student needs will be identified. These student needs refer to conditions or mechanisms of support that should be addressed in order to reduce the inhibiting factors and enhance the facilitating factors in students' self-regulated learning. The arrows from the facilitating and inhibiting boxes into the "Identified Student Needs" box, as shown in **Figure 2**, indicate that these needs are inferred from the analysis of how the facilitating and inhibiting factors influence students' SRL in online learning contexts.

This conceptual framework integrates Zimmerman and Cleary's (2009) model of SRL with Broadbent et al.'s (2022) SRL-O instrument to guide the study's investigation. **Research Question 1** is addressed by using the SRL-O to determine which factors facilitate or inhibit students' SRL in the online component of blended learning. **Research Question 2** is addressed by examining how these factors influence students' self-regulated learning behaviors. **Research Question 3** is addressed by synthesizing the findings to identify the student needs that should be addressed in order to reduce inhibiting factors and enhance facilitating factors in students' self-regulated learning.

Figure 2. Conceptual Framework of the Study



Operational Definition of Terms

Extrinsic Motivation - refers to the learner's engagement in a task for external rewards, such as grades, recognition, or competition (Broadbent et al., 2022, p. 156).

Forethought phase - refers to the self-regulatory processes that precede efforts to act and set the stage for it" (Zimmerman & Cleary, 2009, p. 248).

Goal Orientation - refers to a learner's "beliefs or feelings about the purpose of learning rather than the act of goal setting" (Zimmerman & Cleary, 2009. p. 252).

Intrinsic Motivation - refers to the learner's engagement in a task for reasons such as interest, challenge, curiosity, and enjoyment (Broadbent et al., 2022, p. 155).

Hiya – a Filipino virtue commonly translated as shame, sense of inferiority, modesty, or sense of propriety (Tablan, 2021, p. 31)

Kapwa – refers to the expression of the relational aspect of the person and represents unity of self with others (Tablan, 2021, p. 23)

Online Effort Regulation - refers to a learner's ability to persist in completing tasks even when they are uninteresting, when distractions are present, or when there are more interesting things to do (Broadbent et al., 2022, p. 159).

Online Metacognition/Self-Monitoring - is a learning strategy that refers to the learner's "mental tracking of specific aspects of their own performance, the conditions that surround it, and the effect it produces" (Zimmerman & Cleary, 2009, p. 249).

Online Negative Achievement Emotion - refers to the negative activating emotions such as anxiety and shame, as well as negative deactivating emotions such as hopelessness and boredom in online learning environments (Broadbent et al., 2022, p. 156).

Online Self-Efficacy - refers to the learner's perceived abilities and belief of academic success in online courses (Broadbent et al., 2022, p. 155).

Online Social Support - is a learning strategy that refers to the learner's ability and willingness to seek help from and collaborate with peers and teachers and through the internet (Broadbent et al., 2022, p. 159)

Online Study Environment - refers to how a learner prepares a learning environment that is quiet and distraction-free (Broadbent et al., 2022, p. 158).

Online Task Strategies/Elaboration - refers to how a learner integrates and connects new information with prior knowledge, selects appropriate information, constructs connections among the information to be learned, and apply previous knowledge to new situations (Broadbent et al., 2022, p. 159)

Outcome Expectations - refers to the learner's "beliefs about the ultimate ends of one's performance" (Zimmerman & Cleary, 2009. p. 252).

Peer Learning - is a learning strategy that refers to how learners work together to understand learning content (Broadbent, 2016).

Performance phase - encompasses the self-regulatory processes that occur during motoric efforts and affect attention and action (Zimmerman & Cleary, 2009, p. 248).

Rehearsal - is a learning strategy that refers to learning by repetition such as memorization or listening repeatedly to online lectures (Broadbent, 2016).

Self-Evaluation - is an SRL strategy that refers to the process by which learners assess their own performance in relation to a set of standards or goals. (Zimmerman & Cleary, 2009). This involves comparing actual performance against desired outcomes or criteria that were set during the forethought phase.

Self-Reflection phase - encompasses the self-regulatory processes that occur after performance efforts and influence a person's response to that experience (Zimmerman & Cleary, 2009, p. 248).

Self-Regulated Learning - refers to the processes whereby learners personally activate and sustain cognitions, affects, and behaviors that are systematically oriented toward the attainment of personal goals (Schunk & Zimmerman, 2011, p.1).

Self-Regulated Learning strategies - refers to actions and processes directed at acquisition of information or skills that involve agency, purpose, and instrumentality perceptions by learners (Zimmerman, 1990, p. 5)

Task Interest/Value - refers to how a learner appreciates "a task for its inherent properties, rather than its instrumental qualities in gaining other outcomes" (Zimmerman & Cleary, 2009. p. 252).

Time Management - is a learning strategy that refers to the process of setting specific task goals, estimating time requirements, and monitoring progress toward the attainment of those goals (Zimmerman & Cleary, 2009, p. 251).

Utang na Loob – is a core Filipino virtue centered on gratitude, acknowledgement, and non-material reciprocity (Tablan, 2021, p. 28)

Chapter III

METHODOLOGY

Research Design

In this study, a mixed-method approach using an explanatory-sequential design method was utilized to identify the factors that facilitate and inhibit self-regulated learning among select private junior high school students in the Philippines engaged in a blended learning environment. A mixed-method approach was employed as it combines the strengths of both quantitative and qualitative approaches. This combination enabled a more thorough understanding of the factors that promote or inhibit self-regulated learning in blended learning environments, along with their root causes (Creswell & Plano Clark, 2018, p. 420). The quantitative study provided insights through statistical analysis of the data collected using the SLR-O, while the qualitative study extended these insights through an investigation of the participants' perspectives and experience using a semi-structured interview questionnaire. The explanatory-sequential design method was selected in particular as it allowed for the identification of facilitating or inhibiting SRL factors through quantitative analysis (Creswell & Plano Clark, 2018, p. 356). This is then followed by a qualitative study that provided deeper insights into how the facilitating and inhibiting factors affected the students' self-regulated learning in the online component of blended learning. The sequential nature of this design ensured that the qualitative phase is based on and builds upon the results from the quantitative phase, thus enabling a more comprehensive understanding of the factors under study (Creswell & Plano Clark, 2018, p. 325).

The study was conducted in two stages aligned with the research questions. Each stage is described below.

Stage One: A quantitative study using the Self-Regulated Learning for Online questionnaire (SRL-O) by Broadbent et al. (2022) was used to identify the factors that facilitate and inhibit self-regulated learning among students as measured by the SRL-O. Specifically, stage one answered the following research questions:

- **Research Question 1**: *What key factors facilitate or inhibit students' self-regulated learning in the online component of a blended learning environment as measured by the SRL-O instrument?*

Stage Two: A qualitative study was conducted following Stage One using a researcher-made semi-structured interview questionnaire, developed with the aid of an expert. The objective of Stage Two is to gain an understanding of the impact of the facilitating and inhibiting factors as they relate to students' self-regulation in online learning. The results from stage two were used to verify, support, and explain the results of Stage One. The qualitative study was conducted through focus group discussions following four procedural phases: Preparation, Facilitation, Synthesis, and Reporting. The corresponding activities for each phase are summarized in **Table 1** below.

Table 1

Procedural Phases of the Qualitative Study

Phase	**Description**
Preparation	1. Review results from the quantitative stage and determine the factors that promote or inhibit SRL in blended learning environments. 2. Select participants for the focus group discussions using stratified purposive sampling. 3. Group participants according to top and bottom quartile based on their factor scores: one group with the highest scores, and one group with lowest scores. 4. Create a draft of the semi-structured interview questionnaire. 5. Send the draft of the semi-structured interview questionnaire to an expert for review and feedback. 6. Revise semi-structured interview questionnaire based on inputs and feedback from expert. 7. Prepare the logistics: time, place, location 8. Send the invite and details to participants
Facilitation	1. Welcome participants and state the objectives of the focus group discussion.

	2. Set expectations and encourage open discussion and participation. 3. Prepare recording devices: voice recorder, notebook. 4. Gather consent from participants. 5. Begin the discussion using the prepared semi-structured interview questionnaire. 6. Ask follow-up questions as necessary to gain deeper insights. 7. Wrap up and summarize key points. 8. Check with participants for any missing information from the summary. 9. Close the session and thank the participants.
Synthesis	1. Transcribe the discussion for each session. 2. Take note of key information, details, and insights. 3. Analyze notes and transcript. Identify themes and patterns related to research questions.
Reporting	1. Summarize the findings of the quantitative study. 2. Integrate findings of the focus group discussions with the quantitative results. 3. Explain the connection between the findings of the quantitative study and the qualitative study. 4. Discuss the implications of the results and relate

	them to the development of needs analysis.

The results from the qualitative study were used to answer the research question:

Research Question 2: *In what ways do these facilitating and inhibiting factors influence students' self-regulated learning processes in the online component of a blended learning environment?*

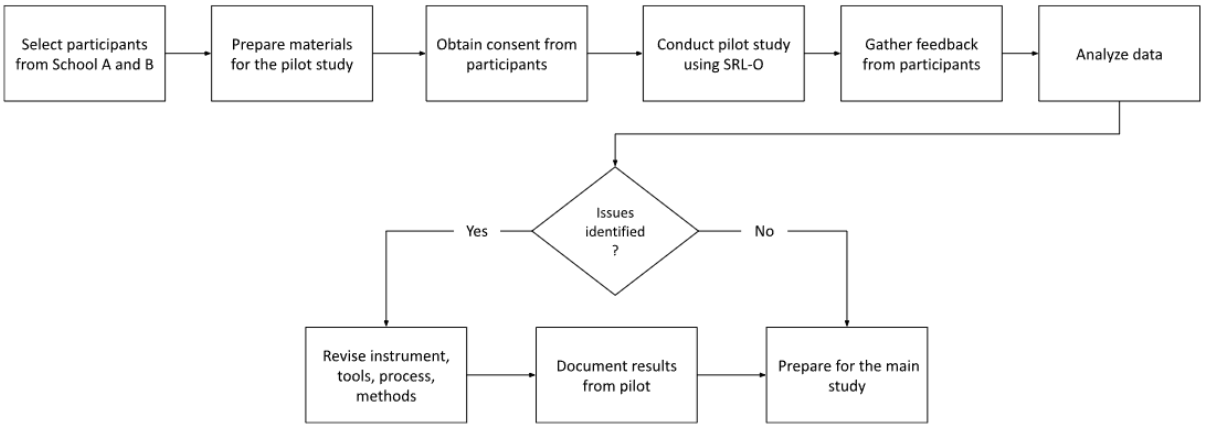
The process of identifying students' needs began after examining how the facilitating and inhibiting factors influenced the students' self-regulation in online learning. The researcher reviewed the themes and sub-themes that emerged from the qualitative analysis and how each theme either facilitated or inhibited students' self-regulated learning. Particular attention was given to students' own accounts of what helped them enact self-regulating behaviors, what they found lacking or challenging, and what conditions they believed could better support their learning. These insights were then synthesized to determine the underlying needs that emerged from students' experiences. These steps guided the identification of students' needs, which addressed:

Research Question 3: *What student needs emerge from the findings that should be addressed to reduce the inhibiting factors and enhance the facilitating factors in students' self-regulated learning?*

A pilot study, as shown in **Figure 3**, was conducted to ensure that any flaws were identified and corrected prior to the actual study. This pilot also provided valuable information on the appropriate time and resources needed for the actual data collection process. Stage One of the study commenced upon completion of the pilot. In Stage One, the SRL-O was utilized to identify the prominent factors that facilitated and inhibited self-regulated learning in blended learning environments across the three phases—*Forethought*, *Performance*, and *Self-reflection*— of SRL.

Figure 3

Pilot Study



Research Locale

The study was conducted in two private schools in the Philippines: School A and School B. School A and School B both offer Junior High School programs and have continued to implement online and blended-learning modalities at the time of this research. These two institutions were selected given the commonalities as well as differences in their pedagogical approach and student demographics.

School A currently operates in nine locations and integrates technology in its day-to-day operations via a learning management system, digital devices, and school-provided laptops for teachers. In 2020, the institution received external recognition for its systematic and innovative use of Google Workspace tools to enhance teaching and learning across campuses. Its curriculum design is anchored in constructivist and project-based learning, emphasizing collaborative and experiential learning. Consistent with this design, students routinely practice self-evaluation and regularly check their progress and outputs against established standards such as rubrics. From a socioeconomic standpoint, students in School A tend to come from middle to upper-middle socioeconomic strata, a pattern reflected in the school's fee structure as well as greater access to digital learning resources—including devices, platforms, and online tools—and stable internet connectivity.

In contrast, School B operates in one location in Manila. It employs a more limited approach to technology integration and relies primarily on traditional, teacher-led instruction. School B's use of technology is mostly restricted to the designated online learning day, which limits students' exposure to digital learning environments, digital devices, and internet connectivity. From a socioeconomic standpoint, School B serves learners who tend to come from lower to lower-middle socioeconomic strata, as suggested by the school's more modest fee structure, which also corresponds to more limited access to digital learning resources—including devices, platforms, and online tools— and less stable internet connectivity among learners (Villaseñor, 2024).

