People's Democratic Republic of Algeria

Ministry of Higher Education and Scientific Research

Mohamed Khider University of Biskra

Faculty of Letters and Languages

Department of English

Investigating the correlation between English as a foreign Language Students' Self-Efficacy Beliefs and their Use of Metacognitive Strategies

Case of Master Students at Biskra University

Dissertation submitted to the Department of English in partial fulfillment of the requirements for a **Master Degree in Sciences of Language**

SUBBMITTED BY:

Nada **MERZOUGUI**

SUPPERVISED BY:

Ms. Kenza **MERGHMI**

Board of Examiners

Pr. Saliha **CHELLI**	(Examiner)	**(University of Biskra)**
Ms. Kenza **MERGHMI**	**(**Supervisor)	**(University of Biskra)**
Dr. Chahira **NASRI**	(Chairperson)	**(University of Biskra)**

Academic Year: 2022/2023

Declaration

I, **Nada MERZOUGUI**, officially declare that this study has been undertaken independently. All the content presented in the pages of this dissertation, except for where reference is written, is of original creation and has not been previously published or done by another individual. Furthermore, I certify that this work has never been submitted to a university or an institution for obtaining a degree or an accreditation.

Author's Name: Nada MERZOUGUI

Signature:

Date:

Dedication

To the source of Love and support
"My Family"

I dedicate this work to the soul of ***"my beloved father"*** who believed that his sons and daughters were always different and capable of creating a fulfilling life.
"We all wish, including me, to see you with us"

To my **heroine,** my **queen**, the one who fought and sacrificed to keep us together ***"my Mother"***
I'm proud beyond words, to be your daughter.

My parents, you taught me how to remain strong
Thank you

To my sisters and brothers
"Your existence was a gift from Allah, I'm blessed to have you in my life"

*To **my friends and colleagues** who were and still a part of my journey*
Your presence has added a great value to my days.

To all of the pure souls ***"My cats"***
As a profound human being, they were created to light and recharge my soul with positivity.

To **the writers**, to all of **the art creators**, whom their artistic works, nurtured my **sparkling visionary** and protected me from the loss of identity.

To ***myself*** who learned to **live** and **rise** from the ashes, not only to **survive**.

"To *the readers* of this work"

Acknowledgements

Initially, all praise belongs to **Allah**, the most gracious, the guardian of faith, the provider and the merciful for granting me wisdom, strength, and patience to finalize this work.

I would like to express my profound gratitude to my exceptional supervisor, Ms. Kenza **MERGHMI**, for her help and support along the way of writing my dissertation. Her professionalism, guidance, patience, and faith in what I can deliver are the reasons that encouraged me to complete this research with hope and satisfaction.

I am appreciative beyond words to the Board of Examiners: Pr, Saliha **CHELLI** and Dr. Chahira **NASRI** for dedicating their time to review, evaluate and enhance the quality of my work and for their helpful suggestions, positive feedback and encouragement as well.

Finally, I would like to extend special regards to the students who contributed in the data collection operation, **namely Master students.** I'm deeply thankful for their collaboration, for the curiosity ,and attention found in their answers.

Abstract

A multitude of scholarly investigations have been conducted to understand the impact of learners' personal variables on their performance. The psychological construct of self-efficacy seemed to influence the way learners manage their learning requirements, face the challenges, and succeed at the end. Nonetheless, the nature of the relationship between self-efficacy (SE) beliefs and metacognitive strategies (MTE) use is still overlooked due to the vagueness created by these two abstract variables. The present study grounded its inquiry on understanding the nature of the relationship between self-efficacy and metacognitive strategies use among a sample of 25 Master students at the University of Biskra. Being in alignment with the chosen methodological procedures, the variables under investigation were examined following a mixed method approach with an explanatory sequential design. As the selected design demanded, the data were gathered using three major data collection instruments, namely, the General Self-efficacy scale (GSE), the Metacognitive Awareness Inventory (MAI), and a questionnaire for students. The obtained data were statistically calculated using IBM SPSS Software version 19 to fully analyze and interpret the data. The results of the analysis revealed that there is little to no correlation between SE and MTE use. Furthermore, the current study sought to build conclusion based on the participants' answers where the majority of them indicated the importance and the impact of self-efficacy on the way they use the strategies. Thereby, the results of this study manifested that self-efficacy is a key factor in the use of the metacognitive strategies paving the way to EFL teachers to focus on introducing SE to learners and to take practical steps towards the instruction of the MTE.

Keywords: Foreign Language Instruction, Metacognitive strategies, Self-efficacy.

List of Abbreviations and Acronyms

SE: Self-Efficacy

MTE: Metacognitive Strategies

EFL: English as a Foreign Language

GSE: General Self-Efficacy

MAI: Metacognitive Awareness Inventory

ELL: English Language Learning

List of Tables

List of Figures

List of Appendices

Contents

General Introduction

Chapter One: Self-Efficacy

Chapter two: Metacognition and Metacognitive Strategies

Chapter Three: Data Analysis and Interpretation of the Results

General Introduction

1. Introduction

Language learning is generally seen as the accumulation of the small and the deliberate actions taken by learners. A range of learning strategies was designed to meet the expectations of the learners, describe and assist their learning progress focusing on the differences among each learner. In this regard, language learners do not learn in the same way; they use a number of strategies to understand, recognize, memorize and retrieve information and also to consciously engage in the learning situations and the requirements they entail. Learning strategies is described by scholars as the assemblage of behaviors and thoughts, beliefs and emotions used by learners to facilitate, understand and transfer knowledge about language (Weinstein, Husman, & Dierking, 2000).

Language learning strategies have been classified according to Oxford 2001 predominantly into: cognitive strategies, socio-affective strategies and metacognitive strategies. The latter reflects the way learners monitor, regulate, and control their learning processes. According to a recent paper, “metacognitive strategies are thinking about thinking process. It is the strategy that relates to the logical sequences of students in the learning process. There are planning, monitoring and evaluating in the metacognitive strategies” (Khikmah, 2018, p. 9). The application of these strategies by the learners enables them to reflect on their learning by preparing the ground to autonomy and self-determination to take place in their pedagogical quest. In addition, metacognitive learning strategies, as one of the key influential factors in language learning, can hone learners’ skills of self-regulation, self-management and self-monitoring through developing their abilities in setting goals, focusing on understanding and comprehension and assessing progress and competence rigorously.

Interestingly, metacognitive learning strategies can be paired with the psychological concept of self-efficacy where it may significantly control the learners' use and application of the appropriate strategies, as it connects them to their deeper metacognition. Self-efficacy was introduced as one of the main components of the social cognitive theory. It is considered as a strong predictor of learners' success where they can flexibly choose their learning strategies, understand and regulate their learning process, direct their learning goals and increase performance (Bandura, 1997). In the field of language teaching and learning, a significant relationship was found between self-efficacy beliefs and the use of language learning strategies in general, and metacognitive ones respectively. The body of research proved that students with higher levels of self-efficacy beliefs are able to manage and become better users of learning strategies (Nosratinia, Saviey, & Zaker, 2014).

The relationship between self-efficacy and the use of metacognitive learning strategies has existed and extensively investigated in many different contexts by experts in the fields of psychology and education. Accordingly, this research work is about investigating and understanding the nature of the correlation between learners 'self-efficacy and their use of the metacognitive strategies by master one level students in the University of Biskra. Furthermore, an examination that seeks to answer the question of how frequent EFL learners tend to plan and monitor in relation to self-efficacy is one of the focal interests of the phenomenon under investigation.

2. Background of the study

The knowledge about the power of our own thoughts and beliefs in guiding our destinations towards an efficient learning experience is a crucial skill that foreign language learners need to be aware of. The idea of self-efficacy revolves around defining human beings as active controllers over life's opportunities simply by observing the way they see

themselves operating in a certain task or a mission. This skill of confidently believing in one's abilities in metacognitively controlling learning is indispensable part of the relationship between self-efficacy and metacognitive strategies use.

Self-efficacy and metacognitive learning strategies are one of the research areas that needs to be comprehensively reviewed in the region of Biskra, Algeria. It happens to notice that students who are majoring in English language are not fully aware of the metacognitive strategies they are unconsciously, neither the importance of orchestrating their beliefs to serve their expected learning outcomes. Another remark that should be given is there have been no efficient studies done previously on the relationship between self-efficacy and metacognitive strategies use by EFL learners in the academic context of Biskra .To cast light on the existing lacks, three studies were conducted focusing on Metacognitive awareness, Metacognitive strategies, and Creativity (Derbali, 2019; Messaoudi, 2020; Abdelaidoum & Chelli, 2021) and others on self-efficacy and its relation with the language skills.

Arriving at this point, the future suggestions that some previous studies included encourage the researcher to fill in the existing contextual gaps. Moreover, this topic has been seen as an appealing issue that deserves investigating in order to uncover the nature of the association that may exist between self-efficacy and metacognitive strategies use in the Biskra University.

3. Statement of the problem

The need to understand and relate the learning components is what paved the way to the appearance of language learning strategies generally and to metacognitive strategies specifically. EFL learners who use this range of strategies are characterized by their meticulous, cognizant and complete realization of what the learning situation entails. In terms of empowering EFL learners' use of metacognitive strategies, self-efficacy proved to have a

great influential role as it indicated by the body of literature. However, the combination of these two elements has not been traced in the academic performance of those learners due to lack of awareness.

In this regard, it is a preconceived assumption that Master one English language learners at the University of Biskra face many challenges when it comes to identifying the appropriate metacognitive strategies to use. These difficulties lays in their lack of knowledge about the importance and applicability of this latter as it was observed and experienced by the researcher herself. The metacognitive knowledge is marginalized to some degree in the EFL classroom. Therefore, a link between learners' self-efficacy beliefs and their use of metacognitive strategies was established by researchers. A research study concluded that, "self-efficacy (self-efficacy) has an important role to show confidence in the ability possessed by students to regulate the processes of thought and knowledge related to metacognition in the learning process"(Wibowo, Sihaloho & Rahayu, 2018, p. 131). Self-efficacy as one of the learning factors can initiate the sense of self-regulation in learners 'learning paradigm, once they can take control of learning they can plan, monitor and evaluate; eventually, they become more trained and ready to see and work effectively inside and outside the foreign language classroom.

Therefore, self-efficacy as a psychological concept centers around metacognitive awareness, and the knowledge about how to use metacognitive strategies adequately is one of its cognitive manifestations. Foreign language learning (FLL), like any process of learning, requires planning and organization and the use of metacognitive strategies is a key to a better academic performance. Thus, this research aims at exploring and understanding the nature of the correlation between learners' self-efficacy beliefs and their use of the metacognitive strategies in the EFL context of Biskra.

4. Aim of the study

The general aim of this study is to establish a deep understanding of how self-efficacy is associated with metacognitive strategies use by EFL learners in the Algerian context.

