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Self-Regulated Learning: Key Strategies of High-Achieving High School Students

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Abstract

This study identified the key strategies of Self-Regulated Learning (SRL) from High Academic achievers among high-school students between Grade 9 to Grade 11 in Language Arts (English)class (N = 46). These High Achievers in Language Art were discovered through their high scores on the Motivated Strategies for Learning Questionnaires (MSLQ) and there school average grade of the class. Students were first requested to fill out the MSLQ questionnaire based solely on how they think and feel about themselves in learning situations. They were made aware that results of the questionnaire would be anonymously revealed for the purpose of the study and that it wouldn't affect their grades. As for the interview, students were briefed beforehand about what they will do and some basic knowledge was established before the interviews occurred to ensure optimal data. The results of the MSLQ was first compared and evaluated in conjunction with the students' scores for their Language Arts class. The Self-Regulated Learning Interview Schedule (SRLIS) was later used to obtain information on SRL strategies used and their frequencies in different contexts from the selected group (N=9). The findings of this study suggested that there is no direct correlation between the MSLQ results and the Language Arts (L.A.) subject grades score, but that there is a relationship between the specific Self-regulation skills to the L.A grade scores. Furthermore, Goal-setting and planning were reported to be the most used strategies among high achieving students. This suggests goal-setting and planning might be one of the keys to success in academic areas. The empirical findings of this study supported many theoretical aspects of SRL. Towards the end of the studies, the implementations for teaching practice and suggestions (in addition to future research directions) were discussed to further increase the understanding of teaching methodology.

Keywords: Self-Regulated Learning, Academic Achievements, Learning Strategies

CONTENTS

FIGURES & TABLES

1. INTRODUCTION

When it comes to providing education from a school setting, there are many trends of methodology used in the search for the most suitable one. Numerous countries are surprising the world with their innovative and distinctive methods of teaching that are presented as the correct and only solution. The fact of the matter is, there are several teaching methods that could be considered "correct" that are presented around the world and as much as they are merging, each of them is unique and beneficial in its own way. Many of these methods derive from different learning theories. To select a suitable design of an educational curriculum is to go back into history, to previous times and see what type of citizen a country requires. Culture plays a big role in our differences (Hofstede, 2011). Different cultures hold different values and understand things differently. For example, they want hard workers who will only follow orders and not question the outcomes, or they want innovative people who find it difficult to follow a set of rules but perform very well at their own pace with intrinsic motivations. This example reveals the reason why there is no single solution, but rather different positive qualities and tactics which all educational systems can consider for the greater good of the learners and the higher educational purposes. Elements from the Self-Regulated Learning theories are qualities that every educational curriculum can integrate into their classrooms.

According to Zimmerman (1990), the Self-Regulated Learning is identified as a proactive process in which the learner can be self-directed and convert his or her mental abilities into skills to support their learning situations. The definition of Self-Regulated Learning has been studied and developed in a wide range of topics and in different contexts to investigate what characteristics a self-regulated learner has. Many tools constructed to support research on SRL were self-report questionnaires (Pintrich et al. 1993; Weinstein, Schulte, and Palmer 1987; Weinstein et al., 1987). Other methods were also introduced such as "Self-Regulated Learning Interview Schedule" (SRLIS) (Zimmerman and Martinez-Pons, 1986, 1988) or "Rating Student Self-Regulated Learning Outcomes: A Teacher Scale" (Zimmerman and Martinez-Pons, 1988). After an extended period of study after study, educators started to see the importance of SRL and began to search for ways to define practical methods of

intervention in order to enhance and implement SRL in existing educational systems.

The intervention aspects of the SRL theory have attracted different educational researchers, which is not surprising since SRL skills have never been more important. We are today living in a world where information and knowledge can be accessed from anywhere and at any time. With the learner now having a tremendous increase of control over the access of information, and the only skill needed for effective learning being SRL, the importance of the ability to regulate their own learning for their success is now being more and more recognized in many educational settings. The current Information Age has revolutionized what education means and now learner-centered instruction is more in use (Reigeluth et al., 2008). SRL has been recognized as an essential skill for competency to prepare students to become 21st century learners (Wolters, 2010). This explains the trend towards SRL intervention research.

As the world changes, we believe that learners must shift to become self-regulated learners and therefore it is normal that the teacher's role will evolve as well. The role of teachers in the 21st century should now move away from providing and presenting information, assigning work and giving tests, or waiting to measure the student's progress (Hampson, Patton and Shanks, 2011; Sawyer, 2006) to being more like coaches instead. A teacher's main role for the future will be to guide, facilitate learning, and inspire the students/learners. They will also encourage students to interact with knowledge and reach the level of synthesis. With this paradigm shift, teachers will actually have more time to focus on each individual learner, in order to better understand their needs and support them more efficiently. This will later help them to develop high quality lesson plans and creative delivery methods (Hampson, Patton and Shanks, 2011).

Throughout this paper, different studies on SRL in a theoretical level, interventions with different tools to understand SRL characteristics, as well as practical methods used to support SRL skills will be discussed. To scope down into more practical ways of implementing the theory and bringing awareness to a school level, this research was conducted to understand what kinds of learning strategies are used and which work well among the high academic achieving students in Language Arts Class. The study will investigate high achieving students by looking at their grades (Language Arts subject score) and their results on how they

perceive themselves on their self-regulation skills. The group of students will then later be interviewed to provide more understanding of the SRL skills they use which are proved to work for them. This will give us some insights into how these processes lead to success. Hopefully, the results from the study will be useful for the teachers to proceed with and reinforce the methods that were discovered throughout the study as effective learning strategies.

2. THEORETICAL FRAMEWORK

In this chapter, different definitions and models of SRL related to language learning will be discussed. Different empirical evidence will later be reviewed focusing on the relationships between SRL and academic performance. The aspects of how cognition, motivation, behavior, and the context of SRL relate to academic performance will be explored as well. Followed by what is equally important is the assessment of SRL. Both the methods of the assessment process and the tools used in assessing and evaluating the use of SRL will be examined. The nature and role of the use of SRL being discussed helps one gain a better understanding and brings more insights into how this study can be useful to learning and education in the big picture.

In order to form a theoretical background of the key strategies of self-regulated learning (SRL) skills from high academic performers, it is essential to start by reviewing the concepts of self-regulated learning and their relation to academic achievements and how learners perceive themselves as self-regulated learners. These are theoretical representations of SRL: Zimmerman 2000, 2001; Boekaerts and Carno 2005; Printrich 2000, which all differ as the concept is developed over time.

2.1 Self-Regulated Learning Theory and Academic Achievements

2.1.1 ZIMMERMAN

Zimmerman's definition of Self-Regulated Learning skills simply imply that there are three main steps. These steps include: forethought and planning, performance monitoring, and reflections on performance (Zimmerman & Campillo 2003). Within each step as presented, different elements of actions have a great impact on the big picture of the SRL process. Under "forethought and planning", allowing the learners to analyze the task and see which is the best way to accomplish it, will help the learners to have a more systematic way of working towards accomplishing a clear goal, set by themselves. In addition, having high levels of motivation and self-efficacy, the learners will generally perform better and produce higher quality work. Followed by the "performance phase" which refers to the act of keeping track, monitoring, and regulating one self's actions to follow the strategies in order to reach the goal.

This gives no question that this phase demands high levels of discipline from the learners. To complete the process, “Self-Reflection Phase” comes in place. In this phase, the learners will critically reflect and evaluate themselves in order to see what needs to be improved, adjusted or kept up and going. This phase is essential, because it will determine the quality of the next outcome or product. The whole process of reinforced self-regulatory skills will eventually help the learner to become a lifelong learner (Zimmerman 2002).

In Zimmerman’s study of SRL and academic achievements, it is emphasized that the three features which define student’s self-regulated learning are: their use of self-regulated learning strategies, their responsiveness to self-oriented feedback about learning strategies, and their interdependent motivational process (Zimmerman, 1990, pp.6). He further explained that these self-regulated students would carefully choose and use effective strategies to help them achieve their academic goals.

There are many empirical studies by Zimmerman when it comes to studying the academic achievements with uses of SRL skills. One of the early studies conducted on high-school students by Zimmerman & Martinez-Pons (1986) was an open-ended interview where the strategies used were reported by students in the track of high academic performance, it was later used to compare another group of students who had a lower academic performance. They found that there are significantly lower strategies being reported from the lower track both on repetition aspects and the different strategies used. Although there was a clear difference in the data, it didn’t reach the statistical significance. Soon further data was collected to continue with the study (1988) and make the findings valid. Teacher's rating on student’s uses of strategies both verbal and math standardized scores were collected. The result supported their first study since all of the data correlated on a significant level. With all the analyzed data, Zimmerman and Matinex-Pon summarize that student’s uses of SRL strategies is a great factor in helping them attain high academic achievements.

Many other studies were conducted to test Zimmerman's model as an example on the Cyclical phase and multi-level model. In studies that were published by Zimmerman and Kitsantas in 1997 and 1999, they studied the diverse effect from the processed goals and the outcome in dart throwing and writing tasks among high school students. The result support the model in a satisfying way. Soon further studies were done on the same case in the study 2000 and 2002 by investigating the effect produced by the models concerning SRL skills. In a more recent study, DiBenedetto and Zimmerman (2010) studied a group of 51 senior students during their science course and the results suggest that sub-processes are used more among the high achievers from the Zimmerman's model. This suggests that there is a correlation between the uses of self-regulated learning strategies and high achieving students, despite of their age limit.

2.1.2 BOEKAERTS & CORNO

Boekaerts and Carno dug deeper and focused on self-regulation for different purposes. In this chapter, the importance of how self-regulation is used in different situations will be discussed. Many things can be learned about the reasons behind self-regulating, which would affect their academic performances and reflect whether or not the learning. Apart from different daily situations that may require self-regulation to bring out productivity, students are facing these situations in classrooms even more often. As SRL focuses on pursuing goals, they describe how it is often viewed in the modern world as an easy and direct path. In fact, it is actually a complex path which sometimes reflects engagement or disengagement and also avoidance or delay. Boekaerts (1999) study show that students' favorable judgment of tasks or learning situations which included their interests, self-efficacy, and feelings of relevance greatly helped them to achieve goals.

The Dual Processing Model is also introduced in Boekaerts' study and the goal in this view is described as "knowledge structures" which guide behavior. It is called dual process, because

the situation can affect the process in two opposite ways. If the students were presented with a task that complements their goals and needs, it would trigger their positive emotions and cognition. With this experience, students would be willing to expand their competence, leading them to a master/growth pathway. On the other hand, if they were presented with a task that they felt could harm their well-being -- meaning their negative emotions and cognition were triggered -- the result showed that the learner moves onto the well-being pathway to keep safe. (Boekaerts, 2011).

The process of top-down self-regulation occurs when the learner pursues self-chosen learning goals motivated by personal interest, values, rewards, and expected satisfaction. The reason it is called top-down is because the regulation occurs only by the set goal steering the process to happen. According to Winne (1995), top-down self-regulators would use goals to extend their knowledge and would sustain their motivation, realizing that the learning process is a long journey. The learners are also aware of what they know and what they believe and even further what kind of skills and knowledge they should use when assigning a task. Goals can be influenced in many ways. According to Hadwin and Winne (1998) the information processing model mainly pays attention to how the information is given, which later leads to the process of metacognition causing the Self-regulated learning to occur.

Bottom up self-regulation occurs when the environment triggers regulation to happen. It didn't start off from the goal that was originally set, but more so on how the surrounding pressure motivated the learner to work in his/her own way and self-regulate. Some examples would be the rewards, feedbacks, or competitive environment. Based on Boekaerts' model, it suggests how student's emotions long for well-being which greatly depends on the environment. These feelings such as belongingness, coercion, self-determination, or even one as simple as boredom can be the factor to prompt self-regulation. Although the aforementioned factors help one to regulate their emotions, they are not suggested methods to prompt self-regulation based on their non-adaptive characteristics. According to Frijda and Mesquita (1995), bottom-up SR is strongly grounded on the student's judgment of relevance in relations to their well-being. This show how emotions are very much in control of the regulation and do not grant stability in the learning process. With this being said, it can be concluded that bottom-up SR is definitely not a good trigger to stable and quality self-regulation to establish meaningful learning goals.