Research Participants

Participants were drawn from junior high school students—Grade 7 through 10— actively enrolled at School A and School B for the 2024-2025 school year. These students were engaged in a blended learning environment where 20% of their learning was conducted online, through a combination of synchronous and asynchronous activities, and 80% was conducted face-to-face.

Stratified random sampling was used to ensure that each grade level was appropriately represented in the sample. Below is a summary of the total population of junior high school students in both institutions as shown in **Table 2** below.

Table 2
Total Population of Students

Grade Level	School A	School B
Grade 7	502	197
Grade 8	480	230
Grade 9	570	273
Grade 10	639	250

Based on the breakdown of the total population of students in both schools, the following sample sizes were calculated using Cochran's formula with a 95% confidence level and 5% margin of error, as shown in **Table 3** below.

Table 3
Sample Population of Students

Grade Level	School A	School B
Grade 7	55	21
Grade 8	52	25
Grade 9	62	30
Grade 10	70	27

The total target number of students is 342.

Research Instruments

The Self-Regulation for Learning Online (SRL-O) questionnaire by Broadbent et al. (2022) was used to determine the factors that facilitate and inhibit self-regulated learning among private junior high school students in a blended learning environment. The SRL-O, developed by Broadbent et al. (2022), measures the range of motivational beliefs and learning strategies employed in online and blended learning contexts

This SRL-O instrument was found to be a psychometrically sound measure of online SRL for learners studying in online and blended learning contexts (Broadbent et al., 2022, p. 153). Confirmatory factor analysis (CFA) was conducted to validate the factor structure of the instrument. Results of the finalized 10-factor structure demonstrated acceptable fit: $\chi^2(850) = 1478.31$, $p < 0.001$, $\chi^2/df = 1.74$, CFI = 0.901,

RMSEA = 0.048. Reliability of the 10-factor structure was then evaluated using factor loadings, mean (SD), internal consistency estimates, and Cronbach's alpha (α). Results revealed that 9 out of the 10 factors had internal consistency estimates exceeding 0.70, indicating good reliability. One out of the 10 factors—study environment—had a slightly lower reliability of 0.665.

Convergent validity was used to explore the relationship between the SRL-O and the Motivated Strategies for Learning Questionnaire (MSLQ). The MSLQ is a valid and reliable instrument (Pintrich et al., 1993) that is widely used to measure SRL. This instrument was initially designed to assess college students' motivational orientations and learning strategies for a college course (Pintrich et al., 1993, p.1). It has then been modified for online and blended learning contexts (Broadbent et al., 2022, p. 137). The results from the convergent validity analysis revealed that the SRL-O scale had a significantly strong positive correlation with the MSLQ scale, indicating that the SRL-O effectively measures the same constructs as the well-established MSLQ.

For stage 2, a semi-structured interview questionnaire was developed with the guidance and assistance of an expert. It was designed to further examine the underlying conditions that influence students' self-regulated learning in the online component of blended learning. The structure and content of the interview questions were informed by the results of the quantitative phase using the SRL-O instrument. The findings revealed two facilitating factors namely: *Online Social Support* and *Online Metacognition*; and two potential inhibiting factors, namely: *Online Study Environment* and *Online Negative Achievement Emotion*.

The interview items under each factor were designed to reveal the experiences, practices, and contextual conditions that influence students' motivational beliefs and self-regulated learning strategies. For the facilitating factors of *Online Social Support* and *Online Metacognition*, the questions aimed to uncover 'how' and 'why' students seek online support and how they plan, monitor, and evaluate their own learning. For the inhibiting factors, the questions sought to investigate the environmental, technological, relational, and psychosocial circumstances that hinder self-regulation in online learning.

Data Gathering

The quantitative data from stage one was gathered from the results of the online SRL-O survey comprising 442 participants from School A (N = 272) and School B (N = 170). Prior to the administration of the SRL-O, the principals from both schools were informed about the study's aim, the timing of survey implementation, target participants, and the support needed for its administration. Instructions for completing the survey, along with the Google form link to the SLR-O questionnaire, were then sent by the researcher to each participant via email. The SRL-O was administered via online survey February to March 2025.

A semi-structured interview questionnaire (SSIQ) was developed to further understand the prominent facilitating and inhibiting factors affecting students' self-regulation in online learning. Prior to its administration, the SSIQ was sent to an expert for review and feedback. Upon revisions and approval from the expert, the

Focus Group Discussion (FGD) sessions were scheduled for 16 students in School A and 16 students in School B. Purposive sampling was used to select the participants from the sample population of students who took part in the quantitative study. The participants were placed in four groups based on top and bottom quartiles of their factor scores. Based on the systematic review of Hennink and Kaiser (2022), saturation is generally achieved within 4 to 8 focus group discussions, indicating that no new themes or information are generated beyond this range, hence the FGD sessions were limited to four groups. Group 1 (N=8) and Group 2 (N=8) comprised Junior High School students in School A and B who obtained the highest mean score in the facilitating factors of Online Social Support and Metacognition. The students in Group 1 and 2 were interviewed using the SSIQ for these facilitating factors. Group 3 (N=8) and Group 4 (N=8) comprised students in School A and B who obtained the lowest mean score in the inhibiting factors of Study Environment and Online Negative Achievement Emotion. The students in Group 3 and 4 were interviewed using the SSIQ for these inhibiting factors. FGDs for School A were conducted via Google Meet, while FGDs for School B were conducted in-person at the school location. The FGDs were carried out in April 2025, while data collection, organization, and analysis were conducted from May to June of 2025.

Data Analysis

To answer research question 1, a quantitative study was conducted and descriptive statistics were employed on the data collected from the SRL-O instrument. The use of descriptive statistics through measures of central tendency and dispersion was used to identify the factors that promote or inhibit self-regulated learning among private junior high school students engaged in blended learning. Using PSPP, an application designed for statistical analysis, sampled data was analyzed by calculating measures of central tendency including mean, median, and mode to identify which among the 10-factor structure, students scored the highest and lowest on. The scale in the SRL-O was based on a seven-point range with 1 indicating ‘Not at all true of me’ and 7 indicating ‘Very true of me’. A score of 5 or higher was interpreted to be a facilitator factor, while a score of below 5 was interpreted to be a potential inhibiting factor (Broadbent et al., 2022, p. 155). In addition, measures of dispersion including range, variance, and standard deviation were calculated to understand the spread of the scores.

To answer research question 2, data collected from the semi-structured interviews were analyzed using interpretive analysis. The researcher, as the single coder, followed the principles of reflexive thematic analysis (Braun & Clarke, 2022) and immersed himself in the data by transcribing the four focus group discussions, producing a total of four transcripts. A deductive framework was applied to organize the student responses using the four SLR-O factors of *Online Social Support*, *Metacognition*, *Online Negative Achievement Emotion*, and *Online Study Environment*. Each transcript was then individually coded using interpretive analysis

and later consolidated for further synthesis. The consolidated codes were reviewed multiple times by the researcher to ensure a consistent and thoughtful approach to finding patterns of meaning in the qualitative data (Braun & Clarke, 2022). Finally, the main themes and sub-themes were constructed to best capture how these factors facilitate or inhibit students' self-regulated learning in the online component of blended learning.

To answer research question 3, the factors derived from the quantitative study were synthesized with insights from the qualitative study, which examined how the identified factors enhanced or impeded students' self-regulation. The themes and sub-themes that emerged from the qualitative study were then grouped according to each facilitating or inhibiting factor. The needs of students were then assessed and identified based on the emergent themes and sub-themes. Each identified need was presented and discussed in Chapter IV.

Ethical Issues in the Research Implementation

To ensure that issues related to the ethics of the collection and use of data in this research were addressed, parental consent was sought before any data were collected, used, or disclosed. All student participants were asked for their assent, confirming their willingness to take part in the study. Participants were briefed on the study's aim, their right to withdraw from participation whenever they wish, and the confidentiality of their input. The participants were also informed about what information would be collected, who would have access to it, how it would be protected, and how it would be used. During data examination, any identifiable data were removed to guarantee anonymity. This type of study is considered minimal-risk research, which according to the Panel on Research Ethics is defined as, "research in which the probability and magnitude of possible harms implied by participation in the research are no greater than those encountered by participants in those aspects of their everyday life that relate to the research" (2022).

Chapter IV

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

Results of the Quantitative Study

Prior to conducting the actual quantitative study, a pilot test was carried out to identify, anticipate, and address any issues with the SRL-O instrument, its administration, and data collection. Stratified random sampling was used to select 38 students, representing approximately 10% of the sample population, to participate in the pilot test. Below is a breakdown of the number of participants per school as shown in **Table 4**.

Table 4
Pilot Test Participants

Grade Level	School A	School B
Grade 7	6	3
Grade 8	6	3
Grade 9	7	3
Grade 10	7	3

Thirty-three or 89% of the selected students participated in the pilot test and the results are summarized below.

1. 90% responded that the instructions were clear, while 10% indicated that it was somewhat clear.

2. 90% responded that they did not encounter any technical issues while taking the survey, while the remaining indicated that they encountered some technical difficulties.
3. 95% of the students completed the survey in 15 minutes or less.
4. When asked if there was anything else to improve in the survey, students either did not provide any input or were satisfied with the way it was designed; as one student noted "*Hmm I think the survey is already effective for students*".

Based on the results of the pilot test, minor revisions were made to improve the clarity of the instructions. The optimal time for completing the survey was set to 15 minutes, which was based on the actual completion time from the pilot. Following the revisions informed by the pilot test, the actual quantitative study was carried out.

The Self-Regulation for Learning Online (SRL-O) questionnaire was administered via an online survey to a total of 442 junior high school students from School A (N = 272) and School B (N = 170). The results of the descriptive statistics for all the ten factors of the SLR-O, including means, median, modes and standard deviation are shown in **Table 5** below.

Table 5
Summary of Results from SRL-O (organized from highest to lowest mean)

SRL Factor	Mean	Median	Mode	Standard Deviation	α
Online Social Support	5.31	5.00	7	1.50	0.81
Online Metacognition	5.26	5.00	5	1.36	0.87
Online Intrinsic Motivation	5.17	5.00	7	1.48	0.84
Online Self-Efficacy	5.17	5.00	5	1.28	0.86
Online Task Strategies	5.16	5.00	5	1.44	0.84
Online Extrinsic Motivation	5.00	5.00	7	1.63	0.73
Online Effort Regulation	4.96	5.00	5	1.41	0.86
Online Planning and Time Management	4.71	5.00	5	1.60	0.86
Online Negative Achievement Emotion	4.61	5.00	7	1.93	0.83
Online Study Environment	4.51	4.00	4	1.69	0.81

The SRL-O uses a 7-point scale, where scores below 4 indicate areas for improvement, while scores equal to or higher than 4 indicate adequate or proficient self-regulation. The mean scores across all ten factors of the SRL-O ranged from 4.51 to 5.31 and are above the midpoint 4 (see table 5). The range of standard deviation (SD) from 1.28 to 1.93 (see table 5) indicates that students' responses were moderately spread out around the mean. This suggests that while most students generally report positive levels of the SRL-O factors, there remains a variation in how strongly these beliefs and behaviors are experienced across learners. Using PSPP, reliability analysis showed that 9 of the 10 factors demonstrated good internal consistency, with Cronbach's α values ≥ 0.80. The

remaining factor—Online Extrinsic Motivation—yielded a Cronbach's α = 0.73, which still falls within acceptable internal consistency (Gliem & Gliem, 2003).

Interpretation of Self-Regulated Learning (SRL) Factors

The quantitative results from the SRL-O reflected the extent to which students self-regulate across all ten factors of SRL-O, which are organized into the dimensions of **Motivational Beliefs** and **Learning Strategies**. Overall, the mean scores of students from School A and School B were significantly higher than the scale midpoint of 4, indicating that they exercise self-regulated learning behaviors to a meaningful degree. The interpretation below focuses on the most prominent facilitating and potential inhibiting factors identified from the descriptive and inferential analyses.

Most Prominent Facilitating Factors

Online Social Support (M = 5.31; see Table 5) and *Metacognition* (M = 5.26; see Table 5)—factors that both fall under the **Learning Strategies** dimension of the SRL-O—obtained the highest mean scores across all ten factors. The high mean scores of these factors indicate that students from both schools actively seek and provide help through online channels, and consistently engage in metacognitive regulation by monitoring, planning, and evaluating their learning progress, as well as adjusting their learning strategies (Broadbent et al., 2022).

Other factors within the **Motivational Beliefs** dimension, such as *Online Intrinsic Motivation* (M = 5.17; see Table 5) and *Online Self-Efficacy* (M = 5.17; see Table 5), and the **Learning Strategies** factor of *Online Task Strategies* (M = 5.16;

see Table 5) also demonstrated relatively strong scores, suggesting that students generally have a positive experience in online learning, feel confident in their abilities to succeed, and are able to employ a range of strategies to deepen their understanding of course content (Broadbent et al., 2022).