In a narrower sense, this research work aims to:

- Discover the levels of self-efficacy among Master level students of English major
- Determine to what extent the metacognitive strategies are being used by Master students.
- Demonstrate the relationship between self-efficacy and metacognitive strategies use by Master students.
- Examine the attitudes of Master students towards the relationship between self-efficacy and the use of metacognitive strategies.
- Introduce the concept of self-efficacy as an important psychological factor to EFL learners.

5. Research questions

This research work tries to answer the following research questions:

RQ1. What is the learners' level of self-efficacy?

RQ2. What is the frequency of the use of metacognitive strategies?

RQ3. Is there any significant relationship between SE and MES use?

RQ4. What are the attitudes of Master students of English towards the relationship between self-efficacy beliefs and Metacognitive strategies use?

6. Research hypotheses

Based on the above mentioned research questions, this research is prior to check the following hypotheses:

RH1. EFL learners' levels of self-efficacy can range from low to moderate.

RH2. Metacognitive strategies may be occasionally used by Master students.

Regarding the third research question, we assume the null hypothesis:

RH0. There is no significant relationship between Master students' self-efficacy beliefs and the use of metacognitive learning strategies.

RH4. EFL Master students may find Self-efficacy as a determinant factor when it comes to the use of metacognitive strategies, and as a variable that may control their overall learning as well.

7. Significance of the study

Research is the systematic quest to reality, knowledge and science prosperity. In educational psychology, a person's perception about his or her own capabilities can markedly impact the attitude and the way they choose to approach learning tasks and activities. Learners who are capable to organize, analyze and deeply understand what they are learning are simply described as high efficacious learners who know how to master their minds by implementing the metacognitive strategies in learning. This investigation seeks to bring into light the nature of the correlation between learners' self-efficacy and metacognitive learning strategies among EFL learners (master level) at the University of Biskra. In addition, it is believed that the current study will contribute in enriching the field of human sciences generally and educational psychology specifically. Furthermore, raising learners' awareness about the definition and the use of metacognitive strategies is one of the desired outcomes behind conducting this research. At a contextual level, the knowledge

about self-efficacy construct is limited and underscored by students, hence more exploration is needed. At the end, we hopefully eager to witness teachers of English introducing the concept of self-efficacy to their learners and showing them how it can considerably impact their behavior and outcomes.

8. The research methodology of this study

8/1. Method

To complete this research work, a mixed method approach is adopted where both quantitative and qualitative data are used to answer the main research question and the corresponding specific ones. Due to the non-experimental correlational nature of the study, an explanatory sequential design is seen as a suitable design to fully investigate and understand the nature of the relation that may exist between self-efficacy and metacognitive strategies use.

8/2. Research tools

For the completion of this research the following research tools are sought to be suitable and applicable:

- The general self-efficacy scale (GSE).
- The metacognitive awareness inventory (MAI).
- Students' questionnaire.

To be in alignment with the mixed method approach requirements, using both of the following data collection instruments has been seen as a prerequisite step towards answering the research questions. For the qualitative part of the study, both psychometric scales of general self-efficacy and metacognitive awareness inventory have been adopted to test the

correlation between the variables. On the other hand, students' questionnaire is designed to qualitatively understand the nature of the correlation and to further confirm the results obtained from the quantitative scales.

8/3. Population and sample

The population addressed for the data collection procedures are Master one students of English at the University of Biskra (N= 175). The sample of this study is forty five (n=45) students for both the qualitative and the quantitative parts together. The learners are provided with two psychometric scales to fill in at first, the number of the participants for this part is twenty five participants. As for the qualitative part , 20 students have been answered the questionnaire that aims at providing a deep understanding of the attitudes of students towards the impact of self-efficacy on their language learning. The participants in this study were chosen based on the non-probability convenience sampling for the availability and the readiness of the sample to take part in the operation of the data collection.

9. The structure of the dissertation

The content of the dissertation is divided into three main parts: Chapter one, Chapter two and Chapter three that will be dedicated to the fieldwork.

Initially, **the first chapter** of the dissertation provides a detailed theoretical overview related to the variable of self-efficacy beliefs. In the very beginning of the chapter the association between self-efficacy and the social cognitive theory will be addressed. Moreover, self-efficacy is defined according to many different perspectives and domains of research, then its sources, importance, its relation to the academic achievement and the cognitive aspect

of learners and some related studies to the field of self-efficacy research will be discussed in the pages of the first chapter.

Additionally, **the second chapter** is an overview of metacognitive strategies and what relates to it. The researcher provides a theoretical foundation starting from defining the language learning strategies in general then diving into their types including the metacognitive strategies. Furthermore, planning, monitoring and evaluating as the types of metacognitive strategies will be further explained, besides the metacognition and academic performance, metacognition and learner's autonomy and finally some related studies will be given.

Finally, **the third chapter** is completely dedicated for the methodology, analysis and interpretation and the discussion and synthesis of the findings. Accordingly, this chapter will show the basic methodological procedures related to the study and its rationale. The second part will about the collected data and its analysis. For the last section, it will be for presenting a thorough discussion and synthesis for the main findings.

Chapter One: Self-Efficacy

Introduction

1.1 The Social Cognitive Theory and Self-efficacy

1.2 Defining Self-efficacy

1.3 Self-efficacy and Self-confidence

1.4 Sources of Self-efficacy

1.4.1 Enactive Mastery Experience

1.4.2 Vicarious Experience

1.4.3 Verbal Persuasion

1.4.4 Physiological and Affective States

1.5 Understanding the Impact of Self-efficacy

1.5.1 The Impact of S-E on Motivation and Performance

1.5.2 The Impact of S-E on Emotional well-being

1.5.3 S-E and Decision-Making

1.6 The Relationship between self-efficacy (SE) and Self-regulation (SR)

1.7 Developing Self-Efficacy in the Classroom

1.8 Studies related to Self- Efficacy

Conclusion

Introduction

The purpose of this chapter is to provide a theoretical foundation on the psychological theory of self-efficacy (SE). As a solid basis for this research project, this chapter's content aims at examining SE emergence in the light of the social cognitive theory, SE's multifaceted definitions, its sources and impact; moreover, its relation with self-regulation and how it could be enhanced by teachers in the classroom.

1.1 The Social Cognitive Theory and Self-efficacy

Seeking improvement and attaining goals and desires are parts of the human nature which justifies the ambition behind their existence. In this sense, it is well understood that individuals have a leading role in shaping their lives and acting and engaging in the societies they belong to. In the process of fulfilling the planned goals, a person's beliefs on his or her own capabilities in gaining what they worked for can determine their success and can show to what extent they exercise control over their lives.

In the light of the social cognitive theory, the human behavior is not only developed through the interaction with the environment; however, it is the product of humans themselves where a combination of cognitive, behavioral and environmental factors can shape and direct the human behavior. Interestingly, self-efficacy is well emphasized in the social cognitive theory as one of the cornerstones of the human actions. Ormrod, 2006 (as cited in Xiao, 2018), states that individuals' beliefs about their capabilities (efficacies) can significantly influence their thoughts, emotions and actions. Individuals who have high levels of self-efficacy believe in their ability to successfully perform tasks, face and overcome challenges. In contrast, humans characterized by low self-efficacy levels find it difficult to stay motivated and more goals directed.

As one of the psychological constructs, the social cognitive theory as presented by its leading father Albert Bandura (1968) focuses on the human agency; in which humans are proactive and self-reflecting and regulating individuals rather than being merely reactive to the biological and the environmental powers. In this regard, the focus on cognition and the cognitive processes was a necessity to clearly highlight the active role of individuals in changing their belief systems, processing knowledge gained through experience, tracking and regulating their behaviors. Stajkovic and Luthans go on to say that " SCT, on the other hand, specifies factors by which human action is determined, and defines several basic human capabilities through which the cognitive motivational processes operate to initiate, execute, and maintain work behavior" (2002, p. 127) .The shift from social learning to social "cognitive" learning came to stress the idea that cognition is directly related to the perceived self-efficacy of individuals where they construct reality, self-regulate, interpret information, and perform complete actions.

1.2 Defining Self-efficacy

Self-efficacy is one of the modern psychological notions which lends itself to explaining the "will" and the "volition" in the human behavior. This notion is not regarded as a skill. Nevertheless, it is seen as what individuals believe they can do with their skills in different contexts and under specific circumstances (Maddux, 2012). Self-efficacy has been extensively investigated since its emergence as a concept in (1977) by Albert Bandura and other scholars. As a matter of a fact self-efficacy cannot only be defined in relation to psychology; however, the new insights brought by self-efficacy can be traced in many related fields of research and that is what explains the different existing perspectives regarding how it should be viewed:

In its broader sense, self-efficacy refers to the human agency that explains the intentionality behind taking certain actions and having control over them. Humans are contributors to what happens to them based on their understanding of their existing potential powers and their beliefs about their own capabilities in pursuing certain tasks that suit designated purposes. But, it is worth noting that the idea of intentionality does not necessarily mean that individuals always get their desired outcomes out of their belief system and work, in many cases they only produce unintended or unwanted outcomes (Bandura, 1977).

Moreover, the impact of self-efficacy was enormously traced in the field of educational psychology. According to Zimmerman and Schunk, "self-efficacy beliefs involves people's self-judgments of performance capabilities in particular domains of functioning rather than omnibus trait or global self-concept" (2003, p. 446). Self-efficacy of students' academic functioning refers to the domains of study related to task specific beliefs not to their self-concept in the academic field. Equally important, this concept is developed through social and cognitive processes which would greatly increase motivation and purposeful goal setting.as a result, the need to provide students with support, feedback, and opportunities for success is important for a better academic functioning.

In sport psychology, self-efficacy is expanded to encompass the concepts of athletes' personal efficacy beliefs, coaching efficacy and collective efficacy. For the first part, athletes' personal efficacy beliefs are centered on athletes' beliefs of their capabilities in performing a task, this later focuses on predicting performance, making decisions (self-doubt levels) and preparation phases. Similar to an athlete's personal efficacy, coaching efficacy refers to coaches beliefs in their ability to guide and improve the performance of athletes effectively. Therefore, collective efficacy is described as the shared values held by

team members, including athletes and coaches working together (Ede, Hwang & Feltz, 2011).

In addition to the physical performance, the balanced levels of self-efficacy proved to positively impact many areas in individuals 'health. Research has shown that self-efficacy beliefs can change and maintain health behaviors by means that individuals can consciously contribute to their mental and physical wellbeing. Zlatanović (2016) indicates that self-efficacy beliefs can also determine the capacity of establishing control over one's health and habits in the face of difficulties (illness). Further, patients with high levels of self-efficacy are able to adopt and initiate new healthy behaviors or quit the unhealthy and the life threatening ones such as, addictive behavior, stress management, AIDS related health practices, regular physical exercise.

To sum up, the core of self-efficacy theory is the role of humans in exercising control and taking actions. Until that point all what has been reviewed in the previous lines where the sense of self-efficacy in relation to psychology in general, education, sport psychology, and health behavior was commonly discussing the idea of triggering a change in behavior to get a desired or an expected outcome. In this regard, humans strive to accomplish their goals and their efficacies can predict to what extent they are able to work and face obstacles.