When using volitional strategies, the ideal self-regulation strategies would be the ones driven by problem-focused, or goal focused (top-down SR) which is considered adaptive rather than the maladaptive, emotionally driven (bottom-up SR) method. Although this is the case, the factors that would influence students to shift their path to well-being are almost far out of the teacher's control. Teacher's role is to try to find a way to help facilitate self-regulation by using other factors such as resource management, time, prioritizing goals, or even grading and evaluating an assigned task. In fact, these factors do not only help in academic matters, but can also influence their every day's lives. This is why emotions are essential to Boekaerts' model. He considered it as the main factor to determine the pathway of well-being and bottom-up strategies which would help the learner to have a quality learning process and promote lifelong learning. (Boekaerts, 2011)

There are a couple of empirical studies in the dual processing model, mainly led by Boekaert, to deepen the understanding of the dual processing model. Many different findings gave us various aspects affected by different ways of self-regulation. Some of the tools used were On-line Motivation Questionnaire (OMQ) and Confidence and Doubt scale to help evaluate student's feelings towards different learning situations. As an example, one of the studies focused on conducting interventions to help vocational schools build up metacognitive knowledge and support creating opportunities to use deep level processing. The study concludes that those interventions work best with learners who are familiar with the strategies of deep-level processing from the start. (Rozendaal et al., 2003; Boekaerts and Rozendaal, 2006). This proved that when learners are faced with situations in which they feel competent or interested, they will perform better mainly based on their self-efficacy.

2.1.3 PRINTRICH

In this chapter the correlation between SRL skills and academic performance and how knowledge about SRL can be put into practice in the context of schools based on Pintrich's theory will be focused on. The Self-Regulated Learning theories have been investigated in many academic situations. It mainly derives from the models and scales that differ as it is developed. Although some of these models and theories were formed over ten years ago, it

can still follow their guidelines as our learning process remains the same mostly. What has differed is the path and tools used to reach our learning goals. When focusing on how SRL is taken and adapted to be used in practical academic matters, it is clear that they appear to be in many different useful contexts. Self-Regulation Empowerment Program (SREP) (Cleary & Platten, 2013; Cleary et al., 2008) is one among many tools. It helps to teach effective strategies to students when approaching test preparation. It guides the students' implementations of strategies when they do not reach their expectations by teaching how their behaviors, cognition, and results can be managed. As some examples of how SRL have been playing an active role in facilitating the learning situations was introduced, it is important to go back and see the essentials of its basis.

According to the Pintrich (2000), the SRL model is made of four different phases: forethought, planning and activation followed by monitoring and control, and lastly reaction and reflection. Under each phase there are four different areas for regulation: cognition, motivation/affect, behavior, and context. Pintrich describes self-regulated learners as ones who are active participants that would set goals and make clear adaptable strategies that are suitable for them. They will also carefully regulate their motivation, cognition, and behavior in order to reach their goals. The learner will choose a characteristic and the context which would help support his or her performance. This includes an ongoing reflection to reach the standards of what the learners have set with a carefully chosen path that they think will lead them to the goal.

In simple words, his main focus is on how the learner takes part actively to control and regulate every aspect that will allow them to reach their highest goal or potential of learning. Based on Pintrich's empirical work ((Pintrich et al., 1993a; Pintrich, 2004), he concluded that students can regulate their emotions and how it can affect them.

Strategies for the Regulation of Academic Cognition (Pintrich 2000)

The main aspects of regulating cognition are the use of carefully selected strategies of each learning process. These processes include different strategies for learning, thinking, reasoning, memory, and problem solving. As many are aware, some subjects require a particular process and strategy more than others. As an example, mathematics (Schoenfeld,

1992) would require a good strategy of active learning and thinking, for reasoning (to understand how the problem is solved), memory (to remember the method and steps to solve the problem), and certainly problem solving strategies will be used. As it is clear that self-regulating cognition seems to be the main focus, but it would only work if metacognition plays a part. The metacognition is what helps the learner reflect and choose the right strategies to go about different learning situations. The three general types of cognitive strategies that have been investigated are rehearsal, elaboration, and organization (Weinstein & Mayer, 1986) All these, including the general metacognitive self-regulation component, have a great impact of the students when it comes to academic learning.

Strategies for the Regulation of Achievement Motivation (Pintrich 2000)

As informed, a lack of motivation is often a significant barrier to the learning process across the board, irrespective of age differences. Many times when the learners are not in an environment that supports learning, it can be a great challenge. Nevertheless, motivation can be regulated the same way people regulate their cognition.

The only two motivational regulation methods that were introduced were by Walters (1998, 1999). Different strategies were put under these two methods which are intrinsic versus extrinsic motivation. Under intrinsic motivation, there are strategies such as Self-Efficacy, Interest Enhancement, and Mastery Self-Talk. On the other hand, the strategies have for extrinsic motivations are Self-Consequences and Performance Self-Talk. Different learners regulate their motivation differently in different learning situations. While intrinsic motivation is perceived to be a better and longer lasting way, there is no evidence to corroborate in the achieved outcome.

Strategies for the Regulation of Behavior (Pintrich 2000)

When talking about regulation of one's behavior, time, effort, planning and management, there are two strategies that must appear in the picture when it comes to academic learning (e.g., Ajzen, 1988; Gollwitzer, 1996). Another strategy that comes in very handy is help-seeking. According to Ryan and Pintrich, (1997), help seeking is a part of behavioral strategies because it relates not only to the learner's behavior, but also means that the learner

will need to seek help from his or her surroundings which would include creating social interaction. Lastly, it will reinforce the learner involving contextual control.

Time and environment management also falls under the scale in MSLQ of Printich although it overlaps with context, because it is the management of the environment; nevertheless, it is a big part of behaviour control.

Strategies for the Regulation of Context (Pintrich 2000)

Context control mainly has to do with the effort the learner puts in to regulate the context or the nature of the task. The differences that context has between other strategy scales are that context is not always under the learner's entire control (Printrich 2000).

When thinking practically, contextual regulation is not really in the control of the learner when it comes to a traditional classroom setting. The more student-centered a classroom is, the more contextual control the students will have. One good example of a situation where students can take most of their contextual control would be in the UBIKO project (Heikki Kontturi, 2016) in a teachers training school in Finland. It is a project that aims to support students to be self-regulated learners, including allowing them to have the most contextual control to benefit their learning environment.

The studies in UBIKO suggested that allowing the students to make decisions in the context of their learning, it increases their interest in learning. To put it simply, contextual control is when the learner regulates his or her surroundings to help him or herself learn better. It could be the elimination of some factors or adding some things to help promote their learning (Zimmerman, 1998). This means they need to be aware and actually analyze what a good learning environment is and what it is not.

Empirical Evidence Supporting Pintrich's SRL Model

A series of studies done by Pintrich have shown us how SRL skills are accompanied by other skills to be used effectively. The study by Printrich and De Groot (1990) shows that there is a direct correlation between self-regulated learning (SRL), intrinsic value and cognitive

strategy, which have a positive effect on the student's' performance. The study was conducted with seventh graders in their English and science classes with the use of Motivated Strategies for Learning Questionnaire (MSLQ). The finding indicates that self-regulation, self-efficacy and test anxiety could predict the performance, meaning they negatively correlated. On the other hand, intrinsic value does not appear to have any effects on the performance.

A few years later another study was conducted by Pintrich, Roeser, and De Groot (1994) on seventh-grade students once again using the same tool (MSLQ). Apart from assessing the five aspects of MSLQ, intrinsic value, self-efficacy, test anxiety, cognitive strategy, and self-regulation, they also explore the student's perception of the classroom experience. Two interesting findings are that self-regulation, self-efficacy, and cognitive strategies are positively correlated to their classroom experience. At the same time, the student's intrinsic value increases more during the later stages of the school year compared to the beginning based on the amplified classroom experience.

Another study by Wolters Yu & Pintrich (1996) was conducted to find the correlation between self-regulated learning and motivation within three different subject areas (English, Math, and Social Studies). It was once again done with junior high students as the subjects. The findings continue to provide proof of a positive connection between different aspects of MSLQ to motivational beliefs on different learning approaches.
These approaches include the performance- approach, goal orientation, and the mastery-approach. On the other hand, students who maintained high grades had high extrinsic goals, which nevertheless showed that it is directly related to the cognitive and motivational outcome.

This chapter has brought up many different theories and models of Self- Regulated Learning from the selected theorists, and presented a deeper understanding of the concept and its uses. Many of these theories were studied and discussed with a direct link to how SRL theories can have a greater impact on academic performance. When it comes to focusing on improving academic performance with the help of SRL skills, it appears to not be only about the skills that can be studied and put into practice, but they beyond that. The method used to regulate one's learning also determines how the content learned by the student plays into a lifelong learning situation. Motivation plays a significant role as well in helping the SRL function in a

desirable way. Different examples of empirical studies were discussed relating to enhancing higher performance through SRL skills.

2.2 Encouraging Self-Regulated Learning in Language Art Class for Secondary School

Content-based Instruction (CBI) is a widespread teaching method across the United States and the world. Its goal is to introduce the English language to learners by using the language itself in teaching different subject areas such as science, history, literature, or even math (Chamot, 2009; Kaufman & Crandall, 2005). As mentioned above, literature (also known as language arts) is taught in other subject areas apart from its own subject period which is increasingly popular in second and foreign language learning environments as being found international schools.

According to Stoller (1997), CBI helps the learner practice the usage of English language skills by following structured steps. The steps were reading a genuine piece of writing, followed by evaluating and making sense of the reading, making judgements of the material in order to cooperate, and lastly responding with a positive and negative reaction. The empirical studies of Singer (1990) and Anderson (1990) show that students in a learning situation find it much easier to cope when the learning materials are properly organized as CBI. They also see the information learned as more meaningful, which helps them to be eager to reach a deeper processing level, which later increases their motivation level and interest in learning. This means that with proper methods of using CBI, students will find the language interesting. By the same token it will help motivate them during their Language Arts, or Literature (English) classes. Chamot (2014) describes the means of developing self-regulation in CBI classrooms with specific steps and details. These steps are very closely related to different models presented by different theories of the SRL concept. The goal of these steps is not only to improve language skills but master the learning content in that specific subject.

The first step is goal-setting and planning. That is, students can construct goals together with their teacher by establishing what needs to be developed, and from there they can create an action plan and procedure. Students will follow the written action plan and procedure to reach their set goals.

The next step is monitoring. The most effective way to monitor progress is by helping the students to be aware of their learning process. There are different avenues of doing this. One is to ask questions that will require students to analyse their thought processes and consider if their method is a suitable one. A think-aloud protocol works well in this situation, because it helps the students to be aware of what is going on in their minds and it also helps the teacher to know if they need any guidance or help. A question that the teacher can ask to reinforce this monitoring step is, "What is the main idea of the text here?" Another option is to create a guideline in order to help students monitor their learning by assigning them to take notes which will help them understand the learning materials.

On the third step, which is problem-solving, it is crucial for the teacher to allow students to see the problems they face and know how to handle them with effective strategies. With the proper guidance and monitoring steps, the students will be able to solve the problems they come across on their own more efficiently.

The following step is evaluation. Apart from the expectations of assessment and evaluation from the teacher, the students will need to be encouraged to take an active role in evaluating their own work before turning it in, which will also help them be more responsible for their assignments. At this stage, the students will get to analyze and reflect on their performance and see whether or not they have reached their set goals. Some assigned tasks could be used to guide the students in the process of evaluation.

The final step is self-management. To summarize all the experiences throughout the self-regulated process, the students are required to manage their own learning by using the methods that are the most efficient for them. This ranges from time management to strategy management. The students will learn to use all the methods which will support them to perform effectively and also draw more interest in the learning process as well as the learning content. Chamot (2014) suggests that if the student follows these steps attentively, he or she will definitely perform well in content-based instruction (CBI).