Potential Inhibiting Factors

Online Study Environment (M = 4.51; see Table 5), a factor within the **Learning Strategies** dimension of SRL-O, had the lowest mean score across the ten factors. This suggests that some students may lack consistent access to quiet and distraction-free study spaces and may not always have a conducive environment for learning online. *Online Negative Achievement Emotion* (M = 4.61; see Table 5), a factor under the **Motivational Beliefs** dimension of SRL-O, had the second lowest mean score across the ten factors. This indicates that although students generally report positive motivation, a portion still experiences anxiety, helplessness, and feelings of being overwhelmed in online learning. Notably, this was the only factor in which a subscale item scored below the midpoint (e.g., “While studying I want to distract myself to lower my anxiety level”; M = 3.58), indicating some students’ difficulty in managing negative achievement emotions during online learning (Broadbent et al., 2022).

To further examine the strength of these factors, a one-sample t-test was conducted to determine whether students' mean scores for each SRL factor significantly differed from the neutral midpoint value of 4 on the seven-point scale. The results as shown in **Table 6** reveal that all SRL factors had means that were significantly higher than the scale midpoint of 4, with $p < .001$, indicating that students generally agreed with the statements that reflect the presence of self-regulated learning behaviors. *Online Social Support* ($t = 18.36$, $p < .001$) and *Metacognition* ($t = 19.48$, $p < .001$) had the largest standardized differences from the midpoint, suggesting that learners felt highly engaged, sought help or collaborated through online channels, and actively planned, monitored, and evaluated their learning (Metacognition). In contrast, *Online Negative Achievement Emotion* ($t = 6.64$, $p < .001$) and *Online Study Environment* ($t = 6.34$, $p < .001$) had the smallest standardized differences, indicating that while self-regulating behaviors were present in these areas, learners still experienced moderate levels of anxiety, hopelessness, and boredom related to their online learning, and were less proficient in managing a quiet, distraction-free, and efficient study space (Broadbent et al., 2022).

Table 6
One-sample t-test results

SRL Factor	T-stat	Critical Value	P-Value
Online Social Support	18.36	1.96	0.00
Online Metacognition	19.48	1.96	0.00
Online Self-Efficacy	19.22	1.96	0.00
Online Intrinsic Motivation	16.62	1.96	0.00
Online Task Strategies	16.94	1.96	0.00
Online Extrinsic Motivation	12.90	1.96	0.00
Online Effort Regulation	14.31	1.96	0.00
Online Planning and Time Management	9.33	1.96	0.00
Online Negative Achievement Emotion	6.64	1.96	0.00
Online Study Environment	6.34	1.96	0.00

The descriptive statistics (Table 5) revealed that the SRL-O factors of *Online Social Support* (M = 5.31, SD = 1.50, Cronbach's α = .81) and *Online Metacognition* (M = 5.26, SD = 1.36) obtained the highest mean scores among all ten factors. Conversely, *Online Study Environment* (M = 4.51, SD = 1.69) and *Online Negative Achievement Emotion* (M = 4.61, SD = 1.93) obtained the lowest mean scores among all ten factors. Moreover, the inferential t-test results (Table 6) have shown *Online Social Support* and *Online Metacognition* to have the largest standardized differences from the midpoint of 4, while *Online Study Environment* and *Online Negative Achievement Emotion* had the smallest standardized differences from the midpoint. The convergence of evidence from both descriptive and inferential analyses indicates that *Online Social Support* and *Online Metacognition* are the most prominent facilitating factors, while *Online Study Environment* and *Online Negative Achievement Emotion* emerge as potential inhibiting factors.

While all ten factors yielded mean scores above the neutral midpoint of 4, focusing on the two most prominent facilitating factors and the two potential inhibiting factors allows for a more manageable scope during the qualitative phase and supports deeper investigation of the most influential aspects of SRL in the blended learning context. This selective approach is methodologically sound for a sequential explanatory mixed method design as it focuses on the most significant quantitative findings to enable a more thorough and comprehensive investigation of the factors (Creswell & Plano Clark, 2018).

To compare SRL patterns across the two participating schools, an independent samples t-test was also conducted. The results revealed significant differences between the two participating schools. Students from School A demonstrated significantly higher mean scores in Online Social Support, Online Intrinsic Motivation, Online Self-Efficacy, and Online Metacognition (see Table 7), signifying stronger online collaboration, higher internal motivation, greater confidence in learning abilities, and more effective planning, monitoring, and evaluation of learning (Broadbent et al., 2022).

These results align with School A's constructivist, project-based curriculum design, where collaborative tasks are central to the learning process. Frequent group work likely cultivated School A students' social support and metacognitive behaviors as they learned to collectively plan, coordinate, and evaluate tasks (Dong et al., 2023; Zhao & Cao, 2023). In contrast, School B relies more on traditional in-person delivery and uses technology only during scheduled online days, which minimizes opportunities for students to practice digital learning strategies and engage in

self-regulatory behaviors. This limited technology use may have contributed to the challenges associated with online learning, such as inadequate resources and non-conducive study environments, which have been observed in similar contexts where minimal exposure to technology was observed (Rotas & Cahapay, 2020).

The higher scores from School A may also be influenced by contextual factors. Students in School A belong to a slightly higher socioeconomic stratum, which may translate to greater access to digital devices and internet connectivity. Multiple studies confirm that low socioeconomic status is directly correlated with limited access to digital devices and internet (Villaseñor, 2024). Specifically, Villaseñor (2024) noted that socioeconomic disparities exacerbate the digital divide for economically disadvantaged students. In addition, School A teachers are equipped with laptops, unlike those in School B, allowing for smoother facilitation of online learning activities and online support.

School A has also received external recognition for its systematic and effective integration of digital learning platforms, indicating that both teachers and students are well-trained in the use of tools that support online learning. Frequent exposure to these tools reinforces confidence and efficiency in managing online learning environments, addressing the inadequate training dilemma noted in other studies on digitalization challenges (Xu et al., 2023). Furthermore, School A requires students to periodically rate themselves on the values of Focus, Grit, Growth Mindset, Ownership, Proactiveness, Mindfulness, and Self-Regulation. This routine reflection fosters internal accountability and metacognitive monitoring, which are

essential dimensions of SRL (Zimmerman, 1989; Zimmerman & Cleary, 2009; Zhu et al., 2016). School B does not implement comparable self-evaluation mechanisms.

Overall, these findings suggest that School A's integration of technology, reflective practices, and support structures may have fostered an environment that is conducive to self-regulated learning (Xu et al., 2023; Zimmerman, 1989; Zimmerman & Cleary, 2009; Zhu et al., 2016). In contrast, School B's limited integration and use of technology may constrain opportunities for students to develop comparable self-regulated learning behaviors (Rotas & Cahapay, 2020).

Table 7
Independent samples t-test results

SRL-O Subscale	t-test Result	p-value
Online Social Support	Significant	0.003
Online Intrinsic Motivation	Significant	0.004
Online Self-Efficacy	Significant	0.004
Online Metacognition	Significant	0.009
Online Negative Achievement Emotion	Marginally significant	0.048
Online Effort Regulation	Not significant	0.083
Online Extrinsic Motivation	Not significant	0.119
Online Task Strategies	Not significant	0.223
Online Planning and Time Management	Not significant	0.23
Online Study Environment	Not significant	0.422

The findings from the descriptive and inferential analyses determined which among the ten factors of SRL-O facilitate and inhibit students' self-regulation in online learning contexts. *Online Social Support* and *Online Metacognition* emerged as the most prominent facilitating factors for students' self-regulated learning, given their highest mean scores and largest standardized differences from the midpoint. In contrast, *Online Study Environment* and *Online Negative Achievement Emotion* appeared as potential inhibiting factors, based on their comparatively lower mean scores and smallest standardized differences from the midpoint. While the quantitative analysis identified these factors, it did not offer insights into how they operate in the lived experiences of students. To gain a deeper understanding of how these factors influence students' self-regulation in the online component of blended learning, the following section presents the qualitative findings.

Results of the Qualitative Study

Each FGD session was transcribed and coded using interpretive analysis structured around the four prominent facilitating and potential inhibiting factors of the SRL-O. A deductive coding framework was initially applied to organize participant responses into themes corresponding to the four factors—*Online Social Support*, *Online Metacognition*, *Online Negative Achievement Emotion*, and *Online Study Environment*. As the analysis progressed, additional sub-themes emerged that extended beyond these four factors. The final resulting themes and sub-themes under each factor are presented in **Table 8** below.

Table 8
Themes and Sub-Themes under Each SRL-O Factor

SRL Phase	Factor	Nature	Theme	Sub-theme
Performance & Self-Reflection Phases	Online Social Support	Facilitating Factor	Theme 1: Facilitative Role of Online Social Support	Online Help-Seeking Strategies
				Peer Collaboration in Online Learning
				Barriers to Online Social Support (moderating condition)
Performance Phase	Metacognition	Facilitating Factor	Theme 2: Facilitative Role of Online Metacognition	Metacognitive Monitoring and Evaluation
				Selection of Optimal Learning Strategies
Performance Phase	Study Environment	Inhibiting Factor	Theme 3: Inhibiting Role of Online Study Environment	Inadequate Physical Study Spaces
				Digital Distractions in Online Learning
				Technological and Resource Limitations
Self-Reflection Phase	Online Negative Achievement	Inhibiting Factor	Theme 4: Inhibiting Role of Online Negative Achievement Emotions	Impact of Negative Achievement Emotions on Learning
				Fear of Failure and External

	Emotion			Pressures
All Phases	Emergent Themes	Adaptive Response	Theme 5: Adaptive Strategies for Overcoming Environmental and Emotional Challenges	
		Integrative	Theme 6: Sources of Self-Regulated Learning Strategies	

The findings from the quantitative analysis revealed *Online Social Support* and *Online Metacognition* as the most prominent facilitating factors of SRL in the online component of blended learning. The following thematic analysis based on the FGD transcripts of Group 1 and Group 2 builds upon these results and provides a deeper understanding of how these factors facilitate students' SRL in online learning.

Theme 1: Facilitative Role of Online Social Support

Online Social Support—a learning strategy under the SRL-O framework—was found to be the highest-rated among the ten self-regulating factors measured in this study (M = 5.31; see Table 5). This quantitative result was reinforced by data from the qualitative study through FGDs, which described ways students engaged with their peers, and at times reluctantly, their teachers, to manage their learning tasks and interactions during online learning. The sub-themes that emerged through the FGD transcripts include: *Online Help-Seeking Strategies*, *Peer Collaboration in Online Learning, and Barriers to Online Social Support (moderating condition)*.

Sub-theme 1.1: Online Help-Seeking Strategies

Students regarded asynchronous online peer interaction as more efficient and convenient than face-to-face interaction. As one student noted "*what's easy for me is that you don't have to go to the person and talk to the person. You can just type your your question or answer to the person*." This reflects a core affordance of asynchronous communication through chat, email, or discussion boards, where online learners can be both together and apart, anytime and anywhere, without being time, place, or situation bound (Garrison & Kanuka, 2004). A key benefit of asynchronous, text-based media like chat or email is the emphasis it places on

written communication, which is a format that encourages reflection and precision of expression (Garrison & Kanuka, 2004). This reflective quality reinforces students' *Online Metacognition—a prominent facilitating factor of SRL*—which involves planning, monitoring, and evaluating one's cognitive activities while studying (Broadbent et al., 2022). In addition, this type of online interaction provides an avenue for students who are traditionally less outspoken in face-to-face settings to participate more willingly and engage in online collaborative learning with reduced interaction pressure (Garrison & Kanuka, 2004).

The FGD also revealed how students established a communication hierarchy, preferring to ask their peers first—"*Magtatanong muna sa classmates*" (I will ask my classmates first)—before reaching out to their teachers. The students provided several reasons such as: "*Kaya ko po tatanungin yung classmate, mamaya po baka narinig po nila or na understand po nila, kapag hindi po, nag ask po ako sa teacher namin.*" (The reason I will ask my classmate is perhaps they have heard or understood, if they didn't, that's the time I ask my teacher). Timeliness of response was also a factor in their preference—"*They usually answer agad po compared sa teachers since marami pong fina-facilitate yung learning facilitators natin*" (They usually answer right away compared to teachers, who are facilitating many tasks). Students, however, mentioned that for tasks involving "*clarification about EGs and OAs po sa teachers na po direcho po*", they directly ask their teachers. EGs (Experience Guides) and OAs (Open Assessments), are learning resources from School A.

Students were also strategic when deciding which communication channels to use online, such as "*Social media apps like Messenger or Instagram*." Their choice of medium depends on the type of academic task. Chat applications were preferred for quick questions or checking understanding with their peers, while video conferencing was preferred for tasks that required group collaboration. As one student remarked: "*Pag may presentation po na need i rehearse need po gmeet po*" (When there is a presentation where I need to rehearse, I use GMeet).