1.3 Self-efficacy and Self-confidence

Self-efficacy and self-confidence are both considered as a behavior controlling variables. They describe the humans' positive or negative beliefs and intentions; in spite of that, these two distinct concepts have been used interchangeably regardless to their different theoretical underpinnings, application and cognitive components (Cramer, Neal & Brodsky,

2009). Self-efficacy and self-confidence may appear to be identical, yet they may differ in a variety of ways.

Self-efficacy and self-confidence are the humans 'conceptualization of themselves (self-concept). To begin with, it is viewed that both ideas are centralized on the humans beliefs and the way they see themselves operating in different circumstances. In spite of that, these notions may differ, self-confidence in this regard is defined by Markway and Ampel (2018) as "the willingness to take steps towards valued goals, even if you're anxious and the outcome is unknown" (Para, 1). Courage and self-compassion seem to be the parts that describe self-confidence where a person can effectively manage situations without relying on others. In addition, self-confidence as Pierce et al study indicates (as cited In Malureanu, Panisoara & lazar, 2021) is related to the notion of self-esteem in which an individual beliefs about his/her worth and significance can shape his/her actions. In contrast, self-efficacy holds the meaning of having positive beliefs on one's own abilities to perform and succeed in a given task (Garaika & Margahana, 2019). Such related concepts cannot be used to describe one another, yet self-confidence can assist self-efficacy since they both can be generated from childhood and experiences. Furthermore, Trust and belief are one of the qualities of self-confidence while self-efficacy is only about the flexibility and persistence in performing actions.

To conclude, differentiating between self-efficacy and self-confidence can be confusing especially after being used interchangeably. On the part of the theoretical body of research these two terms cannot replace each other because self-confidence needs to be set first as a basis that would initiate self-efficacy.

1.4 Sources of Self-efficacy

Self- efficacy in general received ample investigation by researchers and the focus on from where it originates is no exception from that. In 1986, the psychologist Albert Bandura has introduced four main roots that could potentially shape everyone's perceived self- efficacy beliefs (Hendricks, 2016). Sources of self-efficacy concern the knowledge needed to assess one's capacity for exerting control over various life occurrences. Individuals may construct the way they see themselves performing a task through four influential sources: enactive mastery experience, vicarious experience, verbal (and social) persuasion, and physiological and affective state.

1.4.1 Enactive Mastery Experience

Achievements that one's can experience personally are considered the core influential source of efficacy information. Mastery of experience can be defined in terms of having real evidence about success or failure after taking certain actions. Therefore, individuals may operate differently according to what they have experienced. Success can cultivate confidence and perseverance leading to more positive outcomes; in contrast, failure in many cases leads to frustration and work delay. Moreover, individuals with a firmly established sense of self efficacy can turn the times of adversity to an opportunity to take the lead again in their lives.

1.4.2 Vicarious Experience

Enactive mastery experience cannot be sufficient to know and determine the sources of efficacy information and that was based on the idea of the influence that humans can have on each other. Vicarious experiences of individuals are another important element in the visualization of peoples' sense of efficacy. This later is represented through modeling

and social comparison where humans' observation of their internal and external capabilities is a key factor. People may judge their own abilities in relation to the successes and failures of others around them. In this context, the observation of others successful performance can noticeably increase individuals' level of confidence and pushes them to execute well in similar tasks.

1.4.3 Verbal Persuasion

Verbal persuasion is another source that feeds people's perceptions of self-efficacy. This form of verbal encouragement is often conveyed through self-affirmations and the affirmations a person does receive from others. Likewise, people may be verbally encouraged if they were deeply convinced that they own the necessary capability to face the possible challenges; as a consequence, they show more flexibility in facing obstacles and succeeding because of their sense of efficacy that originates primarily from them. In addition to self-affirmations, the external encouragement that people receive from their trusted ones can convince them that they have the necessary skills and abilities to succeed. Therefore, self-doubt is replaced by faith based on the constructive feedback they get (Arslan, 2019).

1.4.4 Physiological and Affective States

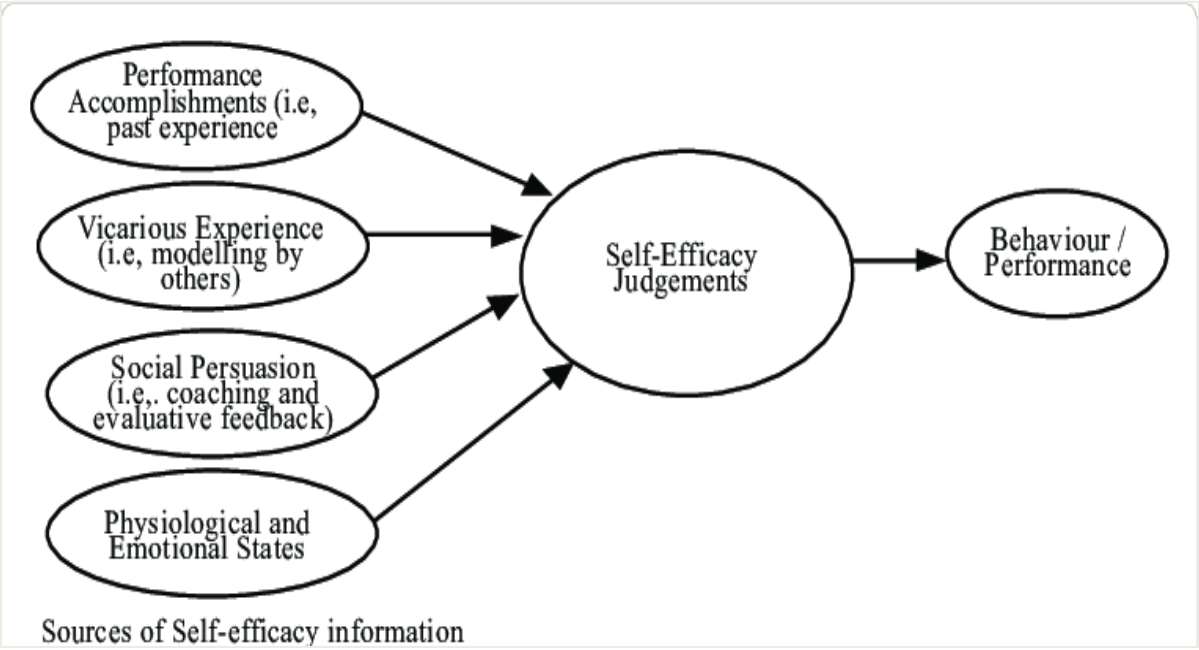
The awareness about the physiological and the affective changes is the last source of efficacy beliefs. The physical body and emotions are naturally interconnected and the way individuals interpret and evaluate emotional states is important for how they come to shape an understanding about their personal efficacies. Emotions such as stress, nervousness, and anxiety may weaken individuals' sense of efficacy; while on the contrary, feelings of excitement, joy and optimism can enormously develop it. In this stage, people's identification of how they physically or emotionally experience situations can shape their

actions and reactions, emotions of distress are not always seen as obstacles in ones' self-actualization journey. Therefore, the manner people choose to address and process these affective states can control their efficacies.

Taken together, individuals' internal perceptions about their capabilities in performing a given task could be influenced by a variety of factors, in which the previously mentioned four main sources of self-efficacy are wholly correlated. In the academic context, sources of efficacy beliefs can greatly enhance the effectiveness of teaching and learning experiences if they were properly understood and implemented by teachers and learners together. As for teachers, the awareness of their personal efficacies and its impact on their cognition is crucial for a better channeling of knowledge to learners (Usher & Pajares, 2008). Teachers are able to develop their learners' confidence and competence through triggering their motivation and reshaping the way they see their educational experiences. The creation of a supportive learning environment that emphasizes the idea of fostering students' self-efficacy is one of the responsibilities of teachers and educators. This later is achieved through providing experiences to learners, encouraging them via presenting a successful model, convincing them that they are capable to succeed and finally making them feel better by reducing stress and anxiety stimuli in the classroom.

Figure 1.3

Sources of Self-Efficacy



(Lee, 2013, p.2)

1.5 Understanding the Impact of Self-efficacy

Self-efficacy is the notion that highlights the idea of how individuals' beliefs and thoughts can change their perspectives and attitudes towards specific life circumstances and outcomes expectancies. These beliefs could significantly impact performance and motivation, emotional wellbeing and decision making as well. Research findings reported that highly efficacious people are able to partially control and direct their actions and persevere in the face of challenges. In contrast, individuals who fail to completely believe in what they can achieve are more likely prone to surrender to life's difficulties. The attempt to understand the crucial role of self-efficacy in enhancing people's motivation and performance, mental health and wellbeing, and decision making gave insights to comprehend and develop the human behavior specifically and life quality in general.

1.5.1 The Impact of S-E on Motivation and Performance

Motivation and performance are closely related. To illustrate, motivation refers to the driving force that leads to goal achievement, while performance refers to the achievement itself. Motivation often times can be the reason behind successful task completion where individuals' efforts, persistence and pure focus are the manifestations of their motivations. Furthermore, self-efficacy can significantly affect motivation as well as performance. In the trichotomy of achievement these three variables exist together in which self-efficacy levels can increase motivation, thus work performance. This idea of self-efficacy focuses on molding a person's perception towards something with regards to motivation, thus creating an impact on his/her overall performance. Cherian and Jacob (2013) study highlighted that the theory of self-efficacy is associated with motivation and work performance. To elaborate more, employee's self-efficacy has been viewed as an important antecedent between motivation and performance. Employees are motivated when they show commitment to their jobs by attempting to learn more skills and to cope with work challenges and changes, ergo, it can be said that the notion of self-efficacy, motivation and performance in general are interdependent, in which motivation and self-efficacy can both impact one another, besides performance is shown as the outcome of discipline generated by self-efficacy.

1.5.2 The Impact of S-E on Emotional well-being

Emotional stability and mental health are important matters to prioritize in order to have the privilege to live an authentic and a fulfilling life. In the quest of establishing a good mental health, humans may be naturally confronted with issues that may threaten their internal peace such as stress, anxiety, or even depression. The modern body of research sheds light on the mediator role of self-efficacy in preventing or bettering the symptoms and

the outcomes of such mental health disorders. Depression, on one hand, may appear as feeling hopeless, helpless and in many cases unable to see the good reason behind existence. Individuals with depression may develop a negative cognitive schema where they feel unconfident in their abilities to manage, worthless and doubtful and feeling like social outcasts.

Self-efficacy can contribute to the modification of this schema by identifying and challenging these negative thought patterns, and replacing them with more realistic and positive ones. This practice requires the patients' awareness as well as social support, thus resulting in the development of their coping mechanisms. In the same dimension, a study conducted on postpartum depression concluded that regenerating one's sense of self efficacy is crucial in the process of treating postpartum depression (Zhang & Jin, 2014). On the other hand, stress and anxiety can be diminished if the ability of regulating one's emotions is mastered. The finding of Călinici, Unk, & Călinici, 2020 study demonstrated that there is a positive correlation found between self-efficacy and emotions regulation. It can be inferred from this findings that being confident in regulating emotions can greatly improve the levels of wellbeing.