2.3 Types of Self-Regulation Measures

After understanding some bases of the SRL strategies, it became more obvious that the instrument used to measure would be mostly effective if it is derived from the learner's perspective. There are many methods and instruments used to measure Self-Regulation i.e. Self-report Questionnaires, Observations of Overt Behavior, Interview Evidence, Think Aloud Protocols, Traces of Mental Events and Processes, Situational Manipulations, and Recording Student Motivation Strategies as They Work and Keeping Diaries (Boekaerts & Corno, 2005). It is important to know first whether the aim of the measurement is to measure SRL as an event or an aptitude (Winne & Perry, 2000). Some of the approaches that fall under these categories are self-report questionnaires, interviews, and think aloud protocols. Other assessments that can be observed and interpreted based on the visibility, are behavioural traces and directly observable. As researchers try to understand the process in the learner's mind , which is later transferred into action, self-report scales are most commonly used. Although this method seems to help answer the curiosity of the researchers, it is still a debatable method of measurement, because it still counts on one's own perspective and opinion (Cleary, Callan & Zimmerman).

2.3.1 Measuring SRL as an Aptitude

In situations where SRL is measured as an aptitude, there is a single measurement that covers a series of qualities of SRL grounded on multiple SRL occurrence. The commonly used protocol for SRL measurements as an aptitude are self-report questionnaires, structured-interviews (Zimmerman & Martinez-Pons, 1988), and the teacher's judgement. These three tools are adopted to question the learners on how they perceive their SRL skills. The quality of this process tends to measure the individuals' SRL skills over long intervals across different tasks, learning situations as well as between individuals (Pintrich, Wolters, & Baxter, in press; Winne, 1996). An example of this measurement would be, as a student is studying for a test the researcher would look into how the student is regulating their own learning through their self-employed memorizing strategies. In addition to self-report questionnaires, structured interviews, the teacher's rating would sometimes be used as well. It is used to measure an externalized behaviour, but in a very subjective manner. Although this is the case when the teacher rating method is compared to self-report questionnaires,

structured interviews is a much more objective and reliable measure of a student's behaviour. This method grants resourceful alternative data that gives good evidence. The evidence can give researchers or practitioners the chance to discuss them further (Loeber et al., 1990).

2.3.2 Measuring SRL as an Event

According to Winnie and Perry (2000), the measurement of SRL as an event describes the regulation of an individual regarding a specific task. His measurement of SRL is divided into three specific levels: occurrence, contingency, and patterned contingency. The transitions of action and repetition of actions are mostly observed. The frequency is the amount of times the learner does a particular action; e.g. the amount of times the learner checks the instructions. Contingency is the action which the learner chooses to use or naturally does. Patterned contingency indicates a sequence of specific occurrences. In addition, the "Duration" also displays how much time is invested in different events that occurred. The protocols mentioned by Winne and Perry, and Boekaert and Corno (2005) are Behavioral Observation, Thinking aloud protocols, Learning diaries, Traces of processes and mental events through the use of computers, and Interviews.

2.4 Self-Efficacy

According to Bandura (1997), self-efficacy is defined as a belief of an individual's regarding his/her ability to control and manage his/her actions to reach the desirable results. He also defines the sources of self-efficacy which is broken down into four major parts in the theory of self-efficacy: (a) mastery experiences, (b) vicarious experience,(c) verbal persuasion, and (d) somatic and emotional states. Mastery experience occurs when one undertakes a task and succeeds. The feeling of achievement allows the person to feel confident in further similar situations. This mastery experience is also known to be the most effective method to enhance self-efficacy (Bandura, 1994). Vagarious experience is another component that affects the perception of self-efficacy. It takes place when one observes another person's successes or failures in which that particular person resembles them in some ways. When the subject being observed successful, the higher the self-efficacy of the observer gets. The same thing happens if the subject fails. It would affect the observers' self-efficacy

negatively. The third component is verbal persuasion which is also known as social persuasion. This occurs when an individual receives verbal support of how they are capable of achieving their goals. With verbal persuasion, the subject is more likely to do the task confidently or with high self-efficacy because his/her self-belief is being supported and reassured positively. Somatic and emotional states are the last components which occur when the individual ponders upon the task and forefeel negative or positive towards a situation or task causing him/her to have high or low self-efficacy. Bandura (2001) also describes in social-cognitive theory on how self-efficacy acts as a motivational drive that pushes the grit when one faces difficulties. When the grit is being triggered, it promotes long-term view, increases intended actions, advances self-regulation, and makes self-correction come in practice when needed.

Despite a considerable amount of evidence that shows a positive direct effects of self efficacy on academic performance, there are numerous studies showing that self-efficacy is a valid predictor of performance which is not affected by the environment or surroundings (De Raad & Shouwenburg, 1996, Peterson, Matthews, & Kelly, 2007, Usher and Pajares, 2008).

3. AIM AND RESEARCH QUESTION

The aim of this research was to bring awareness of how SRL skills affect the learner's academic achievements. It also brings further understanding to the specific strategies of SRL used by students with high scores in Language Arts class (English) who have a highly rated self-report questionnaire in their SRL skills. In addition to this, not only we will understand a deeper level how different learning strategies came into place, but we will also know the degree of self-efficacy they have in different learning situations.

The specific research questions for this study consist of (a)What is the relationship between students with high grades in L.A. class and their MSLQ score?; (b)What and how often the high achieving students report the use of different self-regulation strategies in different type of situations; and (c)What is the relationship between the experienced self-efficacy and reported SRL strategies?

4. METHODS

In this chapter the participants were introduced and their profile background discussed. Followed by the description of the tools used for the data collection and its usage will be explained precisely. Finally, the chapter is going to end with a clear explanation of the study design and of how the data is analyzed after the collection.

The current mixed method study comprises qualitative and quantitative approaches, in which two main different tools are applied to carry out the research. The Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich & Groot, 1990) and the Self-Regulated Learning Interview Scale (SRLIS) are developed by Zimmerman and Martinez- Pons (1986, 1988). MSLQ is a self-report type questionnaire that is used to investigate quantitatively how often students regulate their own learning by the specified strategies. The SRLIS tool is used to investigate a group of high academic achievers and report the high use of SRL skills including the frequency with which they were used. Lastly, additional tool, semi-structured interview by Zimmerman and Martinez-Pons (1990) is applied to investigate students' perception of their own SRL strategies applied in their academics. All these tools are utilized with the aim of gaining more understanding of SRL skills used among High-School Students.

4.1 Participants

The participants pool for this study consisted of 46 high-school students between Grades 9 to 11 (based on the U.S. grade level of educational system which could also be known as year level). All the participants of the study are students of the Bangkok Christian International School where is located in Bangkok, Thailand. The age range of the students was between 14 and 19 years old, with 32 males and 14 females. There are diverse nationalities in this small group of participants. The majority of students is Thai nationality, followed by Korean, and Chinese respectively. The rest is from Taiwan, Japan, Nigeria, Malaysia, and Myanmar.

The students range from different levels of academic performance, and they all study English as their second language. Every subject in school is taught in English apart from the mother tongue subject areas such as Thai, Korean, or Chinese. English is integrated in different

subject areas in addition to English class, or in the case Language Arts, the school is using the Content-based Instruction (CBI) method to help support language learning. The study selects to work with older students from Grade 9 because starting with this Grade, students are more aware that their marks in the report cards are important as they would determine their future acceptance to any universities. Also, I chose to end with Grade11 students because most students in G.12 submitted their applications or already heard their response of results from the universities they apply. The matters with universities may affect their attitude and the outcome of the study.

In the first stage of the study, all of the students from Grade 9-Grade11 were asked to fulfill the questionnaires. 46 students out of 55 were available and completed the questionnaire accordingly. Students were thoroughly informed about the procedure, as well as the importance of answering every test with honesty, knowing that it would not affect their academic performance.

4.2 Measures

Questionnaires and self-reports have always played a significant role in assessing SRL levels due to their solid evidence of usage which helps present good data in researches. Generally, self-reports can be divided into questionnaires or interviews (Cleary, Callan & Zimmerman, 2012) I implemented these two tools in this study which give two sets of data serving different purposes. The instruments were chosen to be suitable to facilitate the research. All data collection was conducted online through different tools such as Google Sheets and Skype.

4.2.1 The Motivated Strategies for Learning Questionnaire (MSLQ).

Motivated Strategies for Learning Questionnaire (MSLQ) is a self-report questionnaire. MSLQ (Pintrich & Groot, 1990). The MSLQ approaches SRL as an aptitude and targets students' perception of their current competences of their SRL skills. Each guiding question

reinforces the respondent to think and reflect about the learning process that he or she followed. The MSLQ includes five areas which were divided into two parts, the Motivational Belief (Motivation) and Self-Regulated Learning Strategies (learning strategies). Under Motivational Belief comes a) Self-Efficacy, b) Intrinsic Value, and c) Test Anxiety. While the Self-Regulated Learning Strategies part includes d) Cognitive Strategies Use and e) Self-Regulation (Printrich, 1990).

4.2.1.1.1 Self-Efficacy

Self-Efficacy is under the motivational belief scale which measures how confidence they are when facing different learning situations. When looking at the questionnaire items, it is apparent that the way the student would evaluate his/her competences is by reflecting upon his/her prior knowledge skills, experiences, achievements and failures. These items also asked the students to compare themselves with others as a means of evaluation and making judgments.

The subscale consists of 9 items:
-Compared with other students in this class, I expect to do well.
-I'm certain I can understand the ideas taught in this course.
-I expect to do very well in this class.
-Compared with others in this class, I think I'm a good student.
-I am sure I can do an excellent job on the problems and tasks assigned for this class.
-I think I will receive a good grade in this class.
-My study skills are excellent compared with others in this class.
-Compared with other students in this class, I think I know a great deal about the subject.
-I know that I will be able to learn the material for this class.

4.2.1.2 Intrinsic Value

Intrinsic value is described as goal orientation in which students view themselves participating for the soul purpose of interest, curiosity, or wanting learn and master the task. These reasons are driven from their inner self and not from outer components such as reward or punishment. By having a high intrinsic value or goal towards an academic task, it would

help students in their perseverance, self-regulation and lifelong learning attitude. Most of the

questionnaire items show that it's asking whether the students does more than the minimum or what is least asked of them when it comes to the learning process.

It consists of 9 items:

-I prefer class work that is challenging so I can learn new things.
-It is important for me to learn what is being taught in this class.
-I like what I am learning in this class.
-I often choose paper topics I will learn something from even if they require more work.
-Even when I do poorly on a test, I try to learn from my mistakes.
-I think that what I am learning in this class is useful for me to know.
-I think that what we are learning in this class is interesting.
-Understanding this subject is important to me.

4.2.1.3 Cognitive Strategy Use

The items in Cognitive Strategy Use were created based on various strategies, that is, Rehearsal, Elaboration, Organization, Critical Thinking and Metacognition. Rehearsal Questionnaire measures how often students review note for course materials and as well rehearsing and memorizing the key concepts and important points. Elaboration strategy reflects how students try to summarize the learning materials and relate those materials to their prior knowledge. Organization is the skill to determine the main ideas of the learning materials. This also includes organizing what specific content that needs to be learned for a specific subject. Not only regarding the learning content but also organizing the surroundings to support their own learning which includes time, space, and with who they are studying with which is very crucial to an effective learning process. The use of Critical Thinking is reported when the students apply their prior knowledge in a new situation as means for problem solving, critical scientific evaluation, or decision making. Metacognition occurs when one considers about his/her thinking and knowledge, and takes control of his/her cognition. There are three common processes that help support the regulation of metacognition namely planning, monitoring, and regulating.