The affordance of asynchronous online interaction through media such as chat or email not only enabled more efficient and convenient communication but may also provide conditions that encourage reflection and greater willingness to participate in online collaborative learning. Students developed a communication hierarchy where, for quick and informal queries, they sought help from peers, while for formal clarifications, they sought help from teachers. They were also strategic in choosing communication channels that aligned with the demands of their academic task. These student-initiated approaches indicate that students are proactively structuring their immediate environment to optimize their acquisition of skill and knowledge. This aligns with Zimmerman's (1989) notion of environmental self-regulation in triadic system of person, behavior, and environment, in which learners deliberately manipulate features of their learning context to aid in task completion. This strategic use of digital tools, combined with the flexibility of asynchronous interaction, enabled students to reduce the time and cognitive effort in addressing their academic challenges in online learning.

Sub-theme 1.2: Peer Collaboration in Online Learning

Students emphasized the reciprocal benefits brought about by peer collaboration when learning online. One student shared that, "*It is easier to learn with friends because I have a wider scope of what our lesson is. I am not only learning on my own*". Many students noted that learning with their peers collectively strengthened their learning by widening the scope of their understanding, as one shared: "*I'm learning with others as well. I learn about their perspectives.*" Another added, "*Nakakatulong siya kasi po hindi lang ikaw yung nag-e-expand ng nalalaman niyo. Nagbibigay din po siya ng information*" (It helps because it's not just you, your knowledge expands. They also provide information).

Learning with peers allowed students to assess, challenge, and build upon each other's understanding. As one student shared: "*It challenges me on how much I know the topic po and it gives me confidence in terms of how well I know the topic is. So I think it benefits both sides.*" Another noted, "*I won't be encountering much mistakes because there will be my peers who will correct me as well, and we will discuss our answers.*". This collaborative approach fostered continuous improvement, as one student reflected, "*I realized that I don't know everything and there is always room for further understanding in a topic so I asked a more knowledge and feedback din po to our peers*".

Such peer collaboration not only reinforces students' SRL behaviors in online learning, but it also contributes to enhanced academic performance (Lim et al., 2020). This is supported by studies showing that peer collaboration and social support improve both academic performance and SRL (Lim et al., 2020; Karaoğlan

Yılmaz et al., 2018; Yu & Zhou, 2022, as cited in Dong et al., 2023). Students remarked that interacting with their peers expands their understanding by exposing them to different insights and perspectives. They saw learning with their peers as a give-and-take process, allowing them to check, challenge, and build upon each other's knowledge and understanding. These student reflections show how cognitive and emotional benefits are linked, where peer collaboration functions both as a learning mechanism and a source of confidence. For some students, giving help also reinforced their sense of mastery, aligning with Zimmerman and Cleary's (2009, p.247) view that self-regulation is sustained through feedback loops that are not limited to just the individual but can come from others as well as the environment.

Sub-theme 1.3: Barriers to Online Social Support (moderating condition)

Although *Online Social Support* scored the highest among the factors that facilitate self-regulated learning in the quantitative results, several barriers hindered students' behavior and capability to effectively interact with others when learning online. One significant constraint was not having a stable internet connection, as one student expressed: "*in a place where walang Wi-Fi and you don't have data with you so mahihirapan ka po mag chat you'll only rely on free data and free data po is not available sometimes din so it's really hard to contact po*" (In a place where there is no Wi-Fi and you don't have data with you, it will be difficult to chat. You'll only rely on free data and free data is not available sometimes, so it's really hard to contact others).

Another barrier was the availability of people to consult and interact with. As one student shared, "*availability plays a big role in terms of contacting your peers*

and your facilitators". Another added: "*Common available time po kasi sometimes hindi po pareparehas ang free time po si*r" (Common available time because sometimes the free time of others is not always the same). Delayed responses and imposed time constraints by teachers also discouraged students from reaching out. As one student put it, "*delays lang naman po for me, especially with teachers*" (it is just the delays, especially with teachers). Another added: "*Sa teachers po hindi na. Kasi mayroon po sinaspecific na oras kung kelan ka pwede magtanong about the subject*" (With teachers I don't attempt to contact. Because there is a specific time when you are allowed to ask about the subject).

A more significant barrier, however, was students' internal perception of being an inconvenience, a feeling rooted in "hiya" or fear. As one student shared: "*naiisip ko po na makakaistorbo ako ng ibang tao*" (I think I might disturb other people). This finding aligns with established Filipino ethical concepts where the virtue of hiya is described as "*temperance towards others*" to promote their welfare, often involving restraining individual wants for the sake of "Kapwa" or fellow human (Tablan, 2021). This reveals a key interaction between a motivational belief—the fear of being a burden—and how it directly inhibits the use of a learning strategy—online social support. What makes this barrier consequential is that it appears to be a perceptual barrier rather than an actual one. During the FGD, students who expressed this fear also confirmed that when they did reach out to their teachers for support, the teachers were responsive—albeit with some delay. This reflects an inaccurate perception where the cultural ideal of avoiding being seen as "walang hiya" (Tablan, 2021) and the fear of being a burden to others become more powerful than the students' own prior positive experiences. This affect can impede their willingness

and motivation to seek help from others. In some cases, this perceptual fear was intensified by past negative experiences, which created more permanent barriers. As one student expressed: "*Yung pinaka down ko. Wala man lang tumutulong sa akin. Ni isang tao. Pati yung mga kaibigan ko.*" (I was at my lowest when nobody cared to help me. Not one person. Even my friends).

These findings highlight that the barriers of online social support are not just infrastructural but are also psychosocial. As the discussions revealed, cultural norms of politeness, students' perceptual fears of being a burden, and the impact of past failed attempts to get help can be significant inhibitors (Pantaleon et al., 2023; Tablan, 2021). The full benefits of online social support, therefore, may not be realized unless infrastructural and socio-emotional barriers are addressed. Reliable internet connectivity and clear communication protocols are essential, but they must be paired with proactive teacher support that can help reduce student hesitation. This approach may be necessary to foster an environment where students feel empowered to seek help, contributing to a more responsive and supportive online social environment.

Theme 2: Facilitative Role of Online Metacognition

Online Metacognition—another learning strategy under the SRL-O framework— was found to be the second highest-rated among the ten self-regulating factors measured in this study (M = 5.26). This quantitative result was supported by data from the qualitative study through FGDs, which illustrated how students monitor and evaluate their learning, and adapt their learning strategies. The sub-themes that

emerged through the FGD transcripts include: *Metacognitive Monitoring and Evaluation*, and *Selection of Optimal Learning Strategies*.

Sub-theme 2.1: Metacognitive Monitoring and Evaluation

Learning online often necessitates increased responsibility from students to monitor their learning progress and evaluate their learning outcomes (Song & Hill, 2007). The coded transcripts from the FGD showed that students employed various metacognitive strategies such as elaboration, reflection, and rehearsal. When asked how they check if they understood the learning topic assigned to them, one student replied: "*If I am able to thoroughly explain the learning material in my own words*". Another student added: "*Babasahin ko po siya nyan, then kapag nabasa ko na po siya, you're gonna describe it by your own words po. And yun po mas naiintidihan ko po sya ng mas maayos*" (I read it first, then after reading, I describe it in my own words. And that's how I understand it better). Other students also reflect and use rehearsal to aid information retention. One student shared "*pag nag online na po I try to understand what is being discussed tapos after class po nag iisip po ulet sa mga na discuss po*" (when we switch to online, I try to understand what is being discussed then I think about the discussion again after class). Another mentioned: "*Sa math po I repeat the questions in my mind para mas makuha ko po*" (In Math, I repeat the questions in my mind so I can understand it).

When evaluating their own learning, students employ self-testing, as well as rubric- and criterion-referencing. One student shared how they test and review themselves: "*Kunyari po, say science, iintindihin ko po muna yung part. Then kapag nag-gets ko naman po itetest ko yung sarili ko po by using flashcard*." (For example,

in Science, I try to understand a part. Then if I get it, I test myself using flashcard). Another added: *“I apply my knowledge by answering the questions in the EGs or using flashcards and mock quizzes*”. Notably, students from School A explicitly and repeatedly mentioned using rubrics and output criteria to guide and assess their performance. As one student noted: “*I usually check the rubrics, check the outputs that I need to give*”, while another added: “*I usually check the criteria po before and after answering the given task because of course before answering, it gives you an idea of the output that you need to provide*”.

The ability to metacognitively monitor and evaluate one’s own learning demonstrates the Performance and Self-Reflection phases of self-regulated learning (Zimmerman & Cleary, 2009). This sub-theme revealed that students employed various SRL strategies to monitor and evaluate their progress. They noted that describing concepts using one’s own words helped them validate their understanding, an approach consistent with elaboration strategies that connect new information to prior knowledge (Broadbent & Poon, 2015; Vanslambrouck et al., 2018). In addition, reflecting and mentally repeating past discussions and questions aided recall and knowledge retention, aligning with organization and rehearsal strategies frequently used in blended learning contexts (Vanslambrouck et al., 2018). Referencing standards from rubrics and marking criteria enabled students to check their outputs against the expected criteria and learning outcomes. Students also shared how self-testing through mock quizzes and flashcards helped reinforce and validate their understanding. These metacognitive behaviors affirm Garrison and Kanuka’s (2004) assertion that metacognition is essential for critical thinking,

particularly in online learning settings that demand increased learning independence and control.

Sub-theme 2.2 Selection of Optimal Learning Strategies

According to the students, selecting the type of strategy to use depended on the learning task they were given. As one student explained: "*I usually think what's the most applicable strategy I can use depending on the task that I have."* Another added: "*I just skim the information surrounding the topic first, then I use techniques depending on the subject to actually help me understand the topic".* Students also assess the effectiveness of their strategy by reviewing the results. As one student described: "*Ako po. Ako po kung mali yung kinalabasan na sagot ibig sabihin mali po yung method na ginawa namin so kung tama naman po tama naman po yung method*" (For me, if the outcome is wrong, it means that the method that we used is wrong, and if the outcome is right, then the method is correct). Another student shared how they used their grades as a benchmark for strategy use, "*Since grade seven I have been using different strategies and for each quarter I could see the effects especially on my grades.*"

The strategies that students applied varied depending on the task they were given. Results and performance outcomes were commonly used by students—notably from School A— to evaluate the efficacy of their chosen strategy. This reflects the self-judgment component of the self-reflection phase, in which learners assess their performance relative to specific standards and make causal attributions about the reasons behind it (Zimmerman & Cleary, 2009). This approach aligns with Bandura's (1986) view that monitoring one's own behavior and its

outcomes provides a powerful feedback loop that enables students to identify the strategies that work for them, which in turn motivates them to continue using and refining those strategies. This indicates that students recognize that SRL strategies are dynamic and that different tasks may require different approaches. This adaptive process reflects how the Metacognition factor operates hand in hand with the Task Strategy factor, where learners adjust their approaches based on varied and changing feedback (Broadbent et al., 2022; Zimmerman & Cleary, 2009, p. 251).

Theme 3: Inhibiting Role of Online Study Environment

The findings from the quantitative analysis identified *Online Study Environment* and *Online Negative Achievement Emotion* as the most potential inhibiting factors of SRL in the online component of blended learning. The following thematic analysis from the FGD transcripts of Group 3 and Group 4 builds upon these results and provides a deeper understanding of how these factors inhibit students' SRL in online learning.

Study Environment was found to be the lowest-rated factor among the ten self-regulating factors measured in this study (M = 4.51). This quantitative result was supported by data from the qualitative study through FGDs, where the analyses revealed that physical and digital surroundings, as well as resource constraints, impacted the students' ability to self-regulate while engaged in online learning. The sub-themes that emerged from the FGD transcripts include: *Inadequate Physical Study Spaces*, *Digital Distractions in Online Learning*, and *Technological and Resource Limitations*.

Sub-theme 3.1: Inadequate Physical Study Spaces

Most of the students who scored lowest in the study environment factor did not have a dedicated study space. These students had to settle for suboptimal areas in their home, which they often shared with family members. One student described his study space: "*Sa sala lang po. So lahat po kami nandun sa isang place. Okay. Medyo maingay po. And nakaka-distract*." (In the living room. We are all there in one place. It is somewhat noisy and distracting). Another student remarked "*there's no privacy in my house like we sir. We share rooms me and pinsans po*" (There is no privacy in my house. I share rooms with my cousins). The absence of a conducive and quiet study space became a source of constant distraction for students. One student explained: "*My typical study environment is kind of hard because there's a lot of family matters that are going around in the house. So it tends to be quite noisy and distracting*". Another added, "*Usually maingay po sa labas, kasi marami po naglalaro kaya hindi po ako maka-focus masyado.*" (It is usually noisy outside because there are kids playing and I can't focus too much).