1.5.3 S-E and Decision-Making

Decision making is an important cognitive process that involves selecting a course of action among a variety of options. As for human beings, the need to thrive in life implies taking rational and wise decisions that could possibly improve or hamper the quality of life. Choices that people make could affect various domains in their lives including work, relationships, academia and healthcare and wellbeing. Furthermore, these decisions are governed and immensely affected by many factors such as, external pressure, emotions and personal thoughts and beliefs. People who have honed the skill of making sound decisions

are often more confident in their abilities in choosing the right option and action, while minimizing the possibility of experiencing mistakes or feeling regretful at the end.

Self-efficacy takes its essence from succeeding in the face of challenges and experiences and forming a strong sense of one's capabilities after these experiences (enactive mastery experience). In the field of business and entrepreneurship, Chen et al. (as cited in Hsu, Wiklund & Cotton, 2015) stated that entrepreneurs who witnessed a successful business exit are more motivated and willing to work, persist and and reenter a new entrepreneurial activities comparing them to those who have failed their businesses. Entrepreneurial self-efficacy appears to be too judgmental on entrepreneur's behavior; however, it serves at empowering their beliefs and motivates them toward success.

To conclude, the role of self-efficacy is undeniable in practice and theory. Human beings are mostly controlled by what they think they can operate. Based on that, the notion of SE came to understand the drive behind what really stimulates and directs the human behavior towards achieving and reaching success. In this frame, individuals' beliefs in their capacities can draw the cognitive roadmap of actions that should be logically followed. The impact of self-efficacy beliefs encompasses several life trends including performance and motivation, emotional well-being and decision making.

1.6 The Relationship between Self-efficacy (SE) and Self-regulation (SR)

Success and achievements have been seen as the product of self-regulation. This latter refers to the ability of humans to mentally adjust their behavior, show autonomy in taking actions and resisting temptations and distractions. It involves a set of cognitive and emotional processes that give the opportunity to people to regulate and adapt to the new challenges in multiple areas such as, academic and institutional changes, cultural and social occurrences, and personal and linguistic development.

In the academic setting, students' self-regulation according to Zimmerman's perspective "is not a mental ability or an academic performance skill; rather it is the self-directive process by which learners transform their mental abilities into academic skills. Learning is viewed as an activity that students do for themselves in a proactive way rather than as a covert event that happens to them in reaction to teaching" (Zimmerman, 2002, p.65). This definition emphasizes the importance of awareness and anticipatory thinking of learners when it comes to implementing the appropriate learning strategies, being disciplined and more goals oriented. Recent research studies concluded that self-efficacy is imperative to self-regulation (schraw, Kauffman & lehman, 2006). Self-efficacy, as a personal variable, is closely related to self-regulation because it influences the degree of learners' engagement and persistence in managing the challenging learning tasks.

A great deal of research investigations and recommendations were directed towards cultivating the skills of self-regulation among learners at their transitioning stages from high school teaching to tertiary education based on observing how it could be daunting for them to adapt to the new requirements of learning (Blackmore, Vitali, Ainscough, Langfield, & Colthorpe, 2021). SR in learning is usually empowered by motivation, metacognition, and strategy adaptation. Learners who are able to regulate their learning behavior are more consistent and success seekers, in which their awareness of how to effectively plan for their tasks, monitor and evaluate their performance are what made them more autonomous. As a result, it can be said that SE and SR are closely related psychological constructs, where SE represents how learners see their learning and SR is about the metacognitive steps that permit self-control.

1.7 Developing Self-Efficacy in the Classroom

The concentration on empowering learners' self-esteem in the classroom has cancelled the importance of taking the value of self-efficacy into consideration. Teachers and parents 'appraisals have made learners succeed, with no regard to the real accomplishment, but with regard to the added value behind appraisal. As an outcome to the absence of appraisals, students in most of the cases will not be able to behave when failure and difficulties occur. Self-efficacy implies the meaning of thriving in the presence of tension and adversity through believing strongly in one's capabilities. A learner may experience failure in order to become knowledgeable about what should be done after (Thorp, 2021). Interestingly, the attempt to bridge between SE theory and its practice paved the way to scholars to suggest a range of useful strategies to promote learners' SE inside and outside the classroom.

In The Best Practices GuideBook of Supporting Students' Self-Efficacy the authors Constantine, Fernald, Robinson & Courtney (2019) concluded that SE can be developed over time by teachers through implementing the suitable strategies and practices during classroom activities:

Table 1.7

Strategies to enhance students' self-efficacy in the classroom

Strategy/ practice Name	Description	Application
1 Task Engagement	Being actively present in the classroom is one of the biggest requirements for a meaningful learning. Task engagement includes participating in tasks related discussions, putting effort	1. Vigor _ Teachers need to approach tasks with positivity and optimism so, they can influence their learners. _ Choose motivating and interesting tasks.

	on Task quality and completion, monitoring task performance and evaluating the learning process. Task engagement can be assessed through: 1. Vigor refers to doing tasks with energy. 2. Dedication refers to the students' sense of significance and inspiration. 3. Absorption refers to students' state of being lost due to concentration.	_ Give their students the space to choose tasks. _ Encourage learners to put efforts on difficult tasks and to seek support when it is necessary. 2. Dedication _ Relate tasks to students' internal values and life experiences. _ promote the sense pride after "trying" to solve a task. _ Look for balanced tasks, not too easy neither too complicated. 3. Absorption _ Ensure that students have what they need in order to complete a task. _ Make clear instructions to follow for their individual or group work. _ Encourage students to cooperate with one another "get lost in doing a task together".
2 Social-Communicative Engagement	Communication inside the classroom is crucial. It became an aim for teachers to be able to connect with their students and make them create an interactional atmosphere between their colleagues in the same class. If students are "able to get their messages across" that means that they strongly believe in their capabilities to communicate effectively. There are many proposed social-communicative behaviors to be followed:	1. Initiating a conversation _ Teachers need to give their students the chance to communicate by: • Observing students' body language, actions and facial expressions in order to partially guess their thoughts. • Waiting for them to respond to unanswered question or give a remark. • Paying attention by listening carefully to what a student said and respond accurately. 2. Talking in class about a learning activity or a topic _ Ask students questions about

		their interests and experiences. _ dedicate enough time for them to respond. _ Once they have responded, provide them with a positive comment. 3. What to do when students have difficulties in forming relationships? _ spot the student who is less likely to participate less in the classroom interaction and talk to their most companionate friend about him/her. _ encourage the student to open up to talk openly about their internal struggle. _ inform family members if needed.
3 Student Centered Learning	The knowledge about teaching approaches proved to be not enough to better teach students. However, being aware of each student's preferred way of learning and their perception on the level of difficulty they face. Teachers can boost their students' SE level by making adaptations on materials to suit students' language level and interests.	For that teachers need to: _ Teach learning strategies according to their students' needs. _ provide explicit instruction _ Encourage cooperation in learning _ Help students realize they have the capabilities to succeed _ Associate the idea of success with the correct use of the learning strategies. _ Choose tasks and goals that make students want to achieve.

1.8 Studies related to Self- Efficacy

Focusing on the relation that may exist between academic self-efficacy and academic achievement, Fakhrou and Habib (2021) conducted a study at the department of

special education. As a sample for the study, the researchers purposefully chose the fourth year students because they were in the final year of their undergraduate studies. The participants in this study were composed of forty-three (43) students (27 of them were males and the rest 16 individuals were females), besides this number made up 19% of the total population (229 students). In order to conduct the following study the descriptive correlational approach was used with the adapted academic SE scale of Dabi (2017) as a measuring tool. In 3/12/2019, the researchers distributed the questionnaire to the respondents with an emphasis on clarifying the instructions and the objective of the study. The obtained results were analyzed using IBM SPSS 23 including one sample T-Test and Two sample T-Test to gain different results.

The finding showed that the participants possessed high levels of academic self-efficacy developed through experience in studying. Furthermore, a positive correlation was established between Academic self-efficacy and academic achievement through using the Pearson correlation coefficient. As for the study limitation and recommendations section, the researchers limited access to the sample hampered the generalization of the findings, so they recommended doing the study again on a larger sample and encouraging the university stakeholders to appreciate the importance of self-efficacy in learning and teaching.

The eagerness to know how public speaking and self-efficacy have a certain influence one another was the main reason that pushed Nuvitasri, Safriyani & Rakhmati to qualitatively execute this inquiry (2017). The participants of this study were from nineteen students of the eleventh and twelfth level. In the data collection phase the researchers used a questionnaire and an interview to answer the research question. The results of the levels of SE revealed that there are five students with low level, six students in moderate level and eight students with high levels of self-efficacy. In addition, the results of the study indicated

that speech performance experience, vicarious experience, verbal persuasion and emotional state can influence students 'SE in prepared speech. Thus, teachers are invited to use challenging task, peer models, affective strategies and social strategies in order to develop students' self-efficacy levels.

Many previous studies reported the existing association between emotional intelligence (EI) and well-being, Self-efficacy and performance. Correspondingly, this study contributed to the body of literature by elucidating the relationship between SE and EI among physical education teachers. The researchers used the Emotional intelligence questionnaire (TEIQue) and the teacher sense of Efficacy Scale (TSES) as a research instruments with the participants. The sample for this study were 119 elementary (n=27) and secondary (92) teachers of physical education in the Belgium French speaking area schools. The statistical analysis was done using Statistica software (9.1) for windows in assessing the correlation between the variables (Spearman Coefficient) and performing other calculations. The results showed that there was a positive significant relation between SE and EI with no differences in gender and mostly with sociability factor, thus EI training is necessary and further qualitative studies is needed to further explore the phenomenon (Mouton, Hansenne, Delcour, & Cloes, 2013).

Conclusion

As a part of the human identity, people's perceptions of their abilities have been always linked to how they pursue their goals and how they visualize themselves as individuals in the course of life in general. Consequently, researchers have noticed its effects on a variety of domains such as, psychology primarily, education and many performance related fields of study. This change brought a lot of perspectives from a plethora of competent researchers. To be in alignment with the corresponding chapter's outline, the

various definitions of Self-efficacy were presented along with its sources of development and impact. Finally, its role and relationship with the human cognitive functioning besides its application in the classroom were all discussed in the lines of this chapter. Interestingly, the subsequent chapter delves into discussing the essence of the human cognitive processes and their impact on their overall performance.

Chapter two: Metacognition and Metacognitive Strategies

Introduction

2.1 The History of the Cognitive Revolution

2.1.1 The Transition from Behaviorism to Cognitive Sciences

2.1.2 The Emergence of Cognitive Psychology

2.1.3 The Cognitive Revolution Traces on Language Learning

2.2 Metacognition

2.3 Metacognitive Awareness

2.4 Metacognition in Language Learning and Teaching

2.5 Metacognitive Learning Strategies

2.6 Metacognition and Learners' Autonomy

2.7 Practical Recommendations for Enhancing Learners' Metacognitive Awareness

2.8 Previous Studies related to Metacognitive Awareness

Conclusion

Introduction

The beginning of this chapter examined the history of the cognitive revolution, the reason behind its emergence and its relation with the behavioristic stream of thoughts. Moreover, a brief introduction to cognitive psychology was provided along with the impact of the cognitive revolution on language learning. Interestingly, the following titles were all under the umbrella of metacognition. Hence, metacognition, metacognitive awareness, metacognition in language teaching and learning and metacognitive learning strategies were all discussed. Up to the end of the chapter, some practical recommendations along with a small amount of reviewed studies were at the very end of this chapter's outline.