It consists of 13 items:

-When I study for a test, I try to put together the information from class and from the book.
-When I do homework, I try to remember what the teacher said in class so I can answer the questions correctly.
-It is hard for me to decide what the main ideas are in what I read. (*R)
-When I study, I put important ideas into my own words.
-I always try to understand what the- teacher is saying even if it doesn't make sense.
-When I study for a test, I try to remember as many facts as I can.
-When studying, I copy my notes over to help me remember material.
-When I study for a test, I practice saying the important facts over and over to myself.
-I use what I have learned from old homework assignments and the textbook to do new assignments.
-When I am studying a topic, I try to make everything fit together.
-When I read material for this class, I say the words over and over to myself to help m remember.
-I outline the chapters in my book to help me study.
- When reading, I try to connect the things I am reading about with what I already know.
(*R: Item recoded)

4.2.1.4 Self-Regulation

In this subscale, student needs to regulate not only their metacognition, but also effort, environment, time, and reaching out for help when needed in order to support his/her own learning process. Effort management is a very important factor to foster one to succeed academically. In this process, learners would take control of their efforts by directing their attentions and eliminating their distractions and find ways to not make uninteresting things harmful to their learning process. It also requires high commitment that would help the learner reaches his/her goals easier when he/she is aware of the steps to reach it. Time and environment is not any less important because it relates to the skills that help learning becomes more effectively. Time management skills are very useful. Furthermore, using time

effectively when studying is equally crucial. Study environment management simply means selecting a proper and suitable place for oneself to study. The last points is reaching out for outer support. This could be peer learning which is not necessary seeking help from peers, but rather sharing the learning experience and understanding between each other. Seeking help from others is also very crucial to the learning process because it allows the learner to understand the problems or difficulties he/she is facing. The help needed could be from teachers, parents, or an expert of the field.

In this scale of Self-Regulation

It consist of 5 items:
-I ask myself questions to make sure I know the material I have been studying.
-When work is hard, I either give up or study only the easy parts. (*R)
-Even when study materials are dull and uninteresting, I keep working until I finish.
-Before I begin studying, I think about the things I will need to do to learn.
-I work hard to get a good grade even when I don't like a class.
(*R: Item recoded)

4.2.2 The Self-Regulated Learning Interview Scale (SRLIS)

The Self-Regulated Learning Interview Scale is the protocol developed by Zimmerman and Martinez-Pons (1986, 1988). It is quite different from other self-report surveys because it consists of open-ended questions, and it gives a specific context and very task-specific situations (Cleary, Callan & Zimmerman, 2012).

This structured interview includes 14 different strategies that one would use as he/she self-regulate his/her learning process. I also added one open category “others” for anything students may report using while learning. The strategies are self-evaluation; organizing and transforming; goal-setting and planning; seeking information; keeping records and monitoring; environmental structuring; self-consequences; rehearsing and memorizing; seeking peer, teacher, or adult assistance; and reviewing tests, notes, and texts. One category of non-self-regulated learning responses (labeled "other") came the last to the scale. (Zimmerman & Martinez-Pons, (1988). The interview questions include revising classwork, structuring an essay paper, completing homework assignment, exam preparation, handling a difficult problem, eliminating distractions and being prepared before class (new study topic). *(See Appendix 1)*.

4.2.3 Grades

The final grade of Language Art class is comprised of the first and second school term (there are in total four terms per academic year). In addition to that is two exams they have towards the end of each semester which contributes greatly to the final grade (there are two semesters per academic year). The grade includes scores in participation (15%), assignments (25%) projects (20%), quizzes (15%), and tests (25%). Apart from this, there are two final exams worth 10% each, which contribute to the final grade.

4.3 Procedure

With the aim to explore the main SRL strategies used among the high achievers who perceive themselves to be self-regulated learners, the exploration needs many steps. There are numerous studies and researches that suggest ways to integrate SRL theory into teaching and learning practices (Paris & Paris, 2001; Boekaerts & Corno, 2005; Bird, 2009). Still, we can see a lack of this method being applied in today’s education system. Instead of focusing on the steps to reinforce SRL skills in classrooms, this research would instead look at the things students with high academic achievement with SRL skills do right to understand what really works in a real learning situation. In order to see the specific strategies and elements used by high-schools students with high scores in L.A. subject and SRL skills, we will first need to see who they are among the whole group.

The first step taken is to identify which students perceive themselves with high SRL skills by the use of MSLQ tool. The students answered the questionnaire based on "self-belief" of their performances in L.A. class. I chose this subject because, first, MSLQ is designed specifically for a single subject and it does not evaluate on a general level (MSLQ (Pintrich & Groot, 1990). Secondly, Language Arts (English) is a general subject that every student is greatly attached and uses it as part of his or her everyday life to interact with others. It is also one component of the standardized test which most of the students between grades 9 to grade 11 would be more likely to focus on for test-preparation. The questionnaires were delivered online and distributed to students using "Google forms". In order to participate, the respondents needed to enter the site through the link given by the teacher who helped collect the data. Later, the responses were collected, analysed, and compared to each other. The second step taken was to collect each student's grade for the Language Arts Class. The students with both highest score on MSLQ were examined. The nine students selected consist of five male students and four female students.

The last part was an interview with nine selected students. The goal was to investigate different learning strategies used and see how often they were used among the participants. The interview was conducted online and it took 25-40 mins. The tool used was the Self-Regulated Learning Interview Scale (SRLIS) where the students were first informed about the strategies people used in different learning. There were seven different scenarios given to them, and they self-reported the strategy used and scored themselves from the range of 1-4 (one being seldom and four, often) on how often they use a strategy based on a given scenario. Before going through these strategies to score themselves, they were well informed of each and every strategy. In addition, they were asked a question about how confident they were in performing well in those situations to measure their self-efficacy on the scale of 1-4 as well.

4.3.1 Cronbach Alpha Test for Reliability

The Cronbach Alpha test was used to ensure the reliability of the data before using it for further studies. This test is necessary based on the fact that students were asked repeatedly in

different ways under one subscale in the questionnaires. The results of the reliability turn out to be reliable for all 4 subscales that were used. The alpha score for Self-Efficacy is a=0.83; Intrinsic Value is a=0.809; Cognitive Strategy Use is a=0.823; Self-Regulation is a=0.748.

The subscale items under Self-Regulation, or? the item with the lowest alpha score, consists of questions related to metacognition, emotional regulations, goal orientation, planning, self-determination theory which is somewhat linked and made possible by Self-Regulation. With this being said, we can only speculate that a possible reason for the low Alpha score is because they are not as closely related within the subscale compared to other items.

4.4 Data Analysis

In this chapter, the most suitable method was used to retrieve the correct data and the uses were described. After data collection, the data was analyzed to find the outcome aiming to answer the research questions. Each steps of the data analysis was thoroughly explained. The research method used in this study is a mixed-method. In order to analyze the data of this study, IBM SPSS Version 23 statistical software was used. The method of analysis was also carefully selected to help answer the research questions.

MSLQ:

Step by step progress of preliminary of analysis using SPSS

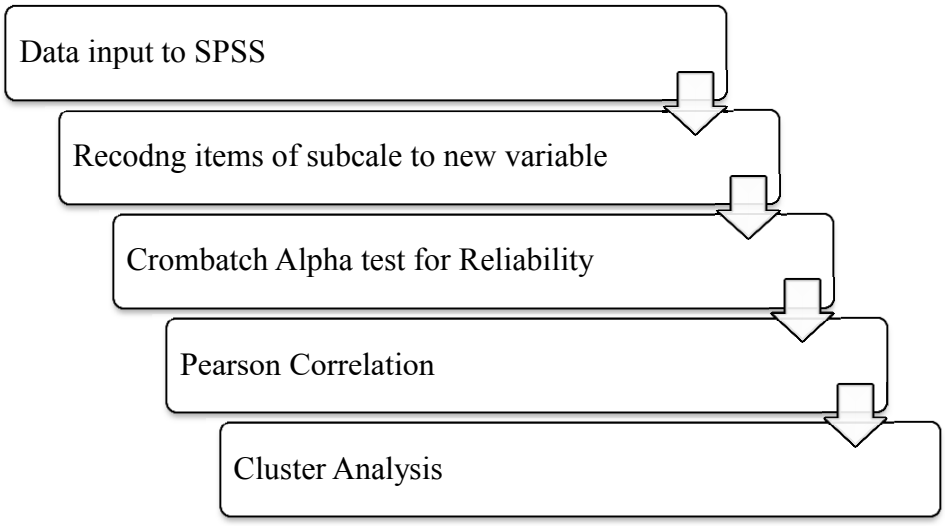


Figure 1 MSLQ: *Step by step progress of preliminary analysis using SPSS*

The data was entered into SPSS with the help of Google form (used for survey collection), which helped make it much easier to transfer them systematically.

Recoding items to New Variables and Crombatch Alpha test was complete before data analysis and reliability checking. There are a few items that required recoding to create new variables for further analysis. When recoded, the result tells whether the outcome is legitimate and can be included to support, and whether the outcome serves the same purpose with other questions or not. The procedure was done; the new value of the variables was included and used to support the scale.

SRLIS:

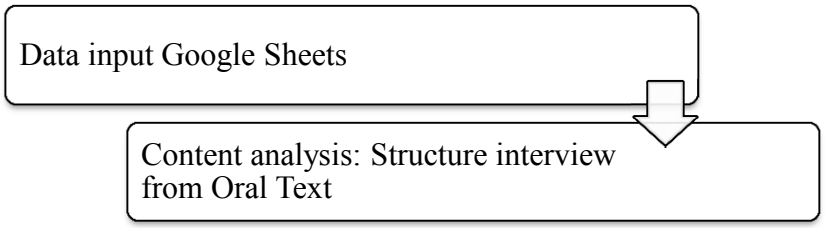


Figure 2 SRLIS: progress in steps of content analysis

4.4.1 Pearson Correlation

In order to understand the relationship between many different items, many tests were run by the use of Pearson Correlation tool. The data was first taken to analyse to see the correlation of the MSLQ and L.A. grade score *(See Table 1).* Thus, I can see if a student with a high score in their L.A. class would perceive themselves as a self-regulated learner or the other way round. The next step for data analysis related to correlation among the subscales: Self-Efficacy, Intrinsic Value, Cognitive Strategy Use and Self-Regulation. *(See Table 2)*.

4.4.2 K-Means Cluster Analysis

Cluster analysis of the data was the next step taken according to the four subscales. When the analysis was made, it allowed better understanding of the nature of how our subjects responded to each subscale of self-regulation items. The main focus was on Final Cluster

Centers, and cluster membership. The set was divided into three cluster groups to provide a strong cluster solution. Within each cluster set, the L.A. grade was also included in the process to place each group.

4.4.3 SRLIS (Self-Regulated Learning Interview Schedule).

On the first step, students were explained about the way to participate in this interview schedule and its procedures. It was made clear to them that they were urged to think carefully about themselves and how they would act in those situations. Students were then taken through all 14 learning strategies and its meaning before for each scenario were presented. The data was recorded into Google Spread sheets, and was studied closely. The main aim of this procedure was to see what strategies were used, and its frequency. This comprehensive method of scoring and analysing indicated the range and consistency with which the participants employ SRL strategies when different situation in a studying settings. .

The 3 most frequent-used strategies were analysed from the result together with its frequency per each scenario. SRL strategy being used by an individual was reported and the frequency of the strategies being used by the whole group was analysed as well. In addition to the understanding of SRL strategy usage, the self-efficacy aspect was also investigated by allowing the students to rate themselves on a scale of 1-4 on how confident they were in accomplishing the task successfully *(See Table 4).*

5. RESULT

In this chapter, the results from the analysis will be elaborated. I will start with the MSLQ result analysis followed by SRLIS (Self-Regulated Learning Interview Schedule). The aim of this study was to first explore the strategies stated in the theory of self-regulated learning reported by students with high-performance in Language Art class. Further, additional scenarios are going to be presented to show how the learners react and cope with different learning situations, and regulate their learning.

5. 1 Result from MSLQ

The results were graphed to enable a clearer understanding of the result. The Pearson's Correlations Coefficient between L.A. Grade Point to MSLQ shows that there is a small positive strength of relationship: r (46) = 28, p<.058. With the level of significance based on 0.05, the correlation is not considered statistically significant (0.058). This concludes there is no direct correlation, but rather a positive effect which cannot be confirmed of its source.