Students also encountered interruptions from family members that affected their focus when studying. One student shared: "*my siblings po it's quite hard for me to focus since sometimes they ask me to play even when studying*". Despite efforts to communicate the need for space to concentrate, students are often asked to do household chores. One student shared: "*I ask them to leave me alone because I'm focusing on studying. they need help with certain stuff like chores po so I can't really focus on my work*." (I ask them to leave me alone because I'm focusing on studying, but they need help with certain stuff like chores, so I can't really focus on my work).

Most of the students reported the lack of a dedicated study space when learning online. This is notable because studies show that having a suitable study space is considered a potential facilitator of SRL (Dong et al., 2023), yet students often had to share spaces with other family members and were situated in areas not conducive to learning. This became a challenge for students as they were constantly exposed to outside noise and distractions. The majority of the students also expressed frustration as they got interrupted—usually by their parents—to do household chores. The combination of distractions and interruptions negatively impacts the students' ability to maintain focus and stay on task during their learning. The experiences shared by students highlight how the Filipino household context, often characterized by shared living arrangements and household responsibilities, affects their study environment (Balolong, 2021; Eslit, 2023).

Sub-theme 3.2: Digital Distractions in Online Learning

Aside from deficiencies in physical space, students also shared distractions caused by their engagement with digital media and games. As one student remarked: "*One of the common distractions I face is mostly the easy access to social media when trying to study online.*" Another added: "*Kapag nag oonline class po hindi po ako nakikinig, nag oonline games po ako*" (During online class, I don't listen, I play online games).

Students have also expressed challenges in studying, maintaining focus, and staying on task. As one student explained: "*It's really difficult to study knowing that you always get locked in your phone instead of doing and finishing your work. Usually it promotes procrastination and other issues with that.*" Another added: "*I*

have a low attention span. So whenever I kind of doze off or distracted, I usually go watch TikToks and YouTube videos." The ease with which they can switch to digital applications and social media further exacerbates their difficulty in maintaining focus. One student shared: "*when there's something I have to do in an app, even if it's something menial like claiming daily rewards. it overrides my priorities*". Another admitted: "*Kapag online hindi po ako ganun makapag focus kasi minsan lumilipat po ako sa social media.*" (During online, I can't really focus because sometimes I switch to social media). A third added: "*Madali po ako ma-distract. Kaya anything na nang mayayari po sa cellphone ko, kailangan ko po pong tignan agad*" (I get easily distracted. So anything that happens on my phone, I feel the need to check immediately. These habits created distraction cycles that undermined their ability to focus and regulate their efforts.

Social media, digital apps and games, and the internet are the common causes of distractions that students face when learning online. Students reported being easily distracted due to a low attention span. These distractions often lead to academic procrastination. In a related study, Habibi et al. (2021) revealed a significant negative correlation between self-regulation and academic procrastination. The challenge of these digital distractions is amplified by the lack of external monitoring. As one student shared "*Isa po yun dahilan kasi wala pong nag sasaway*" (That's one of the reasons because no one is there to correct me). This is a key insight into the underlying process of self-regulation. It suggests that students' effort regulation—a learning strategy in SRL—can be reliant on an external source (such as teacher's physical presence) rather than an on internal one. When this external monitoring is reduced in the online environment, the students' internal ability

to resist distractions and stay on task can be weakened. This offers an explanation for why low attention span and academic procrastination are prevalent in this setting (Habibi et al., 2021; Rasheed et al., 2020). Hence, unless students apply SRL strategies such as time management and effort regulation, academic procrastination may remain high, indicating lower levels of self-regulation.

Sub-theme 3.3: Technological and Resource Limitations

The lack of adequate resources that students can use while engaged in online learning was also highlighted as a challenge. One student shared: "*ang problem lang po talaga kasi gadgets since may kapatid pa po kaming panganay na nag aaral pa po and minsan gamit po nila*" (My main problem is the gadget, since I have olders siblings who are also studying, and sometimes they need to use it). Another added: "*My only tool when I study online is my phone, occasionally my sister's laptop.*"

The predominance of mobile phones as students' primary learning device posed challenges as these are not always optimal for online learning. One student noted: "*minsan po kasi sa phone ko po hindi talaga kaya nang online*" (sometimes my phone really can't handle online learning). Another added: "naglalag lalag and yung mabilis po malowbat yung phone" (It lags and my phone battery drains fast). Having an unstable internet connection also impacted the students' ability to stay focused during online learning. One student shared: "*My common distractions are internet because it can sometimes be slow or it just doesnt work, so basically I can't really listen because of the internet*." Another added: "*Nawalan po kasi kaming wifi recently lang, and then parang nauubusan po kasi kami ng mga load*." (We recently lost our WIFI, and we also run out of mobile data).

These limitations highlight the structural inequalities that underlie students' online learning experiences. Limited access to technological resources and unstable internet connectivity can diminish opportunities to engage with rich learning resources, peer collaboration, and feedback seeking. These technological and resource gaps can impede student access to learning resources and engagement, potentially affecting learning outcomes (Erkan & Sungur-Vural, 2020; Eslit, 2023; Villaseñor, 2024).

Theme 4: Inhibiting Role of Online Negative Achievement Emotions

Online Negative Achievement Emotion—a motivational belief under the SRL-O framework— was found to be the second lowest-rated among the ten self-regulating factors measured in this study (M = 4.61; see table 5). This quantitative result was substantiated by data from the qualitative study, which described how negative achievement emotions and fear of failure impact students' learning. The sub-themes that emerged from the FGD transcripts include: *Impact of Negative Achievement Emotions on Learning* and *Fear of Failure and External Pressures*.

Sub-theme 4.1: Impact of Negative Achievement Emotions on Learning

The negative achievement emotions that students experienced during online learning, particularly those tied to academic performance and fear of failure, affected both their learning performance and motivation. According to students, feelings of overwhelm, pressure, anxiety, and frustration often led to their reduced focus, procrastination, and disengagement. As one student shared: "*I get overwhelmed kasi*

naka tingin lang ako sa screen all day and it leaves me mentally tired." (I get overwhelmed because I just stare at the screen all day and it leaves me mentally tired). Another added: "*kapag po parang na ooverwhelm po ako I choose not to do anything, so natatambakan na lang po ako*" (When I feel overwhelmed I choose not to do anything so my tasks end up piling up).

Feelings of pressure and anxiety also impacted students' motivation to study and work hard. One student remarked: "*I don't really have motivation to study or work hard when I'm feeling anxious or being pressured po*". In addition, feelings of frustration have led some students to give up on their tasks. As described by one student: "*When I can't finish a work or study properly online I usually feel really frustrated and sometimes I feel too demotivated and I just go and I just give up on it*".

As noted earlier, students who perceive learning tasks as stressful, meaningless, or boring may experience reduced effort and resilience. They are more inclined to focus on negative outcomes and the consequences of such outcomes, which further fuel their feelings of anxiety and task avoidance behaviors (Alonso-Tapia et al., 2014). The presence of these negative achievement emotions can influence students' capability to self-regulate (Zimmerman, 1989). The impact of such emotions often results in academic procrastination, loss of motivation to study, and at times, completely giving up (Broadbent et al., 2022; Habibi et al., 2021). Studies have shown that negative activating emotions such as pressure and anxiety may induce effort but may also reduce intrinsic motivation (Broadbent et al., 2022, p. 156). Moreover, negative deactivating emotions such as overwhelm and hopelessness can also adversely impact students' motivation and mental processing

(Broadbent et al., 2022, p. 156). These emotions are outcomes of the *Self-Reflection* phase in the cyclical cycle of self-regulated learning. Failure to manage such emotions can directly influence the *Forethought* phase with regard to the students' effort and motivation to persist and continue with their learning (Zimmerman & Cleary, 2009, p. 248).

Sub-theme 4.2: Fear of Failure and External Pressures

The negative achievement emotions that students feel while engaged in the online component of blended learning are triggered by, and come from a variety of causes. These causes include: fear of failure, external judgment, and self-imposed expectations. Students shared mixed reasons for why they fear failing. One student described "*in online class and your teacher calls you, the negative emotions you feel at that point is connected to the fear of failing because when your teachers calls you, you're instantly pressured and you don't want to like say the wrong answer and you overthink and maybe like the students might think of you as a failure or might make fun of you or the teacher might insult you or anything*". Another added: "*When sometimes you don't know or wala ka pong sagot dun sa question then you got called and it triggers those emotions po*" (When sometimes you don't know or not have an answer to the question, then you get called, it triggers those emotions.) A student explained how failing affects his motivation "*failing can really bring your whole motivation down po or your whole personality down because in your mind you're going to say: Ay nagkamali ako, ay lagot ako, ay hindi ko na to kaya. Ganun po yuyng mindset ko kapag nag fail po ako*" (failing can really bring your whole motivation down po or your whole personality down because in your mind you're going to say: I made a mistake, I'm in trouble, I can't do this. That's my mindset

when I fail). The expectations from their parents were also highlighted by students as one of the reasons why they feared failing. As one student remarked: "*Ayoko po madisappoint yung parents ko sa akin dahil bumagsak po ako*" (I don't want my parents to be disappointed in me because I failed). Another student shared a more serious consequence of failing: "*Papalayasin daw po ako pag bumagsak po ako.*" (I will be kicked out of the house if I fail).

Concerns about external judgment are another cause of the negative achievement emotions that students felt. As one student shared: "*ang inooverthink ko is what people will think of me not just my parents but my classmates*" (I overthink what people may think of me, not just my parents but also my classmates). This external pressure was linked to a cultural and familial dynamic where grades are a source of family pride as one student noted "*Mayabang po kasi yung mga magulang ko sa ibang tao*" (My parents take pride in showing off to others). This emphasis on performance is consistent with the findings of Retya et al. (2017), which revealed that Filipino students' motivation for striving for academic success is deeply social, often viewing academic achievement as achievement for their family as well. This insight reframes disappointment not merely as a personal feeling, but also about how students believe others see them. One student shared how she felt more pressured when she was compared to her siblings "*Tatlo po kasi magkakapatid and yung dalawa po kapatid may mga medals and honors. So, habang proud na proud po yung mga parents ko, parang naleleft out pa ako sa gilid kasi di pa po nakikita yung grades ko*" (There are three of us siblings, and the other two have medals and honors. So while my parents are really proud of them, I feel left out because my grades have not been seen yet). Students felt "*parang nadidisappoint po sila sa*

amin” (our parents get disappointed) when they do not perform well in school, linking their academic achievement to their family’s reputation. This perceived parental academic pressure was found to be significantly correlated with the cultural value of “*utang na loob*” (debt of gratitude), where students feel a strong sense of responsibility to succeed to repay their parents’ sacrifices (Dizon et al., 2025).

Some students also shared that self-imposed high expectations were a source of their negative achievement emotions. As one student described, “*Sa sarili lang po talaga yung pressure kasi naman po parang siyempre gusto mo kong magpasikat po sa kanilang kaya mo ganun kahit minsan po hindi talaga kaya.*” (The pressure really just comes from myself because, of course, I want to prove to others that I can do it even if sometimes I really can’t). Another student explained why it was critical for him to succeed: “*Ako po ano kasi ako yung panganay so ako po yung inaasahan ng parents ko*” (I’m the eldest so my parents really count on me).

The majority of the students pointed to fear of failure as the common cause of their negative achievement emotions. This however, is a surface-level root cause. Further analysis revealed that students’ fear of failure stems from concerns about how they may be perceived or judged by others, particularly their parents. This strong sensitivity to parental judgment is shaped by Filipino socio-cultural norms in which academic success is tied to family honor and obligation (Dizon et al., 2025; Retya et al., 2017). This fear falls under both the *Forethought* and the *Self-Reflection* phases in the cyclical cycle of self-regulation (Zimmerman & Cleary, 2009) but it manifests differently in each. In the *Forethought* phase, the fear of failure operates as a self-motivation belief or a potential barrier that influences how students plan for

and approach their learning (e.g., they may choose to avoid engaging in challenging tasks to avoid looking incompetent). In the *Self-Reflection* phase, the fear of failure manifests as an emotional consequence of performance that triggers a negative self-reaction (e.g., self-dissatisfaction). In essence, fear of failing acts as an anticipatory motivator or barrier in the forethought phase and is experienced as a defensive outcome in the self-reflection phase.

Theme 5: Adaptive Strategies for Overcoming Environmental and Emotional Challenges

Students shared various coping mechanisms that helped them manage negative achievement emotions and address the challenges in their study environment. The coping mechanisms they employed to manage their negative achievement emotions include: talking with people, taking breaks to spend time alone, and task management. "*I talk to people*", as one student shared. Talking to people enabled students to share their feelings with others and feel understood. As one student explained: "*Whenever you talk to friends, often they can relate to your struggles and your feelings. And it's nice to have someone relate to those feelings and helps you feel less anxious, less overwhelmed knowing that you're not alone in anything that you think you're alone at.*" Another student remarked how talking to friends lessened her feelings of anxiety "*Talking to my friends, but I think that this can also serve as a double edged sword. It lessens my anxiety*".