2.1 The History of the Cognitive Revolution

Change and constant evolution have been considered as one the traits of the human history, by creating new pathways for progress. This change is inherent to the experiences of humans and civilizations. Completely different insights emerged from the drawbacks of the previous domains giving birth to new ideologies, theories, social and cultural transformations, and scientific and intellectual advancement. Importantly, the lasting impact that the cognitive sciences have been provoked, since its revolutionary emergence, cannot be denied. The cognitive revolution as a pivotal movement that gave the mid-20th century a different impression converted the study of the cognition and the human mind. Departing from the dominance of behaviorism, it placed a reshaped focus on the mental processes and their role in impacting humans' behavior and understanding by putting emphasis on perception and memory, language learning, the skill of problem-solving, and decision-making. Researchers delivered meaningful interpretations to the effects of the cognitive revolution through investigating the active role of the human mind. This cognitive movement has an immense

influence that led to the foundation of cognitive psychology, computer science and artificial intelligence, linguistic studies and a plethora of other related fields.

Cognitive sciences and psychology are intertwined as they greatly depend on each other in generating theories and studying the human behavior, psyche, and mind. The field of psychology before the 1950's was blindly centralized on the behavioral notions that shaped the assumptions on the human behaviors and the way they learn in general. However, the 1950's marked the period of the paradigm shift, where psychology started to free itself from the total neglect of the functionality of the mind owing to the effects of the cognitive sciences (Miller, 2003).

2.1.1 The Transition from Behaviorism to Cognitive Sciences

Behaviorism, as its name suggests, is the psychological study of the behavioral science and the role of the external environment in generating behavioral pattern. Behaviorists emphasized that all behaviors are the product of the reinforcement principles and conditioning through the association between stimuli and responses. Moreover, the pioneers of behaviorism argued that behavior must be studied and understood in order to be predicted and controlled, and that psychology must give up the analysis of inner consciousness and focus only on the observable behavior of humans and animals. This idea created a debate between those who believe that the mental processes are not compatible with the behavioristic theories because they regard the human consciousness as something that cannot be measured, observed or objectively tested (GÖKEL, 2017). However, this claims started to lose some of its reliability since the emergence of the cognitive sciences that proved the existence and the influence of the human mind and consciousness. It is important to note that behavioristic theories are still credible and used widely in psychology, education, and many other professional and academic areas accompanied with the internal

mental studies to thoroughly interpret the human behavior. With the existence of the cognitive study of the human behavior and thoughts, it is crucial not to deny the points where behaviorism was criticized.

A number of studies have highlighted several major limitations of behaviorism. Initially, behaviorism fails to give credit to the active role of human agency and self-awareness, which are transmitted through the use of language. Concepts such as intentionality, foresightedness, and self-reactiveness, which are the basics of the human agency, are not well considered in behaviorism .Furthermore, behaviorism does not explain how individuals make complex decisions or choose between different goals. Human behavior involves different and collaborative mental processes, including divergent thinking and interpersonal trust, that behaviorism overlooks. Additionally, behaviorism fails to account for individual differences in learning, learning styles, and the influence of personality traits on learning, as it focuses chiefly on conditioned reflected behavior. It also raises ethical concerns in clinical settings regarding obtaining consent to test behavior in patients with mental disorders and neurological issues (Pashayev, 2022). Ultimately, behaviorists test their hypotheses most of the times on animals which are different than human beings, thus the validity of the results is questioned. The aforementioned limitations constituted a call to further investigate the role of the internal cognitive processes that led to the emergence of the cognitive sciences. As a result, an integration of both fields in practical domains such psychological treatments are necessary.

2.1.2 The Emergence of Cognitive Psychology

The cognitive revolution or the shift towards the human mind reformed many psychological philosophies and doctrines leading to the emergence of cognitive psychology. Cognitive psychology was the onset of the cognitive revolution in the mid-20th century until

the beginning of the 21st century. Driven by a shift away from behaviorism, it was influenced by information processing theories and computer science advances, it focused on studying internal mental processes. Overall, cognitive psychology evolved as a field dedicated to understand human cognition and behavior. Sternberg declared that "cognition is thinking, and it encompasses the processes associated with perception, knowledge, problem solving, judgment, language, and memory. Scientists who study cognition are searching for ways to understand how we integrate, organize, and utilize our conscious cognitive experiences without being aware of all of the unconscious work that our brains are doing"(1996, para. 1). Cognitive psychology focuses on the study of mental processes such as perception, memory, language, decision making, and problem-solving. It plays an important function in learning by providing a deeper understanding of how people acquire, process, and retrieve information. Cognitive psychology has an influential impact on learning; educators can design effective learning strategies and instructional methods to enhance learning outcomes and realize the outlined goals. Cognitive psychology provides insights into information encoding, storage, and retrieval operations, fostering the development of memory and retention through the application of various techniques. In addition, it explores the cognitive development through different stages of life, enabling teachers design courses that suit the cognitive abilities and the needs of the learners (Eysenck& Groome, 2015).Expressly, having a clear idea on how individuals tend to solve problems and think in a critical manner is another dimension of cognitive psychology.

2.1.3 The Cognitive Revolution Traces on Language Learning

As one of the domains that require involving the mental processes, the concept and the methods of language learning have been completely renewed since the cognitive revolution. In terms of learning in general, current cognitive approaches to learning

emphasized that acquisition is an active and constructive process based on the learner's mental activities. It focuses on the importance of metacognitive processes and the employment of learning strategies. Learning and memory demand learners to actively scaffold new knowledge and strategies. Effective language learning is facilitated by information rehearsal, categorizing, and utilizing metamemory strategies such as, note taking. These cognitive perspectives highlight the proactive role of learners and gives valuable recommendations for enhancing the learning outcomes (Horaničová, 2007).

2.2 Metacognition

In relation to learning, metacognition is considered as a powerful cognitive process that is crucial to education and learning. It involves being aware of and controlling how one thinks, learns, and solves problems. People gain insight into their learning processes, monitor their comprehension, and take decisions about how to approach tasks by participating in metacognitive activities. Learners who use their metacognitive processes are able to take responsibility for their own learning, develop their ability to solve problems, and learn more efficiently and effectively. Therefore, Metacognition has been seen as an important aspect to investigate and incorporate into educational practices because of its impact on academic achievement and lifelong learning.

Livingston (2003) sees that the concept of metacognition, despite its complexity, has a straightforward definition, known as "thinking about thinking." Despite the fact that educational psychologists have been using the term for decades and that it is based on human reflection on cognitive experiences, there is still a lot of debate about what exactly it is. The disarray emerges from the presence of various terms that basically depict a similar essential meaning, like executive control and self-regulation. These terms are in many cases utilized conversely in academic writing, further adding to the intricacy. All interpretations of

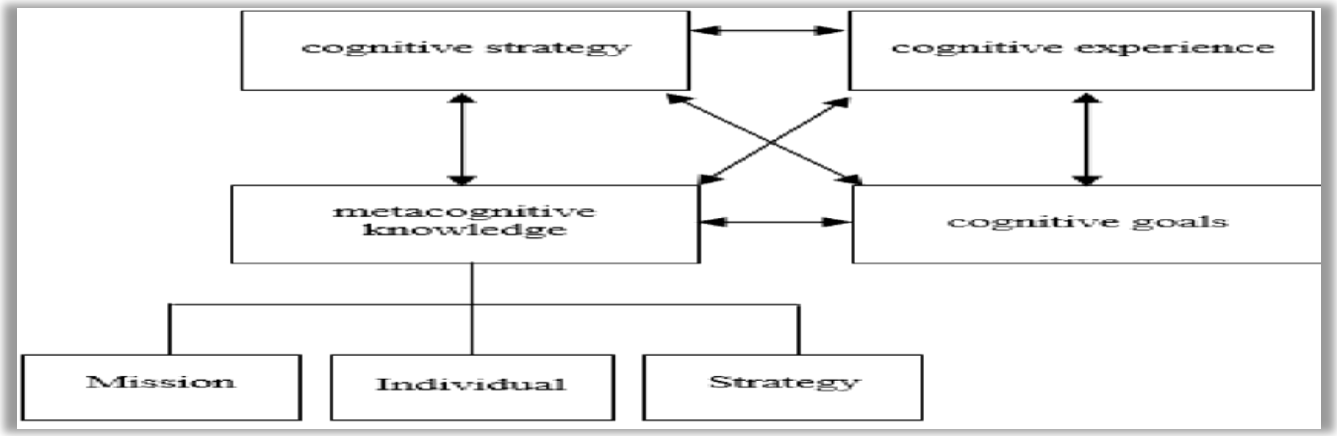
metacognition emphasize the crucial role of executive processes in overseeing and regulating cognitive functions.

Flavell 1976 (as cited in Mahdavi, 2014), metacognition refers to "one's knowledge concerning one's own cognitive processes and products or anything related to them (...) [and] refers, among other things, to the active monitoring and consequent regulation and orchestration of these processes (...), usually in the service of some concrete goal or objective (p. 232) . Metacognition is an individual's comprehension of their own cognitive processes, products, and anything connected to them. With a specific goal or objective in mind, it involves actively monitoring, regulating, and coordinating these cognitive processes. To put it another way, metacognition is the capacity to reflect on one's own thinking and learning processes and exercise control over them. This enables people to improve their cognitive functioning and achieve their goals.

In addition, the American psychologist John Flavell proposed a metacognitive model in 1979, as shown below in figure 2.1

Figure 2.2

Flavell's Metacognitive Model of 1979



(Huong Lan, 2020, p.7464)

Furthermore, many related studies defined metacognition in a similar manner claiming that it refers to “cognition about cognition” and “thinking about thinking”. In this explanation, metacognition have two dimensions, namely metacognitive knowledge and metacognitive regulation. On one hand, Metacognitive knowledge includes learners’ knowledge about their cognitive capacities including the general knowledge they possess about a specific task and the knowledge about the choice and the use of the strategies. On the other hand, metacognitive regulation represents the way how learners monitor and control their mental processes. For example checking the effectiveness of a strategy, and reflecting on their learning (Cambridge Assessment International Education, n.d).

To illustrate, metacognition, cognition, and self-regulation are completely different fields under the umbrella of educational psychology. However, they share a lot of concepts in common, which created confusion in trying to define each term to what it really means. In this sense, the three different terms meet in the ability of humans to reflect and control their mental processes.