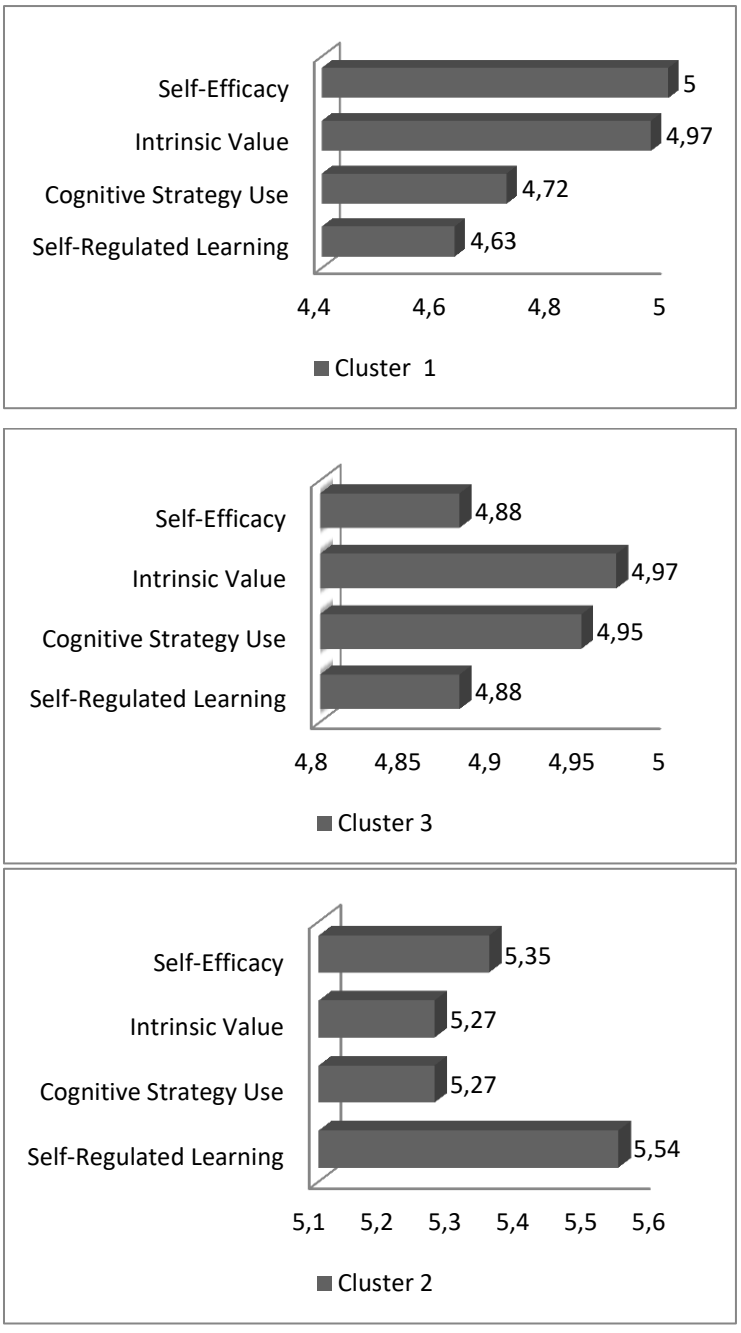
Scale	**Language Art Grade Point**
1. Self-Efficacy	.28
Sig. (2-tailed)	.055
2. Intrinsic Value	.16
Sig. (2-tailed)	.263
3. Cognitive Strategy Use	.23
Sig. (2-tailed)	.123
4. Self-Regulation	.32
Sig. (2-tailed)	.026

Table 1: Pearson Correlation Coefficients between Motivation Subscales' to L.A Grade Point

Scale	1	2	3	4
1. Self-Efficacy	1	.76	.58	.66
Sig. (2-tailed)		.000	.000	.000
2. Intrinsic Value	.76	1	.66	
Sig. (2-tailed)	.000		.000	.000
3. Cognitive Strategy Use	.58	.66	1	.79
Sig. (2-tailed)	.000	.000		.000
4,.Self-Regulated Learning	.66	.66	.79	1
Sig. (2-tailed)	.000	.000.	.000	

Table 2: Pearson Correlation Coefficients among Motivation Subscales'

During the analysis, -means cluster analysis was proceeded and the group that performed the highest (cluster group 2) gave a direction in the next step, which is participants selection. Then, the cluster group took a closer look altogether with the MSLQ result and L.A. grade score. This gave a better scope of selecting a more targeted participants. With the L.A. grade of 90% and higher (below 60% is considered a fail) and score of MSLQ of 80% and higher. By following these criteria, 9 students from G.9-G.11 were selected.



Firguire3 Bar graph of Final Cluster Centres

Cluster Membership was also checked to see the specific profile of students. Group 1 consists of 13 students; group 2 consists of 23 students, and group 3 consists of 10 students. This led to a selection of students that was placed in the highest score group (group.2). The selected students from group 2 were chosen based on their L.A. grade as well the result in high achievers who perceive themselves with SRL qualities. There were nine students in total selected to join our interview that had 90% in their L.A. grade and 80%.

The result of the correlation coefficients test indicates how every item has a moderate to strong positive correlation within the MSLQ items. It also shows great statistical evidence of its significance on every item. On the other hand, the result of the correlation coefficient test for MSLQ and the Grade for LA class shows that there is a small positive correlation with low significance. Although it's certainly leaning towards significance, there is not enough evidence (0.058) that this may have occurred by chance.

To conclude the Pearson correlation coefficient (Table 3), the results show that there is a little correlation in each specific item with the L.A. Grade point but the p values do not give enough evidence of its significance, except for the last item, Self-Regulation. In fact, Self-Regulation is also the item with the highest positive correlation compared to the other items.

In Figure 1, K-Means cluster analysis also had many interesting points. Although the result didn't show a big difference between the score of each cluster and we all may have thought that the MSLQ k-means and L.A. grand point could be matching of its own level, but Cluster 1 appeared with less score in general when it had a higher L.A. grade point compared to Custer 3. Cluster 2 is the group that generally scored the highest in all aspects which as well appeared to be highest scorer in L.A. grade point with the mean of 95.61. When looking into each item, it is apparent that Self-Regulated Learning was the leading item from all four items. On the other hand, cluster 1 which came the second in L.A. grade score (85,23) and cluster 3 (68,10) scored poorly in the self-regulated learning item. As for Self-Efficacy, cluster 2 and 3 seemed to score the item higher than other items as well.

5.2 Result from SRLIS

After the students were selected from the MSLQ and their L.A. grade, they were placed on a profile chart to see what group of subject the researcher is working with.

Student	Age	School Grade	Gender Score %	L.A. Grade
S. 1 J	15	9	M	97%
S. 2 A	15	10R	M	91%
S. 3 C	17	10H	F	99%
S. 4 L	16	10H	F	99%
S. 5 M	17	10H	F	98%
S. 6 O	17	10H	M	98%
S. 7 S	16	11	M	97%
S. 8 W	16	11	F	93%
S. 9 Y	16	11	M	96%

Table 3: SRLIS: *Student's Profiles*
*10R: Regular class / 10H: Higher performance Class

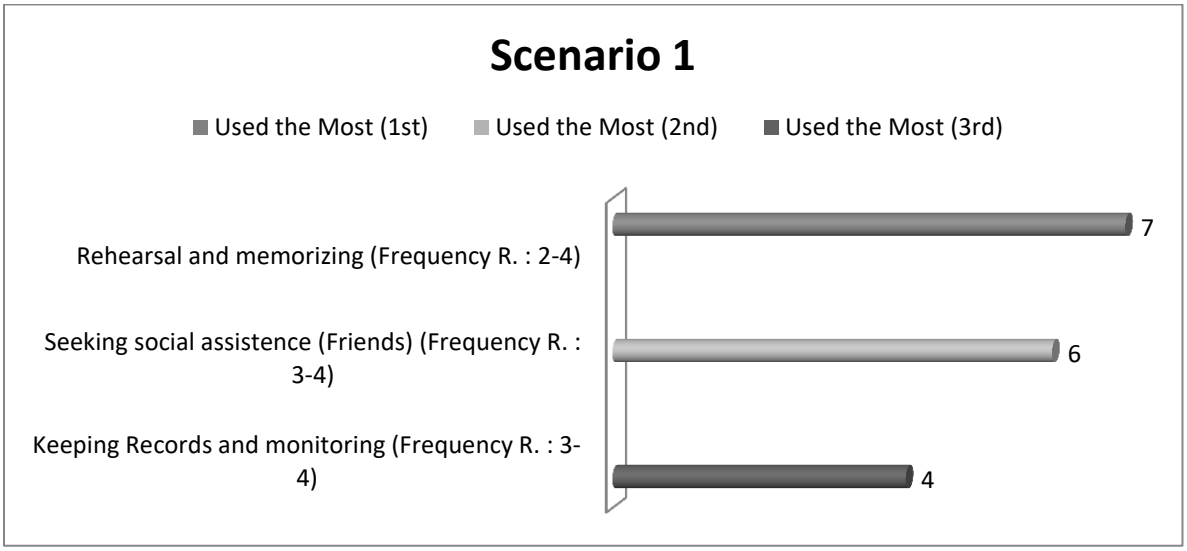
According to the student profile chart on Figure 3, there were not many significant points that could be learned from, but there were some parts from which we could draw a hypothesis from the results presented. As presented that out of the selected students based on their L.A. grade and MSLQ score, only one student from grade 9 and one student from grade 10(R) scored exceptionally high. Nonetheless, there were up to three students from 10^{th} H and three 11^{th} graders. This could mean because in grade 9, there is not much pressure on academic performance because university preparation is not in the student's concern. Also for the 10R

class, the environment is not strongly competitive due to the lower performance, which appeared as a whole group. Apart from that information, age, gender and L.A. grade do not contribute to our new findings.

The results of each scenario were investigated for the most used Strategy.

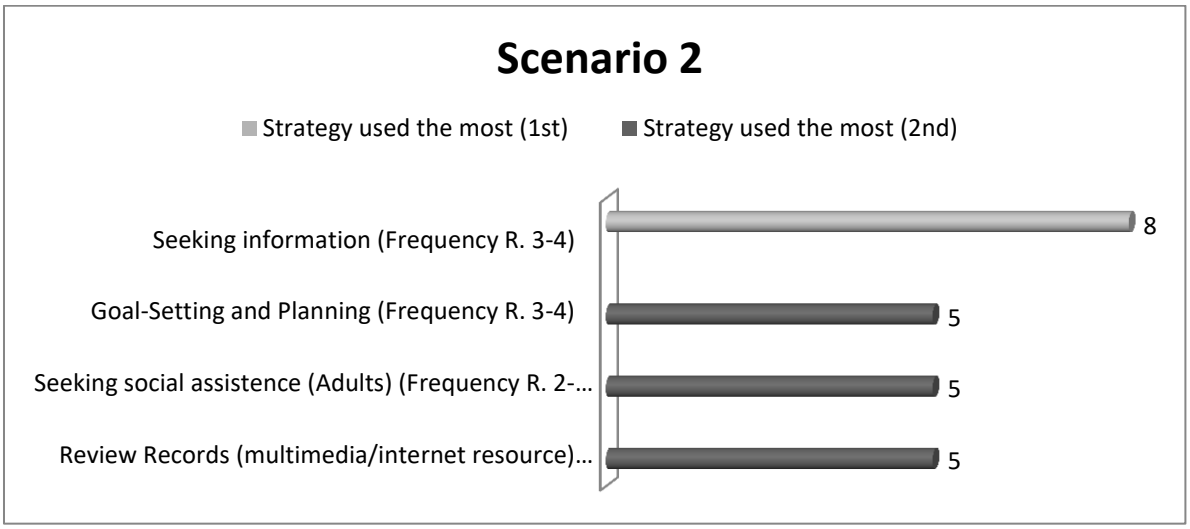
Scenario 1: Assume a teacher is discussing a topic with your class such as the history of the civil rights movement. He or she says that the class will be tested on the topic.