While there are benefits to interacting with others, students also expressed the need to take breaks and spend time alone. As one student shared: "*Alone time po. Minsan po parang tinatanggal ko yung cellphone ko off the laptop*." (Alone time.

Sometimes I remove my cellphone and laptop). Another added "*another thing I do is I usually listen to some music by myself in a quiet room*". Going outside to decompress was also a common coping mechanism shared by several students as one shared: "*I cope by going outside and doing something else.*" Another added: "*lalabas po ako ng bahay para mag isip isip and then babalik po ako. And then continue lang po ako ng study*" (I go out of the house to think then I go back. And then I continue studying). Students also noted that doing things they enjoy helped them manage their negative achievement emotions. As one student remarked: "*Whenever I feel overwhelmed, I take a break and I go and enjoy doing something I like.*" Another added "*Nag babike po ako or kaya po nag skate. Nag pupunta po ako ng seaside po.*" (I go biking or skating. I go to the seaside).

Maintaining focus and task management also helped students manage their feelings of overwhelm and anxiety. As one student shared: "*maglilist po ako muna ng mga gagawin ko. Isa-isa ko po silang tatapusin. Effective po sa akin yung pagka kapag may to-do list po ako*" (I will list all the things I need to do. I will finish them one-by-one. I find it effective to have a todo list). Another added: "*I calm myself down and try to focus on one thing only*". Other students shared that they maintain focus by restricting their use of devices. As one student noted "*buong holy week hindi po ako ng cellphone*" (I did not use my cellphone during the entire holy week).

Students described the various ways they attempt to regulate their emotions when learning online. This is essential considering that studies show that self-control strategies such as avoiding distraction, focusing on learning, and using time effectively are important for student success in online learning environments (Zhu et

al., 2016). Conversely, challenges in emotional regulation can negatively impact their academic engagement and achievement (Liew et al., 2019). While these student-led efforts are encouraging, the scoping review by Xu et al. (2023) revealed that emotion regulation strategies in the context of online learning remain to be a significant gap in existing literature. This underscores the need for more targeted research and support in this area.

Beyond emotional coping, students acted on their study environments. Despite constraints in students' study environments, including limited physical space, digital distractions, and inadequate learning devices or technology, students sought ways to improve their learning conditions. Some students communicated to their family members their need for privacy to maintain focus. As one student shared "*nag papaalam muna po ako sa pamilya ko na wag muna po ako guluhin mga habang may ginagawa ako*" (I ask permission from my family for them to not disturb me while I am doing something). Another added: "*I ask them to leave me alone because I'm focusing on study*".

Other students also tried to look for more conducive study areas. One student noted: "*I go find some rooms that are quieter and some rooms that my family don't really go to.*" They also listen to music to block out external noise and maintain concentration— "*whenever I study I often listen to some instrumental that are something like lowfi*". Other techniques that students employ include the organization of their physical environment. One student described: "*Minsan po kapag nag cocope po ako nag lilinis po ako ng space ko po para makita ko po na malinis*." (Sometimes, when I'm trying to cope, I clean my space so I can see it tidy).

When students were asked about their ideal study environment, the majority described a space that is comfortable, free from noise and distraction, and equipped with adequate learning devices and stable internet connectivity. One student described it as "*A stable wifi, motivation boosters, comfortable environment and reduced noises also distractions*", while another noted, "*Somewhere comfortable, and quiet without distractions.*" Others highlighted the importance of having "*a good internet connection, stable and nice gadgets to use*" and "*A peaceful and quiet place, with a good internet connection and also an AC*". Students clearly see the value of having a conducive study environment. As one student remarked: "*If you have a good study environment be it a quiet room and distraction-free environment then studying can be much more comprehendible*"

Students attempted to manage the challenges in their study environment by employing *environmental structuring*, a key self-control strategy within the performance phase of self-regulation (Zimmerman & Cleary, 2009). Theoretically, this reflects triadic reciprocality where students actively initiative personal agency to alter their immediate physical context rather than passively accepting environmental constraints (Zimmerman, 1989). These strategies include isolating oneself from distractions, blocking out noise, and arranging a clean and organized study area. Having a conducive study environment is crucial for fostering effective learning as it minimizes distractions and enhances student focus (Dong et al., 2023). However, it is important to note that students in School A and School B belong to socio-economic groups that may lack the means to provide dedicated study spaces and learning resources at home. This makes it even more important to educate them

on SRL strategies that help optimize their study environment despite such constraints, alongside institutional support to address access barriers.

Theme 6: Sources of Self-Regulated Learning Strategies

Most of the self-regulated learning strategies that students employed in the preceding sections were derived from their own experiences or student-discovered. As one student described: "*Yung strategies ko po is from my experience na po*" (My strategies are based on my experience). Another added: "*I developed these on my own and from my observations of my previous classmates who were also academic achievers.*" Another student remarked how he mirrored his strategy after his sibling "*For me po because I have my kuya po na nag graduate na din ng grade 12 po sa School A kaya I learned from his strategies na po*" (I have an older brother who graduated from School A so I learned from his strategies).

Students also discovered strategies from the internet and social media. As one student shared: "*Minsan po dumaan sa social media apps like Tiktok, yung mga-methods yung mga apps like mga flashcards yung mga tips po.*" (Sometimes I come across methods in social media apps like TikTok, the methods like flashcards and study tips). Another added "*Some strategies are found in the internet like TikTok po or we learned them po from the design thinking method*."

Most of the strategies that students employed were discovered or developed from their own experiences or online sources. This aligns with Vanslambrouk et al.'s (2018) study, which revealed that students were mostly unaware or unable to articulate that they were actually utilizing an SRL strategy (Vanslambrouk et al.,

2018, p.85). This presents an opportunity for institutions to be more intentional in integrating such SRL strategies into their teaching and learning processes.

The six themes and ten sub-themes that emerged from the interpretive analysis are summarized in **Table 9** below. These themes provide insights into how the identified factors operate to facilitate or inhibit students' self-regulated learning in the online component of blended learning.

Table 9

Impact of Factors on Students' Self-Regulation

Factor	**Theme/Sub-theme**	**Key Findings**	**RQ 2: How (+ facilitates or - inhibits)**	**SRL Phase**
Online Social Support	Online Help-Seeking Strategies	Students used asynchronous communication (e.g., chat, email) and a communication hierarchy (peers first, then teachers) to minimize time and cognitive effort when seeking help.	(+) Asynchronous interaction enables efficient and convenient interaction by allowing students to obtain support from peers and teachers without time and or place constraints. The peer-first communication hierarchy enables students to minimize time and effort when seeking help.	Performance
	Peer Collaboration in Online Learning	Peer learning is reciprocal. Students extend understanding by gaining diverse perspectives and correcting errors through collaboration. Giving help reinforces students' sense of mastery.	(+) Expands students' understanding through peer learning, allows new perspectives to be gained, and errors to be corrected which leads to continuous improvement.	
	Barriers to Online Social Support (moderating condition)	A perceptual barrier in the form of *hiya* or fear of being a burden, combined with inconsistent internet access, limits students' help-seeking behaviors.	(-) Technological constraints and the psycho-social concerns of *hiya* and the fear of being an inconvenience hinder the utilization of collaborative help-seeking strategies in online learning.	
Online	Metacognitive Monitoring and	Students from School A routinely use rubrics and criteria to guide	(+) Enables active monitoring and	Performance

Metacognition	Evaluation	and check performance, which may help explain why they obtained a significantly higher mean scores in metacognition than students from School B.	evaluation of learning through strategies such as elaboration, rehearsal, and self-resting.	Self-Reflection
	Selection of Optimal Learning Strategies	Students' selection of a learning strategy is dynamic and situational. They assess effectiveness through grades and performance outcomes.	(+) Fosters assessment of effective learning strategies by observing results and performance outcomes. Encourages adaptation of approach based on specific task at hand.	
Online Study Environment	Inadequate Physical Study Spaces	The lack of dedicated study spaces force students to use suboptimal, shared family areas that lead to constant distractions and interruptions for household chores.	(-) Affects students' focus and ability to stay on task due to lack of a dedicated study space, shared living areas, and interruptions from family members.	Performance
	Digital Distractions in Online Learning	Digital distractions are amplified due to lack of external monitoring (teacher presence). It weakens the students' internal ability to resist distractions.	(-) Leads to low attention span and academic procrastination due to unsupervised and easy access to social media, digital applications, and online games.	
	Technological and Resource Limitations	Students are often compelled to use mobile phones as their primary learning device, which is sub-optimal for online learning.	(-) Prevents students from fully engaging with learning resources and activities due to inadequate learning devices and unstable internet connectivity.	
Online Negative	Impact of Negative	Negative achievement emotions lead to academic procrastination	(-) Leads to academic procrastination	Performance

Achievement Emotion	Achievement Emotions on Learning	resulting in accumulation of tasks and complete disengagement.	or giving up entirely on tasks due to feelings of overwhelm, pressure, anxiety, and frustration.	Self-Reflection
	Fear of Failure and External Pressures	Intense parental expectations linked to family pride (*utang na loob*) as well as external judgement result in students' fear of failure.	(-) Triggers negative achievement emotions and helplessness due to concerns about external judgement and high self-imposed expectations.	Forethought Self-Reflection
Online Study Environment and Online Negative Achievement Emotion	Adaptive Strategies for Overcoming Environmental and Emotional Challenges	Students are able to utilize emotional coping mechanisms and employ environment-structuring despite lack of formal training and institutional support.	(+) Fosters resilience and helps students continue their learning despite challenges when coping mechanisms such as talking with peers, taking breaks, and environment-structuring are employed.	All phases
	Sources of Self-Regulated Learning Strategies	Strategies are primarily student-discovered through personal experience, observation (from siblings), or social media platforms, rather than formal, institutional training.	(+) Demonstrates the propensity and natural tendency of students to independently acquire strategies through personal experience, observation, or online sources, enabling them to adapt and find effective methods to regulate their learning (-) Lack of deliberate institutional support limits the number of SRL strategies that students can employ to overcome challenges and optimize learning conditions.	All phases

Addressing the Quantitative-Qualitative Discrepancy

It is important to acknowledge the apparent discrepancy between the quantitative and qualitative findings of this study. While results from the SRL-O questionnaire indicated that all self-regulated learning factors scored above the midpoint of the scale, the qualitative findings revealed that students continued to experience conditions that inhibited their ability to effectively self-regulate, particularly in relation to barriers of online social support, study environment, and negative achievement emotions.

This discrepancy may be explained by limitations that are inherent in self-report measures. Prior research has shown that students' reported beliefs about their self-regulated learning do not always align with their actual behaviors. Difrancesca et al. (2016) for instance, found that self-report inventories failed to align with interview data. As an example, low-achieving students in the study reported high levels of knowledge about when to use SRL strategies on surveys, yet their actual behaviors contradicted this. Similarly, Foerst et al. (2017) identified a significant gap between knowledge and action, noting that students often possessed high levels of declarative knowledge about effective SRL strategies but struggled to enact or apply these strategies in actual learning situations.

These findings suggest that self-report instruments such as the SRL-O may capture students' perceived awareness of self-regulated motivational beliefs and learning strategies rather than actual enactment of these strategies under authentic learning contexts. Hence, quantitative scores above the midpoint should not be

interpreted strictly as an absence of inhibiting factors, but rather as an indication that students recognize value of self-regulated behaviors, even if they are unable to consistently implement them.

Insights from the Qualitative Findings

The qualitative findings provided insights into how the most prominent facilitating factors of *Online Social Support* and *Online Metacognition*, as well as potential inhibiting factors of *Online Study Environment* and *Online Negative Achievement Emotion*, operate in the lived experiences of junior high school students. Themes 1, 2, and 3 revealed how students employed *Learning Strategies*: they sought academic support from peers and teachers (Theme 1), notably establishing a communication hierarchy (peers first, teachers second) and using asynchronous and varied communication channels to maximize efficiency when seeking help online. However, this support is often constrained by the perceptual barrier of *hiya* or by being a burden to others (Theme 3). They actively plan, monitor, and evaluate their learning, with students from School A notably leveraging rubrics and criteria to check performance and adjust their strategy (Theme 2). Students struggled to manage their physical and digital environments due to deficiencies like suboptimal, shared living spaces and constant interruptions for household chores (Theme 3). Themes 4 and 5 showed the impact of *Motivational Beliefs.* Students described feelings of overwhelm, pressure, anxiety, and hopelessness that were triggered by fear of failure by fear of failure. This fear is rooted in intense parental expectations often linked to family pride (*utang na loob*), external judgement, and self-imposed expectations (Theme 4). Students also demonstrated their attempts to cope by organizing their tasks, taking breaks, and employing environmental

structuring (Theme 5). Finally, Theme 6 revealed that these self-regulated learning strategies were largely self-discovered and situational rather than systematically taught or supported by the school. Students improvised learning strategies because the conditions compelled them to, not because they were formally taught or guided. Taken together, these results suggest that self-regulated learning is shaped by the dynamic interaction of key factors including students' motivational beliefs, learning strategies, and the cultural and contextual conditions in which they learn (Zimmerman & Cleary, 2009). To build on this, the next section presents the needs analysis, which identifies the support mechanisms necessary to enhance facilitating factors and mitigate inhibiting ones.