2.3 Metacognitive Awareness

The awareness about the metacognitive processes that one possesses is considered as a significant factor that drives self-motivation and outcome expectancies, which are the beliefs regarding the ultimate results or rewards associated with one's performance. These outcomes can include receiving a high social recognition or attaining a desirable employment position. Students' outcome expectations are impacted by their knowledge and awareness of the role their mind plays in planning, monitoring, and reflecting on their learning processes (Hacker, Dunlosky & Graesser, 2009).

Metacognitive awareness, in simple terms, refers to what individuals know about their thinking and cognitive abilities. It encompasses a wide range of information that relates to how they think, learn, and process information. The intriguing aspect about metacognitive awareness is that it applies to people of all ages, from children to adults (Flavell, 1979). At its depth, metacognitive awareness involves humans understanding, as cognitive beings, and how they cognitively process everything. It means being aware of and comprehending various cognitive tasks, goals, actions, and experiences. This awareness allows humans to reflect on their own thinking processes, estimate their level of understanding, and adjust their cognitive activities accordingly. Delving deeper into this concept, metacognitive awareness involves recognizing the strategies and approaches that can enhance learning and problem-solving abilities. It includes awareness about effective learning techniques such as organization, elaboration, and retrieval, and the capacity to choose and apply these strategies appropriately in different situations.

To elaborate what has been said earlier, Metacognitive awareness also encompasses understanding the nature of cognitive tasks themselves, including their complexity, demands, and potential challenges. This understanding enables us to assess the difficulty of a task and make informed decisions about how to allocate our cognitive resources. This awareness helps us identify suitable strategies to deal with a task, break it down into manageable parts, and keep track of our progress towards achieving our goals. Metacognition entails individuals being conscious of their own learning processes and being aware of their needs and what they need to achieve, assessing their specific learning requirements, choosing strategies to fulfill those needs, and putting those strategies into practice. Accordingly, Flavell (1979) identifies three types of metacognitive awareness:

2.3.1 Awareness of Knowledge

This aspect involves recognizing and understanding the extent of one's own knowledge. It includes being aware of what one knows, what one doesn't know, and identifying the gaps in knowledge that need to be filled. Additionally, it may also encompass an awareness of other people's knowledge and recognizing that others may possess information or insights that one does not possess.

2.3.2 Awareness of Thinking

This aspect of metacognitive awareness pertains to understanding the cognitive tasks at hand and grasping the nature of what is required to successfully complete them. It involves being aware of the specific mental processes and strategies necessary to manage different cognitive tasks effectively.

2.3.3 Awareness of Thinking Strategies

This aspect centers on understanding and being familiar with various approaches and strategies that can be employed to direct one's own learning. It encompasses knowledge of effective learning techniques, such as or note-taking strategies, problem-solving methods. This awareness permits individuals to choose and utilize the most appropriate strategies for a given learning situation.

2.4 Metacognition in Language Learning and Teaching

A plethora of factors are proved to affect performance in language learning and teaching. These factors can internally be governed by the learner such as the high and low levels of motivation, dedication, and persistence and externally influenced by the teachers' instruction. Metacognition is seen as an important factor in language learning and teaching

because it focuses on the proper implementation of the cognitive processes owned by teachers and learners.

Wenden (as cited in Haukas, Bjorke & Dypedahl, 2018) declared that the significance of metacognition is highlighted in the realm of language learning and instruction.The examination of research on metacognitive knowledge sought to clarify its relationship with the existing language theories and research. Wenden's conceptualization of metacognitive knowledge was aligned with Flavell's framework and constituted of three main categories, as discussed earlier: person’s knowledge, task knowledge, and strategy knowledge. To provide additional insights, an aware learner is familiar with his or her personal style in learning, prepared for the task, and knows how to choose and use a specific strategy to get a desired outcome.

Additionally, to be more accurate, various cognitive activities associated with language use, such as oral communication, reading comprehension, writing, and language acquisition, all depend on metacognitive knowledge taking into account its effect on self-regulation practices of picking up, incorporating the strategies of planning, monitoring, and evaluating. Studies indicated that learners' metacognitive awareness and effective use of strategies contribute to successful learning outcomes and supports the significance of metacognition in language learning. Successful learners employ metacognitive strategies more frequently. Interestingly, less successful learners do not necessarily employ fewer cognitive strategies because they lack metacognition, which prevents them from applying strategies appropriately in certain circumstances. Perceiving the fundamental job of metacognition, it is basic to accentuate its significance in language learning and educating (Zhang & Guo, 2019).

Ultimately, metacognition in language learning basically relates to the level of awareness of learners and their readiness to do what it takes to learn. It is evident that metacognitive learning strategies are a part of the metacognitive awareness and self-regulation concepts, as they believe that learners who plan, monitor, and evaluate their progress are able to take charge and show commitment to their learning.

2.5 Metacognitive Learning Strategies

Learning is manifested in the steps that learners take in order to learn efficiently. Thus, metacognitive learning strategies are one of the manifestations of the strategic, highly focused learning. Metacognitive strategies (alternatively regulatory strategies) have been defined as the set of strategies that may involve planning, monitoring, and evaluating the success of learning activities. These include scheduling, trial-and-error, planning, or anticipating outcomes; monitoring, or testing, adjusting, and rescheduling learning activities; and checking outcomes, or reviewing the results of strategic actions for efficiency and effectiveness. Planning is one of these strategies, and it's a crucial metacognitive technique for learning a second language since it controls how the language is absorbed and produced. Planning may be impacted by objectives or input elements that appear to be most helpful for completing a job. Being aware of one's actions or bringing one's mental process under conscious investigation and, thus, more effectively under control are two ways to define monitoring as another important strategy (Chamot, 1998).

The link between metacognitive knowledge and metacognitive awareness has been established. Within the larger concept of metacognition, metacognitive strategies and metacognitive knowledge are distinct components that should not be considered synonymous or interchangeable. The skills that students use to manage, direct, regulate, and guide their learning are referred to as metacognitive strategies, while metacognitive knowledge is the

information that students acquire about their learning process. Metacognitive information is somewhat steady and can be recovered and reflected after, making it appropriate for conversations and use in learning assignments. It grows later in the growing experience, as it depends on earlier growth opportunities as a source of perspective point. Metacognitive strategies, on the other hand, may not be as stable and may be more task-dependent than age-dependent. However, researchers acknowledge that the two components are closely related. The application of metacognitive strategies in learning tasks is guided by metacognitive knowledge, and the insights gained from using these strategies enrich the metacognitive knowledge that is already in place (Zhang & Guo, 2019a).

2.6 Metacognition and Learners' Autonomy

Human autonomy is essential for performance and self-regulatory behavior .Whatever the behavioral area, when the motivation underpinning a goal or activity is autonomous or self-endorsed rather than forced or controlled, feelings of engagement, diligence, and vigor are greater. Goal-related performance thus tends to be better. Researchers believe that because autonomy embodies action taken by learners , it has a positive impact on goal-regulation as well .In other words, the sense of autonomous activity is motivated and sustained by sensations of internal causation, profound personal importance, and interest and the complete awareness of what needs to be done (Martnek & Kipman, 2016).

Anderson (2002) highlights the concept of metacognition as the act of reflecting on one's own thinking processes. This implies that students who possess metacognitive abilities are aware of how to approach tasks, while those lacking such abilities may struggle with knowing what to do. Consequently, students are encouraged to employ learning strategies that enable them to comprehend the necessary steps for initiating their learning process. By using metacognitive strategies, individuals can enhance their thinking abilities, leading to more

effective learning outcomes and improved performance, particularly among peers facing learning difficulties. For teachers, developing an understanding of and the ability to regulate cognitive processes is crucial in assisting students in comprehending the material being taught.

According to Efklides (2009) metacognitive ability plays a vital role in self-regulated learning, he describes metacognitive knowledge as a data set necessary for self-regulated learning. Thus, the instruction of metacognitive skills holds significant importance for students because it helps them to find information and process it. This in turn helps students become autonomous learners. Learner autonomy can be defined in simple terms by A well-known definition of autonomy by Holec (1981) is “the ability to take charge of one’s own learning” (p.3). Based on Holec’s definition autonomous learners should take the responsibility for all aspects of their learning, such as deciding upon objectives, selecting the content, choosing strategies, and evaluating their progress.

Rahimi and Katal (2012) came to say that metacognitive knowledge leads to increased student autonomy and directs students towards individual learning and teaching. Benson (2001) described autonomy as the capacity to control one’s learning in which students are capable of creating spaces allowing differences to coexist. He also believes that there are three essential factors that need to be considered as a control function carried out by students, including learning management, cognitive processes, and learning content. To be more independent, students need to develop their capacity to plan learning, monitor learning progress, and evaluate learning outcomes Benson (2001).

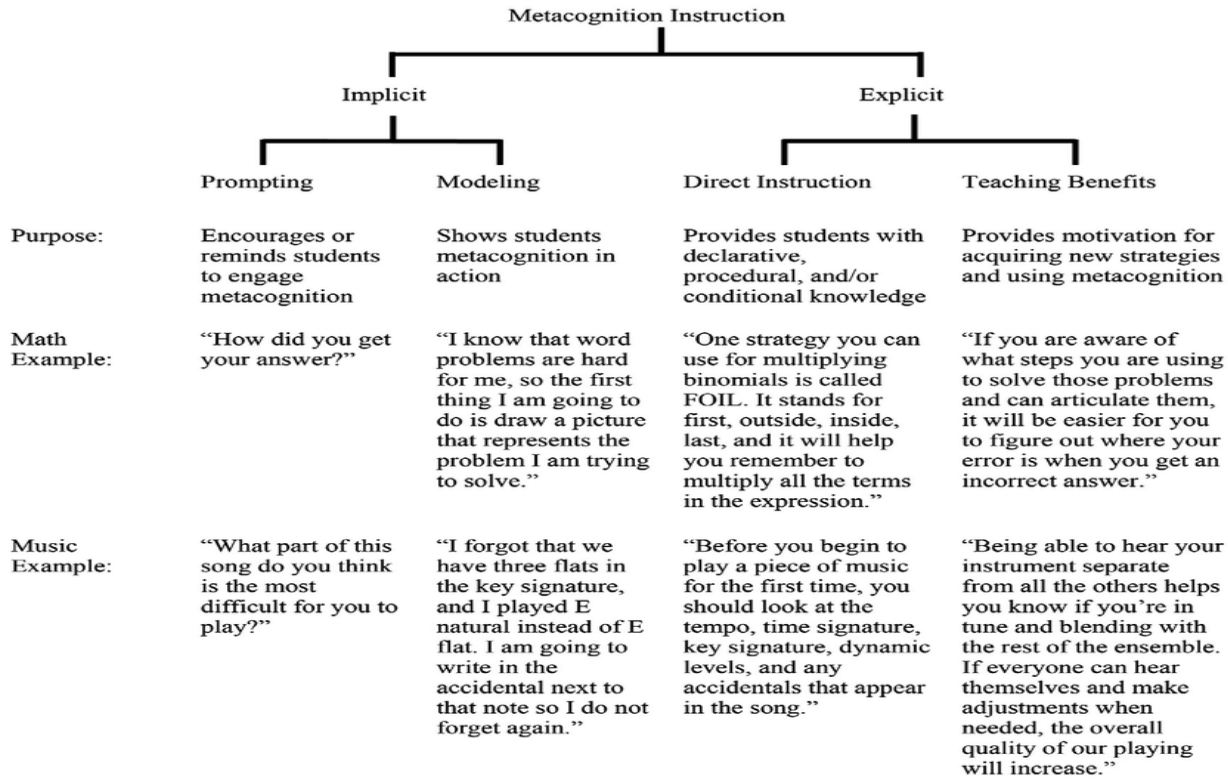
2.7 Practical Recommendations for Enhancing Learners' Metacognitive Awareness

The logical connections that learners make while learning should never be excluded or disregarded by educators and learners together. Due to its importance, the attempt to learn within the borders of the metacognitive awareness constituted a call for teachers to adopt and adapt new path ways towards embracing cognition and metacognition as crucial aspects in learning.