Q. Do you have a method to help you learn and remember what was discussed in class?

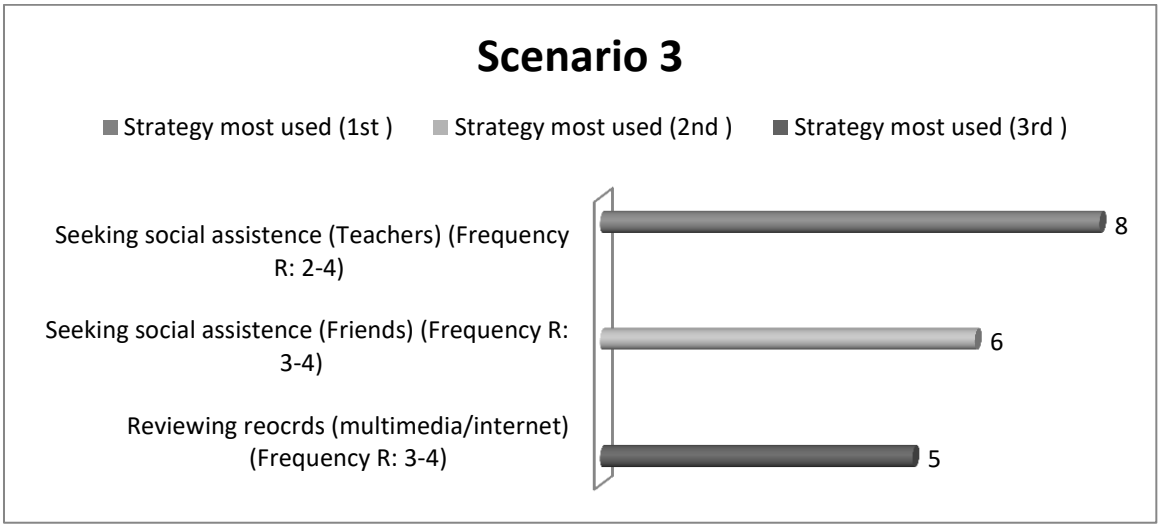


Scenario 2: Teachers often assign their students the task of writing a short paper outside classroom on a topic such as your family history. They also often use the score as a major part for grading.

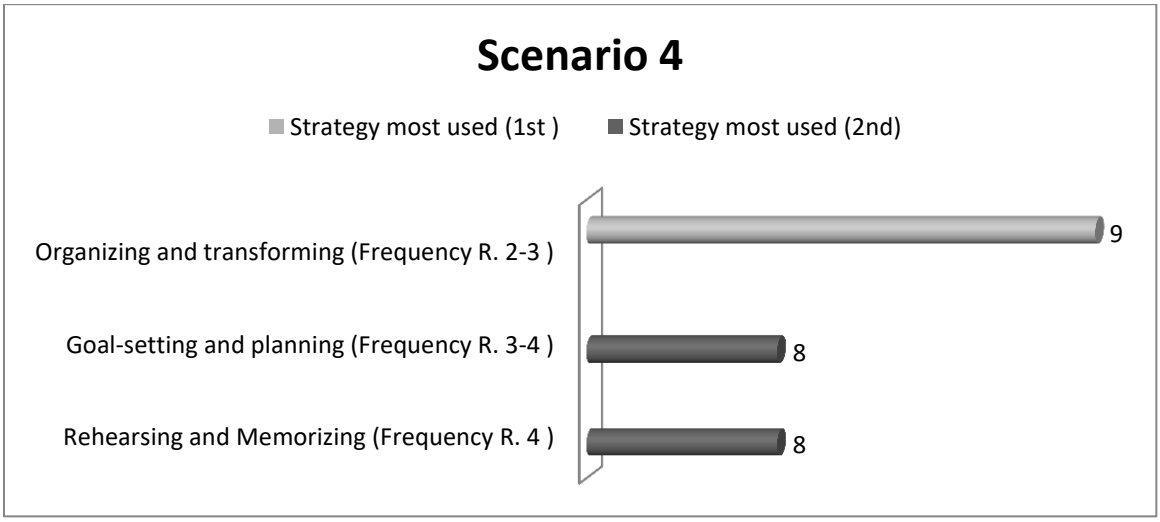
Q -In such cases, do you have any particular method to help you plan and write your paper?



Scenario 3: Is there any particular method you use for completing your math assignments?

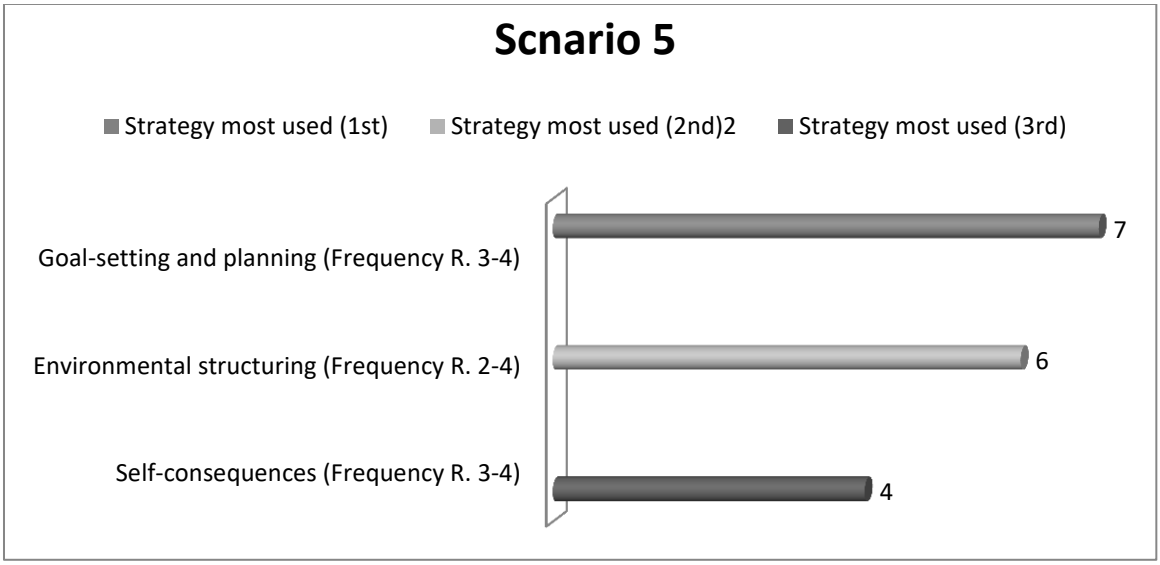


Scenario 4: Most teachers give a test at the end of a marking period, and these tests greatly determine the final grade, exams.



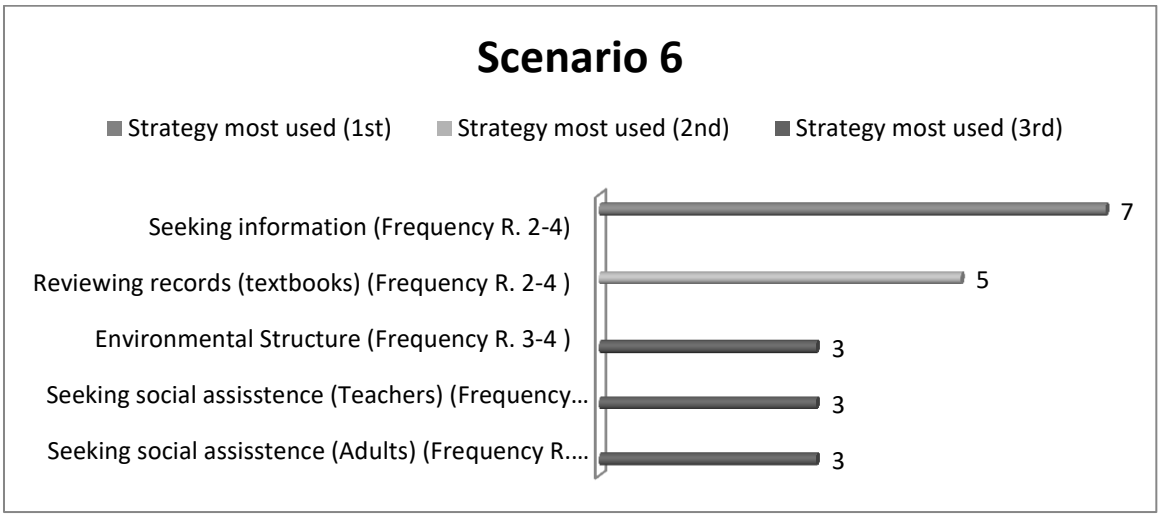
Scenario 5: Students often have problems about completing assignments because there are other more interesting things to do.

Q. Do you have any particular method for motivating yourself to complete your homework under these circumstances?



Scenario 6: Most students find it necessary to complete some assignments or prepare themselves for class at home.

Q. Do you have any particular methods to help you complete your work or improve your study at home?



7. When you are assigned an assignment in the subject that you are not interested or a task that is challenging for you.

Q. -Do you have a method to help you achieve it?

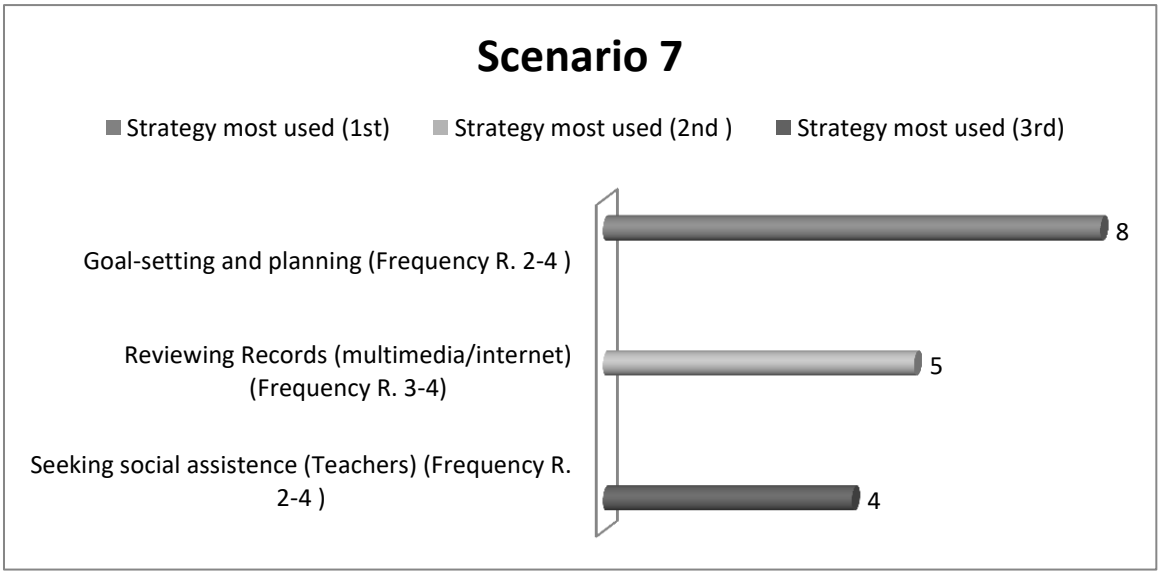


Figure 4 : SRLIS -Scenario 1-7

The total SRL strategy being reported for each scenario may provide a wider picture about the number of strategies being implemented in different situations. Scenario 1 appeared to have 36 SRL strategies reported. The same amount applies to scenarios 7 as well. With the result of 37 SRL strategies reported of its use for scenario 6 follows with scenario 2 and three with 40 strategies being reported. The highest number amounting to 72 reported strategies was shown in scenario 4. The lowest strategy being reported is in scenario 5 with 25 strategies being reported of its use. The two end of the highest and the lowest are obviously deviated from the average of other scores. Scenario 4 relates to strategy being used regarding the concerns on exams. This is a situation that required many different strategies and its outcome is moderately reasonable. It requires one to motivate himself/herself and to direct his/her actions, as well as gathering all necessary resources and seeking assistance from others. To have a clear goal and planning are also crucial. The lowest strategy appears in scenario 5 which relates to finding the right method to complete a homework assignment when there were other temptations or distractions. The nature of this question was very direct and particular. This does not require as many strategies, but rather choosing the right important or crucial strategies.