Needs Analysis for Self-Regulated Learning Support

The quantitative results identified *Online Social Support* and *Online Metacognition* as key facilitating factors, while *Study Environment* and *Online Negative Achievement Emotion* emerged as potential inhibiting factors of SRL in the online component of blended learning. The qualitative results provided a deeper understanding of how and why these factors manifest and affect the students' self-regulation. This section synthesizes these findings to address the study's third research question: *What student needs emerge from the findings that should be addressed to reduce the inhibiting factors and enhance the facilitating factors in students' self-regulated learning?* The identified needs are organized according to the themes that emerged from the thematic analysis as shown in **Table 10.**

Table 10

Identified Needs

Theme/Sub-theme	**RQ 3: Identified Needs**
Online Help-Seeking Strategies	Students need an intentional and supportive online environment to strengthen their help-seeking and peer collaboration behaviors.
Peer Collaboration in Online Learning	
Barriers to Online Social Support (moderating condition)	Students need intentional and proactive teacher and institutional communication that normalizes help-seeking and reduces the perceptual barrier of *hiya* or fear of being a burden.
Metacognitive Monitoring and Evaluation	Students need to move beyond relying solely on self-discovered strategies and increase awareness of their thinking process to consciously and metacognitively plan, monitor, and evaluate their learning.
Selection of Optimal Learning Strategies	
Inadequate Physical Study Spaces	Students need education on how to effectively manage the physical and digital study environments. Institutions also need to address the inequity caused by deficiencies in students' study spaces, learning device constraints, and internet access, in coordination with broader government support where necessary.
Digital Distractions in Online Learning	
Technological and Resource Limitations	
Impact of Negative Achievement Emotions on Learning	Students need institutional tools that can help regulate overwhelming negative achievement emotions that stem from fear of failure, and external pressure from parents, peers, and self, alongside efforts that help parents better understand and support students' emotional needs.
Fear of Failure and External Pressures	Students need institutional support on how to reframe self-motivation beliefs from extrinsic orientation (grades, rewards, parental expectations) to intrinsic ones (personal growth, task interest/value)
Adaptive Strategies for Overcoming Environmental and Emotional	Students' self-discovered coping mechanisms need to be formalized and

Challenges	strengthened through education on emotional regulation.
Sources of Self-Regulated Learning Strategies	Students' self-discovered SRL strategies need to be transformed into intentional, integrated, and institutionally supported programs, policies, and protocols.

Discussion of Identified Needs

An intentional and supportive online environment to strengthen students' help-seeking and peer collaboration behaviors.

The qualitative study revealed that students develop online help-seeking strategies in response to challenges caused by physical isolation during the online component of blended learning. Students adapt by using asynchronous interaction channels and various digital tools and by establishing communication hierarchies such as engaging with peers first for quick queries, and teachers for formal clarifications and instructional support. This approach enabled them to select tools that matched the demands of an academic task and helped students reduce the time and cognitive effort to overcome their challenges. In addition, students found value in collaborating with their peers as it not only challenged their own assumptions and understanding, but also exposed them to diverse insights and perspectives that helped expand their learning. While these behaviors demonstrate the propensity of students to employ SRL strategies that enhance their ability to collaborate online, creating intentional and institutionally supported mechanisms may be useful to enhance and maximize these practices (Buot, 2023). Such mechanisms may include peer mentoring programs, collaborative learning activities, or online discussion boards (Zhao & Cao, 2023; Zhu et al., 2016). These practices may contribute to the

increased utilization of help-giving and help-seeking behaviors observed from the FGDs of the students (Broadbent, 2017; Xu et al., 2023).

Intentional and proactive teacher and institutional communication that normalizes help-seeking and reduces the perceptual barrier of hiya or fear of being a burden.

The quantitative results revealed that *Online Social Support* was the most prominent facilitating factor as reflected by its highest mean score (M = 5.31; see Table 5) across the ten factors of SRL-O. Moreover, results from the qualitative analyses revealed that help-seeking in the online environment is not merely functional, but also socially and culturally mediated (Pantaleon et al., 2023). This mediation is strongly influenced by indigenous Filipino ethical systems (Pantaleon et al., 2023). Some students expressed shame or *hiya* (propriety), which inhibited them from enacting help-seeking behaviors. This is consistent with the understanding that *hiya* is a Filipino virtue defined as a type of self-control or temperance directed toward the welfare of *Kapwa* (fellow human), often manifested as adherence to social norms (Tablan, 2021). These findings point to the need for intentional and proactive teacher and institutional communication that frames help-seeking as a normal, expected, and valued aspect of the learning process, rather than as a sign of weakness or source of inconvenience. By routinely communicating that seeking clarification and asking questions are expected, and by clearly specifying appropriate channels and timeframes for consultations, teachers may reduce students' fear of being a burden (Tablan, 2021; Vanslambrouck et al., 2019). This mechanism could be effective in the Filipino context because it provides a structured means for

help-seeking, reducing students' fear of appearing inconsiderate (*walang hiya*) when they need to consult others in online learning contexts (Pantaleon et al., 2023; Tablan, 2021).

Move beyond students' self-discovered strategies and increasing awareness of their thinking process to consciously and metacognitively plan, monitor, and evaluate their learning.

The quantitative study revealed that *Metacognition* is a key facilitating factor for self-regulated learning, with students actively engaging in self-monitoring and self-evaluation. However, FGD results indicated that while students commendably self-discovered many of their strategies through personal experience or observation of others, these approaches were not deliberately taught and may inhibit these practices from being fully optimized (Zhu et al., 2016). This suggests a gap where while students have a natural inclination toward metacognitive practices, they are unable to formalize or strengthen them due to limited institutional support (Buot, 2023). The qualitative findings further showed that students' metacognitive strategies commonly originated from personal experiences, siblings, peers, or social media platforms such as TikTok rather than formal instruction (Theme 7: Sources of SRL Strategies). Notably, students from School A routinely used rubrics and performance criteria to guide and assess their work, which may help explain why they scored significantly higher in metacognition scores than students from School B. To address these disparities, institutions may need to develop formal training and teacher-modeled demonstrations of metacognitive strategies (Zhu et al., 2016; Zimmerman & Cleary, 2009). This could involve curriculum integration that teaches

students how to consciously plan their learning, monitor their progress, and evaluate the effectiveness of their selected methods (Zimmerman, 1989; Zimmerman & Cleary, 2009). Teachers may likewise model metacognitive thinking by verbalizing and demonstrating how they apply these strategies during instruction. Formalizing these strategies could help students improve their motivation and enhance their academic performance as shown in the meta-analytic study by Theobald (2021).

Education on how to effectively manage the physical and digital study environments.

Study Environment was identified to be a potential inhibiting factor of SRL based on the quantitative findings. During the FGDs, students expressed concerns about the lack of a dedicated study space, constant noise and interruptions from family, expectations to perform household chores during study periods, and digital distractions caused by social media and online games. While some students attempted to apply their own coping mechanisms, these were often reactive and inconsistent. To address this, formal training on how to manage their physical and digital study environments may be warranted (Zimmerman, 1989; Zimmerman & Cleary, 2009). This could include workshops on how to create a more conducive study space at home, using tools to block digital distractions, and time management techniques like *Pomodoro method* to minimize academic procrastination. Equally important is educating parents and guardians on the importance of protecting the students' study time and encouraging them to minimize non-urgent household task demands while students are engaged in online learning (Balolong, 2021; Barroso et al., 2023). Providing students and parents with concrete and research-supported

strategies may empower them to overcome these barriers and contribute to improving their focus and effort regulation during online learning (Broadbent & Poon, 2015).

Institutional support to address the inequity caused by deficiencies in students' study spaces, learning device constraints, and internet access, in coordination with broader government support where necessary.

The FGDs brought to light a fundamental issue of equity within the online learning environment. The qualitative data highlighted that many students lack access to adequate learning devices and stable internet connectivity. Most of the students share devices with their siblings and rely solely on mobile phones that are not necessarily optimal for online learning. These constraints can impede students' ability to effectively engage and access online educational resources. Institutions could take an active role in mitigating these issues by creating programs such as subsidized mobile data plans for internet access, loaner laptop or tablet devices, or on-campus study hubs where students gain access to a quiet and distraction-free space with reliable technology. These institutional initiatives can be strengthened by complementary government support through programs such as **The Digital Rise program** (Department of Education, 2022) and **The Digital Bayanihan Project** (Department of Information and Communications Technology, 2025), which are designed to systematically address the digital divide by improving connectivity and updating the technological resources for basic education. Addressing these barriers may help ensure a fair and equitable learning experience for all students (Buot, 2023).

Institutional support and tools that can help regulate overwhelming negative achievement emotions that stem from fear of failure, and external pressure from parents, peers, and self, alongside efforts that help parents better understand and support students' emotional needs.

Online Negative Achievement Emotion was identified as the other potential inhibiting factor of SRL in online learning. The qualitative findings revealed that students experience overwhelming negative achievement emotions such as anxiety and pressure, which often leads to loss of motivation and academic procrastination. Fear of failure emerged as the main root cause of these emotions and was closely tied to intense parental expectations linked to *utang na loob* (family pride), external judgment from peers, and self-imposed high standards. Students described how they worried about how they will be perceived by others and felt that their academic performance is not just a reflection of their own achievement, but of their families as well (Retya et al., 2017). This social and cultural framing of academic success intensified their fear of disappointing their parents (Dizon et al., 2025). To address these emotional barriers, institutions could create student support mechanisms that help students develop emotional regulation skills (Eslit, 2023). This could include counseling services that focus on coping with academic pressure, or providing workshops on stress management and techniques such as mindfulness practice (Broadbent & Fuller-Tyszkiewicz, 2018, p.1451). Furthermore, educating parents on how they can better understand and support their child's emotional needs may help ease the performance pressure students experience at home (Eslit, 2023; Zhu et al., 2016). Formalizing these emotional support programs could help students reorient

their mindset and develop their resilience to persevere through academic challenges (Zhu et al., 2016, p.60).

Institutional support on how to reframe self-motivation beliefs from extrinsic orientation (grades, rewards, parental expectations) to intrinsic ones (personal growth, task interest/value)

The qualitative findings revealed that the students' fear of failure is closely tied to extrinsic outcome expectations such as being judged by their peers, and the desire to please their parents and avoid their disapproval. This is consistent with research showing that Filipino students often view academic performance as a reflection of family honor and obligation, where grades become a source of family pride (Retuya et al., 2017). This dependence on external validation can be detrimental for students, as failures could derail their motivation entirely (Zimmerman & Cleary, 2009). Students may need support in shifting their focus from external motivation such as grades, praise, and validation, to intrinsic motivation such as task interest and value (Dong et al., 2023). This reframing is critical because extrinsic motivation focuses on external reasons like grades and rewards, while intrinsic motivation relates to internal reasons such as interest and mastery (Broadbent et al., 2022). Institutions could support this by designing learning experiences that highlight growth mindset and task interest rather than performance or grades. This approach is linked to goal orientation, which is designed to motivate both confident and unconfident students to seek opportunities to improve their abilities (Zimmerman & Cleary, 2009, p. 252). In addition, institutions could also conduct parent-training on cultivating a growth mindset for their children and educate them on how they can

shift their perspective on academic success and learn effective ways to support and motivate their children (Zhu et al., 2016, p.59).

Formalized and strengthened education on emotional regulation.

The FGD revealed that students developed their own coping mechanisms to deal with negative achievement emotions and environmental challenges such as talking to friends, taking breaks, or listening to music. While students attempt various emotion-regulation coping strategies to address their negative achievement emotions, almost all were student-discovered and self-initiated, and may not be the most effective long-term solutions (Vanslambrouk et al., 2018). Studies have shown that emotion regulation strategies specifically within online learning contexts remain a significant gap in the literature (Xu et al., 2023). The findings indicate a need to formalize and strengthen emotional regulation skills. This could be done by conducting emotional regulation training that can teach students emotional awareness, effective coping strategies, and proactive help-seeking when needed. An institutionally supported education program could move students beyond simple reactive coping to a more conscious and proactive approach to regulating emotions. One example of such a program is the ERAS (Emotion Regulation in Achievement Situations) model, which could help guide students to regulate their emotions in academic and other achievement-related contexts (Harley et al., 2019).

An intentional, integrated, and institutionally supported programs, policies, and protocols that formalizes the use of SRL strategies.