When it comes to fostering metacognition, a number of procedures can be done by teachers. A range of strategies have been designed to meet such a goal, in which they were divided into two approaches: explicit approach and implicit approach, the taxonomy was depicted in figure 2.7 along with their explanations.

Figure 2.7

The Taxonomy of Metacognition Instruction



(Peteranetz, 2017, p. 69)

For the two approaches, students are likely to use metacognition without being explicitly taught how or why to do so; this is known as implicit instruction. This can happen through things like modeling or getting people to use metacognition without talking about it. For instance, an instructor might remind students to screen their awareness and apply restorative techniques without clearly showing them how or for what reason to do as such. Essentially, instructors can incite learners to ponder their contemplations and cycles or exhibit mental abilities by verbally processing. In these cases, metacognition is by implication supported without direct guidance (Peteranetz, 2016).

Furthermore, clear guidance happens when the "how" or "why" of utilizing metacognition is straightforwardly tended to. Teachers emphasize the significance of metacognitive processes and their methods. They might give students step-by-step instructions and explain why certain activities like planning or outlining, are helpful. Students are more likely to successfully apply strategies and thinking skills when they are explicitly taught. This sort of guidance likewise assists students to create procedural information and restrictive information (knowing when to utilize the technique).

A toolbox analogy can help us comprehend the distinction between explicit and implicit instruction. Students can use the various tools in the metacognition toolbox to complete learning tasks. Students are reminded to use the tools in their toolbox by explicit instruction, whereas implicit instruction gives them new tools. Implicit instruction encourages students to continue using a particular tool if they already have it. Be that as it may, on the off chance that the learner doesn't have the device being incited or demonstrated, verifiable guidance alone is probably not going to prompt its utilization. By providing the student with the specific tool or strategy and allowing them to use it in the future, explicit instruction

becomes useful in these situations. Because it adds new tools to the student's repertoire, explicit instruction is frequently linked to achievement gains.

To conclude, metacognition frequently includes showing learners strategies to use. Although their use is not required, strategies are procedures that can improve learning or task completion. Strategy instruction can be given explicitly by giving instructions on when and how to use the strategy or it can be given implicitly by asking for help and showing how to use it. These strategies can be explicitly educated using note-taking, planning and monitoring, memory methods like mental helpers, creating graphics, self-testing, summarizing, and self-assessing. By training students on these strategies, instructors intend to enhance their metacognitive capacities and further develop learning results.

2.8 Previous Studies related to Metacognitive Awareness

This study by Sakai and Takagi (2009) titled "The Relationship between learner autonomy and English language proficiency of Japanese learners" investigates the correlation between learner autonomy and the English language proficiency of Japanese university students from 16 different universities. A total of 721 students participated in the study and completed questionnaires that aimed to examine their perceptions of learning and learner autonomy. Based on their vocabulary test scores, the students were categorized into three proficiency levels. The researchers conducted a comparative analysis to explore the differences in perceptions of learner autonomy among the three groups. The questionnaire data underwent factor analysis, revealing nine distinct factors. For further analysis, ANOVA and multiple comparisons, specifically Tukey HSD, were employed to examine the three proficiency levels across these factors. The results indicate variations in the degree of autonomy among the groups, with high-performing students displaying characteristics of

"independent users," the middle group demonstrating attributes of "independent learners," and the lower-performing students struggling at the level of "dependent learners."

The aim of this study by Marantika (2021) titled as "Metacognitive ability and autonomous learning strategy in improving learning outcomes" is to examine the association between metacognitive ability and learning autonomy as a means to enhance student learning outcomes. Metacognition plays a critical role in the success of learners as it primarily pertains to the thinking process. Consequently, the classroom environment should be designed to enable learners to independently determine their learning strategies. Autonomous learning, in itself, is closely linked to learners' ability to express themselves, demonstrate creativity, possess self-confidence, and comprehend more challenging conceptual learning. The research utilized a descriptive correlational method, with a sample of 30 students from the Department of Language and Arts, randomly selected from the first semester of 2018/2019. Data collection involved the use of questionnaires and tests. The findings revealed a significant correlation between metacognitive ability, learner autonomy, and learning outcomes in Indonesian language courses. These findings emphasize the need for students to enhance their capacity for self-directed learning and to develop their learning strategies, while also being provided the opportunity to make decisions, particularly in the realm of idea development.

In this study by Durukan et al. (2022) titled "Metacognition Enhancing Strategies in Science Classrooms: Science Teachers' Practices" the objective was to explore the metacognitive strategies employed by science teachers during science lessons and the corresponding activities they implement. They employed an instrumental qualitative case study design and collected data from science teachers working in public schools throughout the 2018-2019 academic year. The findings indicate that science teachers possess well-developed and aligned understandings of the metacognition concept as outlined in the existing literature. Furthermore, they discovered that science teachers frequently utilize a majority of

the metacognition-enhancing strategies proposed in the literature. These strategies encompass activities such as pre-lesson planning, promoting original questioning and independent thinking among students, motivating students to assess their learning experiences using multiple criteria, fostering empathy and motivation, assisting students in overcoming difficulties, creating opportunities for students to reflect on their ideas, promoting self-awareness in students' behaviors, encouraging students to explain their statements, incorporating role-playing and drama activities, and serving as role models for their students. However, it was observed that science teachers employ journal-keeping strategies to a lesser extent compared to other strategies. This research has the potential to contribute significantly to the existing literature, serving as a valuable resource, particularly for novice teachers seeking to develop a solid understanding of metacognition and its integration into instructional practices.

Conclusion

This chapter was composed to highlight the notions of cognition and metacognition and what they contain as a two related concepts. Thus for the content of this chapter, a comprehensive account was given to the emergence of the cognitive revolution and what triggered its paradigm shifting appearance, accompanied with a description of cognitive psychology and the cognitive influence on language. In addition, almost what related to cognition, metacognition, and metacognitive awareness was presented, including the position language learning and teaching. This chapter provided a theoretical basis for one of the main variables in this study by dwelling on its meaning and its implications.

Chapter Three: Data Analysis and Interpretation of the Results

Introduction

3.1 Research Methodology: Rationale and choices

3.1.1 Research Paradigm and Research approach

3.1.2 Research Design

3.1.3 Data Collection Instruments

3.1.3.1 The General Self-Efficacy Scale

3.1.3.2 The Metacognitive Awareness Inventory

3.1.3.3 The Students Questionnaire

3.1.4 Data Collection Procedures

3.1.5 Data Analysis Procedures

3.1.6 Population and Sampling Techniques

3.2 Data Analysis and Interpretation

3.2.1 Presentation and Analysis of the Results

3.2.1.1 The Results of the General Self-Efficacy Scale (GSE)

3.2.1.3 The Results of the Correlation Analysis

3.2.2 The Interpretation of the Findings

3.2.3 Students' Questionnaire Analysis

3.2.4 Students' Questionnaire Interpretation

3.3 Discussion and Synthesis of the Key Findings

Conclusion

Introduction

This chapter represents a comprehensive description of the basic components of every research inquiry, starting fundamentally from the underlying reasons behind favoring a specific approach, a design or a method over the others to the practical steps taken by researchers. To elucidate more, this chapter provides a basic understanding on the suitable research paradigm, research approach, and research design chosen for the completion of this study. Additionally, data collection and its procedures, data analysis procedures, and population and sampling techniques will be addressed in details. Equally important, there will be a section for displaying the results of the current study accompanied with its analysis and interpretation. Finally the last section of this chapter is dedicated for the discussion and the synthesis of the main findings.

3.1 Research methodology: Rationale and Choices

Research is fundamental to humans' prosperity. It is described as the inquisitiveness of knowing more and uncovering the truth behind certain phenomena and life occurrences. It is almost impossible to doubt the rigorousness of conducting a research in terms of selecting the appropriate steps and procedures. As Kothari thinks "research is the art of scientific investigation". (2004, p.2) The present segment of this dissertation discusses the basic theoretical connotations of the research paradigm, approach and design which have been selected to direct the choice of the suitable population/sampling techniques, data collection instruments, and the data analysis procedures.

3.1.1 Research Paradigm and Research Approach

The conduction of a research study requires following the international research standards and conventions. These conventions involves following a series of ordered steps starting primarily from the research's philosophical assumptions to selecting the suitable research approach. This study is organized based on the pragmatic research paradigm which insists on the freedom of combining more than one research approaches required for the conditions of the phenomenon under investigation, thus this study is done through incorporating the elements of both quantitative and qualitative research approaches as they both tend to be in the center of the research continuum (Grover, 2015). In accordance with the current investigation research questions, a mixed method approach is sought to be appropriate to fully answer the research questions and test the hypotheses. Consequently, more complementary insights will be provided through merging the quantitative and the qualitative research methods of analysis.

3.1.2 Research Design

A research design provides the necessary instructions and procedures that researchers need to carefully follow. These well-structured procedures include the methods that will be used to collect, analyze, and interpret the data. For the sake of addressing the research questions and objectives, this study, in relation to the mixed method requirements, is done through the framework of the explanatory research design. Creswell (2017) indicated that the researchers need to start by gathering and analyzing the quantitative data first then interpret the results, after that they explain it in details with the subsequent qualitative research. This investigation was carried by collecting and analyzing the quantitative data as an initial phase,

then comparing it with the qualitative results as a second phase to see any convergence or divergence in the results.

3.1.3 Data Collection Instruments

The phase of data collection is unquestionably a necessary step in any research investigation. The implemented instruments should be designed, chosen and implemented with a great precision to ensure finding meaningful and coherent answers to the available research questions. According to the nature of the chosen research method of this study, a combination of quantitative and qualitative data collection tools was employed. As a result, two self-rating scales and a questionnaire for students were identified as the three main instruments used to finalize this study.

It is important to consider the abstract nature of the variables, as they strongly associate with the fundamental psychological aspects and manifestations of individuals' self-perception in relation to their personal experiences in learning. Regarding the issues of validity and reliability, the adoption of these two scales was based on considering the factors of applicability, contextual and cultural differences, the research aims and questions, level of students, and the scoring methods, therefore, If the scales were not compatible enough the results would be inaccurate.