As the data were closely observed, the participants with high Strategies for Self-Regulated Learning Survey (SSRLS) score are students: S. 1, S. 4, S. 5 and S. 6. Although the difference is not so much, students: S. 2, S. 3, S.7, S. 8 and S. 9 scored lower. Furthermore, the result shows that most students tend to use 3-4 or even 5 different SSRLS repeatedly despite the fact that some strategies are more important and applicable in a certain, specific situations. As an example: Student 1's result shows the uses of Self-evaluation, organizing and transforming, goal-setting and planning, seeking information, and environmental structuring more than other strategies in general just as how student 5 reported using Seeks assistance from adults, Seeks assistance from peers, reviews notes and Goal-setting and planning. This could also mean that students tend to use the strategies they are familiar with I different situations rather than picking a suitable strategy to use in that particular situation.

An important observation derived from the results is that goal-setting and planning as well as seeking social assistance are the strategies used by every student in an exceptionally higher manner compared to other strategies On the other hand, the result also shows that keeping records and monitoring is the minimum-used strategy in a set of SRL strategies. Additionally,

self-consequences is hardly used, which wasn't emphasized so much in different SRL theories.

During the interview, there were many interesting points the researcher could pick up from e.g. in scenario 6 students were asked about method one needs to improve their school work or studies at home. This made many interviewees paused and allowed some thoughts before they answered. They mentioned that they used many methods but mostly they would read and highlight the important points. The answer seemed to appear differently and varied from one to the other. Although the highest strategy being reported is seeking information, there were many other strategies reported were not included in the chart. This revealed how students learn and review materials in a different and unique way. Some would do better in a room with music and some. Some would do better when seeking assistance while some needs be in solitary confinement. Some need to sit and study for a long time to be able to concentrate and go with it until the end. Some just can't study when being seated for a long time. All of these matter and are crucial for the learner to be aware of how they learn best.

Apart from goal-setting planning and seeking assistance from teachers and friends, environmental structure was also mentioned numerous times as well as getting resources from the Internet. For instance, a student from scenario 6 mentioning about environmental structure which greatly helps him because it have been a problem that was difficult since it have effected all the study plan that was made. He mentioned that it comes with discipline and when the surrounding is in control it helps everything else to go as planned. On scenario 3 e.g. one student also mentioned that the Internet is a great source of knowledge. It helped him so much especially when he has no access to other teacher and friends. With maths, a number of useful materials are available that can help provide understanding in the materials. These sometimes are better than information received from teachers, family, or friends. He further explained that it is crucial to know how to ask the right question, so the Internet system can give the right answer.

5.3 Result from SRLIS: Self-Efficacy

This self-efficacy item was evaluated at the same time when students were scoring the learning strategies. Students ranged themselves within 1-4 on how confident they are in

performing well in those situations. This procedure gave us an interesting look on their views on self-efficacy when facing those situations.

To understand about the participant self-efficacy, Figure 5 helps bring a deeper understanding on the subject. According to the reported result, it can be seen that the score does not obviously vary. The scores appeared are mostly "3" and "4". In fact, there is only one result of "1" and the result of "2" only appeared once or twice per each participant with an exception of one student who scored three "2's". This shows that the students have rated themselves quite highly, reflecting that they have a high self-efficacy in most learning situations.

During the interview session, many students mentioned that they find exams and Maths difficult. These two topics were raised 3-4 times by different students and with this in mind, personal difficulties have an effect on the results as well e.g. one student said she doesn't do well and feels anxiety when it comes to maths because of its difficulties, but she said she feels lucky to have a supportive and good teacher who is always willing to help. As a reflection, Scenario 3 asking about difficulties when facing difficult maths problems results in the score to have a low score of twos from four students. Another high score of 2s is the scenario 7 which is related to how one would deal when facing a topic of study which is not interesting. Many students are not sure if they can regulate themselves even when the result of strategy is self-regulation. This shows that the students are aware of what is needed in action, but they are as well aware that it is not so easy and requires lots of effort.

Scenario	**Student**								
	S.1	*S.2*	*S.3*	*S.4*	*S.5*	*S.6*	*S.7*	*S.8*	*S.9*
Scenario 1	4	3	3	2	4	3	4	4	4
Scenario 2	4	4	4	3	3	3	4	3	3
Scenario 3	3	2	3	2	4	2	2	4	4
Scenario 4	3	3	3	2	3	3	4	4	4
Scenario 5	3	3	2	4	4	4	3	3	2
Scenario 6	3	1	3	3	3	3	4	3	3
Scenario 7	4	2	2	3	2	2	2	4	3

Figure 5. Self-Efficacy

5.4 Conclusion of the Result

RQ1. What is the relationship between students with high grades in L.A. class and their MSLQ score?

The relationship between LA. grade-point to MSLQ has a small positive strength of correlation, but it was not statistically significant. Although the outcome was not statistically significant, it was very close to being significant, which allows me to conclude that it could happen by chance. This showed that through this test the relationship between LA. grade point and Self-Regulation (subscale) indicates a small positive correlation and the correlation is statistically significant: $r(46) = 32$, $p<.055$. (significant at $p < .05$).

As was mentioned earlier, the result of the relationship of L.A. grade and MSLQ score can be understood by understanding the nature of the self-evaluation test. MSLQ is all about self-perception and interpretation, which makes it difficult to obtain 100% accuracy, because we all perceive things differently. With this slight correlation it can be said, to a limited degree, that the studies support many theories of SRL (Zimmerman, 2000, 2001; Winne & Hadwin, 1998; Printrich, 2000) and many others.

RQ2. What and how often the high achieving students report the use of different self-regulation strategies in different type of situations?

The three strategies reported as the most frequently employed were goal-setting and planning, organizing and transforming, and seeking assistance from peers. These qualities have been great strategies for the participants based on their grades. That is, when referring back to Scenario 7, it appears that goal setting and planning are scored with exceptionally high points. This clearly shows that their goals motivated them to work hard. Also, they were aware of the procedures to achieve those goals practically. Organizing and transforming help the students to manage things and take control of their own learning path as well. It requires effort in adjusting the learning materials to suit their own goals and monitoring their own learning to

meet those goals. Lastly, seeking assistance from friends is one of the methods that was brought up in different studies on how SR learners would seek advice by outsourcing. This also supports the trend of collaborative learning in classroom settings nowadays. Other skills such as seeking information, reviewing the text and seeking assistance from adults were also ranked higher up compared to the rest of the skills.

RQ3. What is the relationship between the experienced self-efficacy and reported SRL strategies?

There is no direct relationship clearly seen from the result of SRL reported and self-efficacy. Although there were many scenarios that students did not feel so confident, low self-efficacy, it does not mean that their SRL strategies are not being used. This basically means that students may know what strategies they should use, but they were not confident due to the failure or difficulties in the past. Students may not know that they need more assistance from other strategies or even persons. In contrast, students who are confident and have high self-efficacy in each scenario would generally report a higher amount of SRL strategies and higher frequency as well. This explains how other studies suggested that self-efficacy is a good tool that can be used to predict student's academic success.

6. DISCUSSION & CONCLUSION

6.1 Findings from the MSLQ

As the data was collected and keyed into the SPSS, the results could easily be explained. The individual answers of each subject tend to lean towards a positive answering pattern or a negative one. This means most students who answered a question with a high score would tend to answer other questions with a high score as well, and vice versa. This is very reasonable, because it was mostly normal that students who view themselves as self-regulated learners would generally practice similar traits and actions resulting in regulating their learning. At the same time, students who do not regulate their learning would generally score themselves lower on questions that would reflect their skills of regulation which would affect the results of the questionnaire.

Regarding the results of MSLQ and the LA. grade score, the outcome shows little correlation, but not statistically significant. It allows me to explain that a student who performs well in their LA class could perceive himself/herself as or as not a self-regulated learner for many possible reasons. Some of the reasons are that they may compare themselves to other classmates with high grades, or that they believe they could have done more regulation, or that they may not be satisfied with their grades in general. Each of these could influence their way of self-judgment. Conversely, students who do not perform well could score themselves highly in the MSLQ while thinking they have put a lot of efforts in studying and regulating their learning based on their judgment compared to their classmates. By keeping in mind that as long as self-evaluation test is used, there will always be an exception that needs to be kept in mind. This is the fact that self-assessment test often lacks the capacity to give 100% valid proof because people perceive things differently. Nevertheless, the results for this case shows some positive correlations, meaning, the significance is almost close to the line of being determined as significant. In this case, it can be said that the positive outcome contributes to our understanding although it is not a significant level.

Following with the correlation within the subscales, it is clear that Cognitive Strategy use and Self-Regulation shows the highest score on its correlations. This is because self-regulated learners are perceived to be skilful with metacognitive qualities regarding their awareness and use of cognitive strategies (Butler & Winne, 1995; Zimmerman, 1989, 1994).

Another item worth mentioning due to its high correlation of relationship is between *Self-Efficacy* and *Intrinsic Value.* According to Deci and Ryan (2000), self-efficacy and motivation are an important internal characteristic, supported by the theory of self-determination. They also proposed how people's behavior is motivated by three different key components consisting of competence, autonomy, and relatedness. When looking carefully at these keys, it appeared that competence is another term for *Self-Efficacy*, while relatedness is another word for *Intrinsic Value.* They can both represent the keys as mentioned and would function essentially the same way. This would be the drive to push or motivate their learner to regulate their learning.

By moving on to the correlation analysis between L.A. Grade Point and different subscales, one important observation on the last item is observed. The relationship between L.A. Grade Point and the Application of Self-Regulation is the only item that indicates a small positive correlation between the two with statistical significance. Although it is a small measure, the statistical significance has given the evidence that this does not happen by chance. This finding supports many previous studies and theories related to SRL for years. This can be traced back to of one the oldest studies of SRL by Zimmerman & Martinez-Pons (1988) where an experiment was held to see what response students would have if they were more in control of their own learning situation. The result showed that all students were responsive to the program. Moreover, students who showed initiative, responsibility, and intrinsic motivation would be the ones who would succeed academically.

6.2 Findings from the SRLIS

Keeping in mind that this data was very limited by its small sample size, I could only make suggestions based on the results. Since all the students who were part of the interview were carefully selected based on their high grades and MSLQ causing the variation of the result to not differ as much. Also, there were still some interesting findings based on the

results. As mentioned earlier, each student tended to repeatedly use the same strategies in different scenarios. This may have occurred due to the different preferences the learners had while being aware of what worked best for them. It could also mean that the students were not used to other strategies or ways to implement the strategies to support their learning. In either case, the result as a whole showed that students did employ a wide range of SRL strategies.

The data suggests that the high report on the uses of goal setting and planning, and low report on keeping records and monitoring, are good signs of corroborating the 'beginning' of the SRL model (Pintrich & Zusho, 2002; Zimmerman, 2000). Still, they did not quite follow sth?? as it should be. This gap can definitely be bridged by the teacher in helping improve the student's overall performance even more.