A recurring theme that emerged from the focus group discussions is the students' utilization of SRL strategies. However, these are largely student-discovered, rather than institutionally supported. This suggests an opportunity for institutions to intentionally cultivate and strengthen SRL strategy use among their students. The findings indicate the need to formalize these informal and fragmented practices into an integrated and cohesive SRL framework (Zimmerman, 1989). This could involve formal training on the three phases of SRL along with various strategies that can be employed across each of the phases (Zhao & Cao, 2023, p.8). It has been found that employing mixed SRL strategies and interventions throughout the three phases can enhance students' academic achievement (Xu et al., 2023, p. 2927). By making SRL an integral part of the students' education process, institutions may be better able to prepare students to become effective self-regulated learners (Theobald, 2021).

Chapter V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary of Findings

This study employed a mixed-methods explanatory-sequential design to investigate the factors that facilitate and inhibit self-regulated learning (SRL) among private junior high school students in the online component of a blended learning environment. A total of 442 students from two private schools in the Philippines participated in the quantitative phase using the Self-Regulation for Learning Online (SRL-O) questionnaire. A subset of 32 students then participated in the qualitative study through focus group discussions (FGD). The findings that address the research questions are summarized below.

Research Question 1: What key factors facilitate or inhibit students' self-regulated learning in the online component of a blended learning environment as measured by the SRL-O instrument?

Of the 10 factors measured by SRL-O, *Online Social Support* (M = 5.31) and *Metacognition* (M = 5.26) scored the highest and were the most significant facilitating factors. This indicated that students demonstrate a strong propensity for online help-seeking and help-giving behaviors, and that they actively monitor and evaluate their learning processes. While all 10 factors from the SLR-O scored above the midpoint of 4, *Online Study Environment* (M = 4.51) and *Online Negative Achievement Emotion* (M = 4.61) were identified as potential inhibiting factors or relative areas for improvement, as these had the lowest factor mean scores and

smallest standardized difference from the midpoint. This suggests that students encounter challenges in their physical and digital environments, as well as negative achievement emotions when learning online.

Research Question 2: In what ways do these facilitating and inhibiting factors influence students' self-regulated learning processes in the online component of a blended learning environment?

The qualitative study, conducted through focus group discussions, provided deeper insights into the conditions and mechanisms through which the identified factors influence students' self-regulation in online learning contexts. These mechanisms are not purely individual, but are also shaped by Filipino socio-cultural norms. In particular, the Filipino virtue of *hiya (*propriety*)* and *utang na loob* (debt of gratitude) influence how students approach help-seeking, effort regulation, and emotion regulation in the online environment (Pantaleon et al., 2023; Tablan, 2021)

- *Online Social Support* facilitates students' self-regulation by enabling **Strategic Online Help-Seeking** and **Reciprocal Peer Collaboration**. Students leveraged various digital tools such as chat applications and video conferencing to efficiently seek help from their peers and teachers. They established a "peer-first" communication hierarchy to minimize the time and cognitive effort spent when seeking help. They also found peer collaboration to be extremely valuable, as it enables them to expand their understanding and correct misconceptions through diverse perspectives. At the same time, help-seeking is socially and culturally mediated. Students' fear of being a burden is closely linked to *hiya* and concern for the *kapwa,* which can inhibit

them from utilizing available support (Pantaleon et al., 2023; Tablan, 2021). Barriers such as internet accessibility, teacher online availability, and these culturally shaped concerns about appearing *nakakaistorbo* (burdensome) can inhibit self-regulating behaviors if not addressed.

- *Metacognition* facilitates self-regulation as students actively engage in **Self-Monitoring and Evaluation** and **Selection of Optimal Strategy**. Students validate their understanding by explaining concepts in their own words, self-test using mock quizzes and flashcards, and mentally rehearsing lessons. They assess their learning by checking their performance against rubrics or grading criteria. In addition, students also demonstrated the ability to evaluate, select, and adapt the most appropriate SRL strategy to employ depending on the learning task and performance outcomes.
- *Study Environment* inhibits students' self-regulation due to **Physical Space Deficiencies**, **Digital Distractions**, and **Technology and Resource Gaps**. Students often lack a dedicated and conducive study space, which leads to constant interruptions from family and outside noise. They also reported being constantly distracted by social media and online games. Furthermore, the majority of students have suboptimal devices and unstable internet connectivity when learning online. These challenges negatively impact students' ability to focus and regulate their efforts, often leading to academic procrastination.
- *Online Negative Achievement Emotion* inhibits students' self-regulation through feelings of overwhelm, pressure, anxiety, and frustration, which often lead to academic procrastination. This is consistent with Habibi et al.'s (2021) finding that academic procrastination is significantly and negatively correlated

with effort regulation. The underlying root cause of these negative achievement emotions is **Fear of Failure**, driven by concerns about external judgement from parents and peers, as well as self-imposed high expectations. What is uniquely evident in the findings is that these negative achievement emotions intensify when academic performance is framed as a reflection of family honor and parental expectations (*utang na loob)*, which further amplifies students' fear of failure (Pantaleon et. al., 2023; Tablan, 2021). This finding strongly supports the concept within the Forethought phase that a learner's motivation is heavily shaped by their beliefs about performance outcomes (Zimmerman & Cleary, 2009).

Although all SRL-O factors scored above the midpoint in the quantitative phase, the qualitative findings indicated that students continued to experience conditions that inhibited effective self-regulation, particularly in relation to online social support, study environment, and negative achievement emotions. This discrepancy may be explained by the limitations inherent in self-report measures, which tend to capture students' perceived awareness of self-regulated learning beliefs and strategies rather than their enactment in authentic learning contexts (DiFrancesca et al., 2016; Foerst et al., 201). Thus, scores above the midpoint should not be strictly interpreted as the absence of inhibiting factorus, but as an indication that students recognize the value of self-regulated learning behaviors despite not being able to consistently apply them.

Research Question 3: What student needs emerge from the findings that should be addressed to reduce the inhibiting factors and enhance the facilitating factors in students' self-regulated learning?

Based on the synthesis of the quantitative and qualitative findings, the study identified the following key student needs to address inhibitors and enhance the facilitators of identified self-regulating factors:

- An intentional and supportive online environment to strengthen students' help-seeking and peer collaboration behaviors.
- Intentional and proactive teacher and institutional communication that normalizes help-seeking and reduces the perceptual barrier of hiya or fear of being a burden.
- Move beyond students' self-discovered strategies and increasing awareness of their thinking process to consciously and metacognitively plan, monitor, and evaluate their learning.
- Education on how to effectively manage physical and digital study environments.
- Institutional support to address the inequity caused by deficiencies in students' study spaces, learning device constraints, and internet access, in coordination with broader government support where necessary.
- Institutional support and tools that can help regulate overwhelming negative achievement emotions that stem from fear of failure, and external pressure from parents, peers, and self, alongside efforts that help parents better understand and support students' emotional needs.

- Institutional support on how to reframe self-motivation beliefs from extrinsic orientation (grades, rewards, parental expectations) to intrinsic ones (personal growth, task interest/value)
- Formalized and strengthened education on emotional regulation.
- An intentional, integrated, and institutionally supported programs, policies, and protocols that formalize the use of SRL strategies.

Overall, the findings suggest that self-regulated learning in the online component of blended learning among Filipino junior high school students is not only a function of individual motivation and strategy use, but is also deeply embedded in Filipino cultural norms of *hiya*, concern for *kapwa*, and family-linked expectations about *utang na loob* and academic success. This aligns with the social cognitive view of SRL as a dynamic, interactive system in which personal factors, behavior, and the environment continuously shape each other (Zimmerman & Cleary, 2009).

Conclusions

The unique demands of the online component of blended learning serve as a catalyst for junior high school students to discover and enact self-regulated learning behaviors. The findings indicate that students exhibit a meaningful level of self-regulation, as reflected in their mean scores across all ten SRL-O factors. In particular, their relatively higher scores in the factors of *Online Social Support* and *Online Metacognition* indicate that students engage in help-seeking behaviors and employ strategies to plan, monitor, and evaluate their learning. However, while commendable, the strategies they employed were informal, reactive, and often

self-discovered or learned from peers. While this reflects students' resourcefulness and resilience, it also indicates that they are not fully equipped with the right tools, knowledge, and support mechanisms that can enable them to consistently and effectively employ self-regulated learning strategies. The qualitative findings further suggest that these strategies are not purely individual choices but are embedded in Filipino socio-cultural norms, particularly *hiya*, concern for *kapwa*, and strong family expectations around academic success.

The study revealed that students' *Study Environment* and *Online Negative Achievement Emotions* serve as key inhibitors to effective self-regulation. Students' challenges with suboptimal study spaces, digital distractions, and technological constraints are further amplified by feelings of anxiety, frustration, and a deep-seated fear of failure driven by extrinsic outcome expectations. These emotions are intensified when academic performance is treated as a reflection of family pride, which increases the pressure to avoid making mistakes and can discourage students from seeking help or admitting difficulty. These inhibiting factors can hinder students' ability to focus, persist, and actively engage when learning online. Moreover, findings revealed that help-seeking is socially and culturally mediated. Some students hesitate to seek online support because they fear that doing so can inconvenience others or *nakakaistorbo,* revealing how this Filipino virtue of *hiya* can be a barrier to self-regulated learning.

Institutions need to take an intentional and holistic approach to help students move beyond their self-discovered SRL strategies towards a formal, comprehensive, and optimized self-regulated learning framework. This requires interventions that are

not only oriented towards policies, programs, or skill-development, but also culturally responsive. By formalizing SRL education and establishing strong support mechanisms that are culturally responsive, institutions can address the factors that inhibit self-regulation while also reinforcing and enhancing the factors that enable it, particularly in the online component of blended learning.

Recommendation

The following recommendations are proposed based on the study's findings:

For Educational Institutions

1. Integrate Self-Regulation Learning in the curriculum. Institutions should explicitly teach students about the three phases of SRL along with research-backed strategies. SRL should also be embedded across all subjects to make it a core competency. In addition, informed by the positive findings from School A, institutions should consider integrating formal reflective practices to cultivate metacognitive awareness.
2. Provide strong and culturally responsive student support systems. Institutions should design programs, policies, and protocols that address the physical, digital, and emotional barriers that impede self-regulating behaviors, particularly in the online component of blended learning.
3. Educate parents, teachers, and staff on self-regulated learning and its cultural dimensions. For SRL to be sustainable, all stakeholders must be educated to help them understand the principles of SRL and to make them partners in fostering and reinforcing SRL behaviors in students.

For School B and Similarly Profiled Schools.

1. To further enhance utilization of metacognitive strategies, schools may consider integrating explicit metacognitive training during in-person sessions to better prepare students for the autonomy required on online days. In addition, School B may encourage students to routinely use rubrics and performance criteria to gauge progress and learning outcomes.
2. Support online-help seeking behaviors by implementing structured peer-mentoring programs or study-buddy system using low-cost or free communication platforms such as Messenger. Furthermore, schools may consider integrating constructivist, project-based and collaborative learning experiences that compel students to work collaboratively particularly during online learning days.
3. Designate quiet on-campus study hubs with school-provided internet and devices to address study environment constraints and digital inequity, thereby providing environmental structuring that students may not be able to achieve at home.
4. To address high levels of negative achievement emotion, schools may also consider workshops for parents to help them reframe academic success through growth mindset rather than being driven primarily by grades or rewards.

For Future Research

1. Future research can explore long-term effects of SRL interventions in junior high school settings across both private and public school and compare findings to determine the generalizability of these results.
2. Investigate other stakeholder perspectives. The inputs from the study were limited to student participants. To gain a more complete picture and obtain deeper insights into SRL, the perspectives of teachers and parents should also be included.
3. Examine the role of culture in fostering or inhibiting self-regulated learning. Future studies can investigate how Filipino socio-cultural values such as *hiya,* concern for *kapwa,* deference to authority, and family-linked expectations about academic success influence students' self-regulation in online learning contexts.
4. The results from the study revealed the adverse impact of negative achievement emotions in students' ability to self-regulate. Despite this, emotional regulation strategies, specifically within online learning contexts, remain a significant gap in the literature (Xu et al., 2023). Further research on effective emotional regulation interventions, particularly in culturally specific contexts such as the Philippines, is recommended.

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APPENDIX

Appendix A: SRL-O Questionnaire

Appendix B: Semi-Structured Interview Form

Appendix A

SRL-O Questionnaire

This appendix contains the Self-Regulated Learning Online (SRL-O) Questionnaire used in the study.

Full questionnaire available at: SRL-O

Appendix B

Semi-Structured Interview Form

This appendix contains the questions that were used in the participant focus group discussions.

Revised of FGD questionnaire: Semi-Structured Interview

Appendix C

SRL-O Results

This appendix contains the Self-Regulated Learning Online (SRL-O) Results

Full questionnaire available at: SRL-O

Appendix D

Independent Samples t-test

This appendix contains the Independent Samples t-test Results

Full questionnaire available at: Independent Samples T-Test

Appendix E

One Sample t-test

This appendix contains the One Sample t-test Results

Full questionnaire available at: One-Sample t-test results