To suggest ways to help students be aware of more strategies, the teacher should take a direct role in finding ways to help student employ different SRL skills. With the support of different research findings, it is now possible to practice using different ways to implement this. As an example, more specifically in improvement of the Language Arts subject, Paris, Cross, and Lipson (1984) allowed students to work in pairs as they practiced using reading strategies, something called "reciprocal teaching." Students were asked to discuss ways and strategies to help them understand the materials better. As Harris and Graham (1992) teaching students in their studies to practice using organizing, planning, and revising as they worked on their writing., they also went deeper and taught tactics for self-instruction to reinforce self-regulation through letting students practice identifying the problem and focusing on the task while working at it. They also evaluated their performance and learn to deal and cope with anxiety and difficult situations. In the study conducted by Harris and Graham (1996), they went even further and suggested more specific ways of how SRL can be incorporated into Language Art class on account of their realization of how SRL is being neglected. Its implementation basically follows these stages: (a) activating and developing background

knowledge, (b) discussion, (c) cognitive modelling, (d) mnemonic memorization, (e) supported performance, and (f) independent performance. Based on the results, seeking for help from others is being reported by students. Seeking help from friends was ranked the first and then followed by parents and teachers respectively. According to researches, it's suggested that self-regulated learners tend to seek advice (Clarebout et al., 2010) as well as information (De Bruin et al., 2011) more than students who have less self-regulate skill in classroom settings.

During the interviews, I observed how students mentioned exams in a frankly negative way. The students expressed how they had tried using different strategies, but they just were not work due to the huge amount of content. According to the strategies they used, revising, memorizing, and practice were used to help them study for tests and exams. The students also reported how they think it is unnecessary that they are evaluated
based on what they know as they will forget it after the exams finish. This shows how they lack the task value, which is very much related to motivation and lifelong knowledge acquisition. Based on the studies of Schunk & Zimmerman (2007), and Zimmerman (2008), they suggest that self-regulated learners also perform better on academic tests and different evaluations of student performance and achievement. It is also seen how my results support this claim. There is no question about the performance of this group of students. But if these students, who are considered high achieving students, are struggling to understand the meaning of examinations as an evaluation method, then that method may need to be called into question for revision.

Another point which was expressed in the interview was how students were motivated to work hard, given that they are coming very close to the university application period. All of these students also know about task priority. There was no question that they prioritized their studies as the most important thing for the time being.

6.3 Conclusion

Although the data of SRLIS hasn't proved definitive, due to its limitations, the overall results of the study suggest a direct correlation between the uses of SRL skills and high achievement. This contributes to the understanding of how successful students engage in a

greater range of self-regulatory skills, and with more frequency, than lower achievers (Ablard & Lipschultz, 1998; Cordingley et al., 1998; Purdie & Hattie, 1996).

It is important to be reminded that there are many other strategies and methods apart from those mentioned in these studies that teachers in every subject field can use practically in their classrooms to help promote the development of SRL skills in students. Based on different studies discussed earlier, SRL skills will not only help students to perform highly in their academics milieus, but also improve self-esteem as a whole and motivate those students to become lifelong learners.

To emphasize once again how SRL skills are needed more than ever in this era, teachers are the first to raise awareness and instigate changes in the educational system. The simplest thing for teachers to do would be to change teaching methods, dynamics, and the learning environment. The Self-Regulated Learning theory will never be a useful discovery if it is not implemented in today's educational system.

6.4 Practical Implication

There were some ethical issues needed to be mentioned. Due to the experimental nature of the study, there were two main limitations that affected the outcome and research as a whole: The relatively small sample size and the tools used are rather limited to produce the clear-cut findings.

The amount of participants for the MSLQ is acceptable (46 students). However, for the interviews (9 students), if there were more participants or even if the whole group of cluster group "two" participated in the interview, the outcome might have been more significant and vastly different from what is presented here. With the group of high performers that we have, it served the purpose and brought us to the understanding I was looking for, but with a greater participants it would more accurately represent the whole group of high achievers, and might give us more insights into SRL processes.

The first part of the study, MSLQ, did serve its purpose, but the SRLIS seemed to be a bit weak when used on its own to measure the SRL process. The reason is that, as the interviewees were reporting different strategies, they might skip some strategies or misreport the frequency with which they employed due to varying possible reasons. SRLIS is surely a good tool, but it wouldn't be recommended for use on its own, but rather in conjunction with other tools in support. This can bring more significant and valid findings. Teacher's observation could be a good tool to help the teacher see the roles and study strategies visible on the learners. Learning diaries is one other tool, widely used, which would certainly be a good complement to SRLIS.

6.5 Research Evaluation & Future Research

The research was conducted based on strong theoretical studies which allowed space for a further investigation on the topic. The experiment was carried out with the consent of the school staff and students. Different procedures were implemented as designed and research questions were answered. Although the limitations may have caused the findings to not be as expected, there were many other compelling points that were visible throughout the experiment and as well as the analysis.

What can be suggested for future research is to work with a larger sampling pool of students. A bigger sample size would allow the researcher to see more of their SRL processes and even be able to classify them. This would also allow the researcher to focus on the students' differences in learning habits. The SRLIS could also be accompanied with learning diaries and teacher's observation to help understand more about the regulation process, and gain deeper insight into how the students do things and think about their learning.

To build on this further, future research could do a similar experiment with schools from different curricula or even countries and see the extent to which students have developed. It would be interesting to see what SRL skills were implemented in those schools and see whether there are any differences in different schools in different cultural settings. I believe that schools where neither emphasize nor implement learning activities that promote SRL would foster an environment which students are less aware of their skills being used. Thus, they

are less likely to develop the potential they are not aware of. Research on how teachers implements SRL skills with students could also be very interesting to study.

There are many directions to work with when it comes to SRL, and I personally believe that there will be many more studies, especially when our world has reached its greatest need for self-regulated learners. The world we are now in is one in which knowledge is free, but how we go out, select and gain that knowledge for it to remain with us is yet another matter. This is how SRL would function to support the lifelong learning education for the ideal 21st-century educational system.

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8. APPENDINCE

Appendix 1: Interview Questions for SRLIS

The Students Report their points on a scale of 1-4

1. Assume a teacher is discussing a topic with your class such as the history of the civil rights movement. He or she says that the class will be tested on the topic.
-Do you have a method to help you learn and remember what was discussed in class?
-How confident are you in your performance?

2. Teachers often assign their students the task of writing a short paper outside class on a topic such as your family history. They also often use the score as a major part of the grade.
-In such cases, do you have any particular method to help you plan and write your paper?
-How confident will you be?

3. -Is there any particular method you use for completing your math assignments?
-How confident are you with your math assignments?

4. Most teachers give a test at the end of a marking period, and these tests greatly determine the final grade, Exams.
-Do you have a particular method for preparing for a test in classes like English or history?
-How confident are you in your performance?

5. Many times students have problems completing a homework assignment because there are other more interesting things they would rather do.
- Do you have any particular method for motivating yourself to complete your homework under these circumstances?
-How confident are you in finishing on time as you have planned (it could be before the deadline).

6. Most students find it necessary to complete some assignments or prepare themselves for class at home.
-Do you have any particular methods to help you complete your work or for improving your study at home?
-How confident are you to be able to do it.

7. When you are assigned an assignment in the subject you have no interest or a task that is challenging for you.
-Do you have a method to help you achieve it.
-How confident are you that you will manage to complete it at the end.

Appendix 2:

Table 2: Self-regulated learning interview schedule coding categories

Students have a list of these Sand they explained to thoroughly before the interview starts.

Category of strategy	Definition
1. Self-evaluation	Statements indicating student-initiated evaluations of the quality or progress of their work, e.g., 'I check over my work to make sure I did it correctly.'
2. Organizing and transforming	Statements indicating student-initiated overt or covert rearrangement of instructional materials to improve learning, e.g., 'I make an outline before I write my paper.'
3. Goal-setting and planning	Statements indicating student setting of educational goals or subgoals and planning for sequencing, timing, and completing activities related to those goals: e.g., 'First, I start studying two weeks before exams, and I pace myself.'
4. Seeking information	Statements indicating student-initiated efforts to secure further task information from non-social sources when undertaking an assignment, e.g., 'Before beginning to write an assignment, I go to the library and get as much information as possible concerning the topic.'
5. Keeping records and monitoring	Statements indicating student-initiated efforts to record events or results, e.g., 'I took notes of the class discussion.' Or 'I kept a list of words I got wrong'.
6. Environmental structuring	Statements indicating student-initiated efforts to select or arrange the physical setting to make learning easier, e.g., 'I isolate myself from anything that distracts me.' Or 'I turn off the radio so I can concentrate on what I am doing.'
7. Self-consequences	Statements indicating student arrangement or imagination of rewards or punishment for success or failure, e.g., 'If I do well on a test, I reward myself to a movie.'
8. Rehearsing and memorizing	Statements indicating student-initiated efforts to memorize material by overt or covert practice, e.g., 'In preparing for a maths test, I keep writing the formula down until I remember it.'
9-11. Seeking social assistance	Statements indicating student-initiated efforts to solicit help from peers (9), teachers (10), and adults (11), e.g., 'If I have problems with maths assignments, I ask a friend to help.
12-14. Reviewing records	Statements indicating student-initiated efforts to reread notes (12), textbooks (13) or access other multimedia/internet resources (14) to prepare for class or further testing, e.g., 'When preparing for a test, I review my notes.'
15. Other	Statements indicating learning behaviour that is initiated by other persons such as teachers or parents, and all unclear verbal responses, e.g., 'I just do what the teacher says.'

(Adapted from Zimmerman & Martinez-Pons, 1986).

Appendix 3:

Parental Consent Form

I understand that my child's participation in this project will involve:

-Taking part in filling a Questionnaire, in which he will be asked questions about how he regulate his learning behavior.

-Exposing their GPA score of their previous semester(s) in a confidential manner.

-Taking part in an interview with (researcher), in which he will be asked questions about his views on how he copes with challenges in his community and in his school.

-During this interview, notes will be taken and the interviews recorded for later transcription. The interview will be fully anonymised when it is transcribed.

I understand that my child will benefit from this study as an individual.

I understand that my child's participation in this study is entirely voluntary.

I understand that his participation will be treated confidentially and all information will be stored anonymously and securely. All information appearing in the final report will be anonymous.

I understand that I am free to ask any questions at any time. I am free to discuss any questions or comments I would like to make with the researcher.

I, _____(NAME) consent to (researcher) proceeding

with this study with the supervision of (supervisor).

Signature of Parent or Guardian: ……

Date……

Name of Child: ……

Grade:.....

Appendix 4:

Self-Regulated Learning scale and subscale.

Scale	Subscale	Alpha
Motivational Beliefs	**Self-Efficacy (9 items)** -Compared with other students in this class I expect to do well. -I'm certain I can understand the ideas taught in this course. -I expect to do very well in this class. -Compared with others in this class, I think I'm a good student -I am sure I can do an excellent job on the problems and tasks assigned for this class. -I think I will receive a good grade in this class. -My study skills are excellent compared with others in this class. -Compared with other students in this class I think I know a great deal about the subject. -I know that I will be able to learn the material for this class.	
Self-Regulated Learning Strategies	**Intrinsic Value (9 items)** -I prefer class work that is challenging so I can learn new things. -It is important for me to learn what is being taught in this class. -I like what I am learning in this class. -I often choose paper topics I will learn something from even if they require more work. -Even when I do poorly on a test I try to learn from my mistakes. -I think that what I am learning in this class is useful for me to know. -I think that what we are learning in this class is interesting. -Understanding this subject is important to me.	
	Cognitive Strategy Use (13 items) -When I study for a test, I try to put together the information from class and from the book. -When I do homework, I try to remember what the teacher said in class so I can answer the questions correctly. -It is hard for me to decide what the main ideas are in what I read. (*R) -When I study, I put important ideas into my own words. -I always try to understand what the- teacher is saying even if it doesn't make sense. -When I study for a test I try to remember as many facts as I can. -When studying, I copy my notes over to help me remember material. -When I study for a test I practice saying the important facts over and over to myself.	

	- I use what I have learned from old homework assignments and the textbook to do new assignments. - When I am studying a topic, I try to make everything fit together. - When I read material for this class, I say the words over and over to myself to help me remember. -I outline the chapters in my book to help me study. -When reading I try to connect the things I am reading about with what I already know.
	Self-Regulation (5 items) I ask myself questions to make sure I know the material I have been studying. When work is hard I either give up or study only the easy parts. (*R) Even when study materials are dull and uninteresting, I keep working until I finish. Before I begin studying I think about the things I will need to do to learn. I work hard to get a good grade even when I don't like a class.