3.1.3.1 The General Self-Efficacy Scale (GSE)

3.1.3.1.1 Structure and Aim

The general self-efficacy scale was adopted to measure the targeted sample beliefs in their own capabilities to cope with different challenges and achieve their goals. Schwarzer and Jerusalem (1995) designed a ten items scale to test this abstract psychological construct.

As it was mentioned before, the scale contained ten items or statements, each rated on a four points Likert scale ranging from 1 (Not At All True) to 4 (Exactly True). The participants are required to indicate the extent of agreement with each statement which serves at knowing how individuals see themselves operating in different contexts. The ten items are:

1. I can always manage to solve difficult problems if I try hard enough
2. If someone opposes me, I can find the means and ways to get what I want.
3. It is easy for me to stick to my aims and accomplish my goals.
4. I am confident that I could deal efficiently with unexpected events.
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
6. I can solve most problems if I invest the necessary effort.
7. I can remain calm when facing difficulties because I can rely on my coping abilities.
8. When I am confronted with a problem, I can usually find several solutions.
9. If I am in trouble, I can usually think of a solution
10. I can usually handle whatever comes my way.

1.3.1.1.2 Piloting and validation

The general self-efficacy scale has been proven to be suitable to many research areas regardless to the population's cultural differences. From a general angle the internal consistency, validity and reliability of this scale were calculated and proven to be accurate. For the reliability, the Cronbach's Alpha test showed that the internal reliability equals .76 and .90 which indicates satisfactory to high internal reliability for the scale items. Concerning its validity, it correlates positively with emotion, optimism, work satisfaction, and negatively correlated with depression and stress, health complaints, burnout and anxiety. Specific to the current investigation context, few participants were asked to give their opinions after finishing

the self-rating scale online via their emails. Interestingly, participants found no difficulty in understanding the items of the scale because it was accompanied with a glossary for the terms that may seem ambiguous.

1.3.1.2 The Metacognition Awareness Inventory (MAI)

1.3.1.2.1 Structure and Aim

Schraw and Dennison (1994) developed an inventory for assessing the extent to which learners are metacognitively aware of their learning. The inventory is designed to measure individuals' awareness of their strategies use, including their ability to plan, monitor, and evaluate their progress in learning. The adopted scale consists of 52 statements grouped into two main categories "knowledge of cognition" and "regulation of cognition". In the category of knowledge of cognition three items along with their statements are provided including declarative knowledge, procedural knowledge, and conditional knowledge. In addition, the second category belongs to the regulation of cognition where five main items along with their statements are presented. The current research study is sought to investigate the use of planning, monitoring and evaluating strategies, thus three elements from the regulation of cognition section were adopted including planning, comprehension monitoring, and evaluating. The items were grouped as the following:

Planning Items: 4, 6, 8, 22, 23, and 42.

Comprehension Monitoring Items: 1, 2, 11, 21, 28, 34, and 49.

Evaluating Items: 7, 18, 24, 36, 38, and 49.

1.3.1.2.2 Piloting and Validating

Similar to the GSE scale, the current scale's chosen items were piloted along with the GSE scale, hence we can conclude that participants found it easy to answer since the

definitions of metacognitive strategies (planning, monitoring, and evaluating) were given and clarified. Concerning its reliability and validity, MAI is a reliable instrument which can be used in education. In a study conducted by Akin, Abaci and Cetin (2007) investigating the validity and the reliability of the Turkish version of the metacognitive awareness inventory proved that the inventory scales and subscales are correlated. After performing a series of factor analysis to assess the psychometric properties the results revealed that the internal consistency is .95 which means that the subscales are correlated and any possible mistake is due to an external factor not to the items or the scoring method. From these findings we can deduce that this inventory is suitable to the context of this study since it was entirely adopted and no changes or translation has occurred.

3.1.3.2 The Students' Questionnaire

3.1.3.2.1 Aim and Structure

The students' questionnaire was a qualitative instrument sought to gather data for the second phase of this inquiry, unlike the first two scales, this questionnaire aimed at investigating and understanding learners' awareness and use of the metacognitive strategies in relation to what their beliefs in their own capabilities (i.e., their Self-Efficacies). The questionnaire was divided into three related section, each with its aim:

Table 3.1

The Students' Questionnaire Sections, Questions, and Aims

The Section	Question	General Aim
Section one	1 To 3	The first section's questions were designed to gather the respondents 'general information regarding the reasons behind choosing to study English, their level, and their experience with learning English as it was seen useful to form a general image on each learner.
Section two	4 To 9	This section's questions were mostly about learners' awareness about their mental processes and the way it impacts their studies.
Section three	10 To 14	The last section was under the title of the relationship between self-efficacy beliefs and metacognitive strategies use. The questions content was about the importance and the influence of SE on the learners' academic performance and the relationship of the variable and its nature.

1.3.2.2 Piloting and Validity

After being validated by the supervisor, the questionnaire was send to four Master one students to answer and then to fill in the students' opinions on the questionnaire section where they were required to provide their feedback on the easiness or the complexity of the questions included. The four addressed students indicated that they found the questionnaire enjoyable, straightforward, and easy to digest. Based on this feedback no changes were made in the content of the questionnaire.

3.1.4 Data Collection Procedures

The nature of the current study design necessitates initiating the quantitative inquiry and then following it with the qualitative one. Based on these conditions, the data collection process started with administrating the two adopted scales at the end of March 2023. The scales were merged together in two sections using Google Forms as a tool for organization, administration and, time gain. The scales were merged together due to their short length where the GSE constituted of 10 items and MAI's selected subscales were medium in length as well. The scales were posted in Master one students' official Facebook page for a better access. Google Forms offered the "required option" that enabled the researcher to make sure that all answers are completed by preventing the students to submit the questionnaire without selecting an answer that properly describes them. In this period of time only 25 responses were gathered and recorded in Google Forms 'answers section and no more than this value has been recorded since then. The reasons behind participants fewer responses are still unknown; however, as a special case the study was carried merely using 25 responses.

Subsequent to this operation, the qualitative data collection phase started at the end of April 2023. After piloting and validating the questionnaire, the 20 respondents were approached during their session in person to answer the questionnaire. It is worth noting that students showed a great sense of support and pleasure to take part in the data collection phase of this study. With the collaboration of the teacher who was teaching at that moment and the students, the data collection process was finished successfully at the same day.

3.1.5 Data Analysis Procedures

To complete the analysis of the current study, the descriptive and the inferential statistics of both the quantitative and the qualitative parts of this investigation were done

through using both of Excel 2010 and IBM Statistical Package for Social Sciences (SPSS) version 19 for Microsoft to perform the calculations and graphically display the obtained results. Initially, the quantitative survey data were moved from Google Forms to Excel 2010 and coded according to the code book that has been prepared previously (the scales scoring methods). Then for an easier control and results generation, (SPSS) was used to calculate both of the descriptive statistics (mean, median, standard deviation) and the inferential statistics specified to correlation. To answer the first two research questions of the first quantitative phase, the sum of the scores, the mean, and the standard deviation were calculated and compared to answer the first research question. Moreover, the frequency tables generated by SPSS were taken and interpreted to further answer the second research question. Equally important, testing the correlation between the variables under investigation required performing one of the tests of correlation. Due to the categorical nature of the variables, the Spearman's rank correlation coefficient test, as one of the non-parametric tests, was the appropriate choice to assess the non-linear potential correlation between SE and MTE. Following this formula:

$$\rho = 1 - \frac{6\Sigma\, \mathrm{d}_i^2}{n(n^2 - 1)}$$

$\boldsymbol{\rho}$ = Spearman's rank correlation coefficient
di = Difference between the two ranks of each observation
n = Number of observation

Similarly to the first part's analysis, the qualitative questionnaire data were gathered and coded using Excel and then transmitted to SPSS for performing the descriptive statistics including the frequencies and the percentages of the analyzed questions. The questionnaire

contained 11 question with multiple choices and three main open-ended questions sought to investigate participants' attitudes. To better analyze the three questions, thematic analysis was used as a qualitative data analysis method. Thematic analysis is a method for the systematic identification, organization, and the generation of new insight into, patterns of meaning (referred to as themes) from a dataset (Braun & Clarke, 2012). Segment codes were generated from participants' opinions and perspectives, and then they were organized into themes based on the similarities, connections, and the reoccurring concepts.

3.1.6 Population and Sampling Technique

The current study seeks to generalize the main findings on a population of (175) students of English at the university of Biskra. The selection of the population was after observing that they were in a preparatory stage to engage in conducting a research for their postgraduate degree, where a high level of self-awareness is required to fully regulate their learning behavior and habits. To specify, the sample was chosen based on the non-probability convenience technique. Obilor defined the convenience sampling as "Convenience samplings, also called grab, accidental or opportunity sampling, is a technique in which a sample is drawn from that part of the population that is close to hand, readily available, or convenient. Convenience sampling is a non-probability sampling technique that is adopted by researchers where data is collected from available and easily accessible pool of respondents." (2023, p.4) Hence the number of the participants varied according to each research approach, on one hand, the quantitative investigation's participants was 25 students who contributed in rating the scales. On the other hand, 20 students agreed to take part in the study and answer the questionnaire of the qualitative investigation.

3.2 Data Analysis and Interpretation

3.2.1 Presentation and Analysis of the Results

The phase of data analysis is what makes up any research study. Hence, this section is dedicated to highlight the main findings obtained through the utilization of the three data collection instruments, namely the two tests and the student's questionnaire.

3.2.1.1 The results of the General Self-Efficacy Scale (GSE)

Following the completion of the data collection process, the information obtained from the GSE Scale were coded and cleaned according to the test's criteria and based on the quantitative requirements of analyzing the scores. Concerning the quantitative guidelines of coding such a scale, it is important to mention that the variable of self-efficacy is categorical (nominal) in nature; however, this exception did not form any obstacles in the face of preceding the analysis of this inquiry and displaying the results of the initially performed descriptive statistics, including the sum of the total scores, the mean, the standard deviation, and the percentages.

As an attempt to answer the first research question about finding the levels of SE, the final scores of the participants were displayed and organized in the table 3.1. According to the GSE Scale' ten (10) items, the scores of the targeted EFL learners at the University of Biskra were summed and calculated to specify a value for each participant. The results showed that SE's scores varied from moderate twenty-four points (24) to high thirty-seven points (37) out of forty (40) points as a total superior value of Self-Efficacy level.

Table 3.2

Participants'GSE Total Scores

Participant Number	Total SE score
1	24
2	31
3	32
4	27
5	38
6	35
7	32
8	30
9	32
10	30
11	31
12	27
13	25
14	34
15	29
16	29
17	25
18	33
19	30
20	33
21	32
22	29
23	31
24	34
25	27

These preliminary calculations were supported by the mean and the standard deviation to better understand the variation found in the results. The mean in this study has an average SE test score of around (X= 30.4) and the standard deviation is (SD= 3.07). This suggests that the scores are relatively closer to the mean. The table 3.3 summarizes the main general descriptive statistics related to self-efficacy:

Table 3.3

The general descriptive statistics of self-efficacy

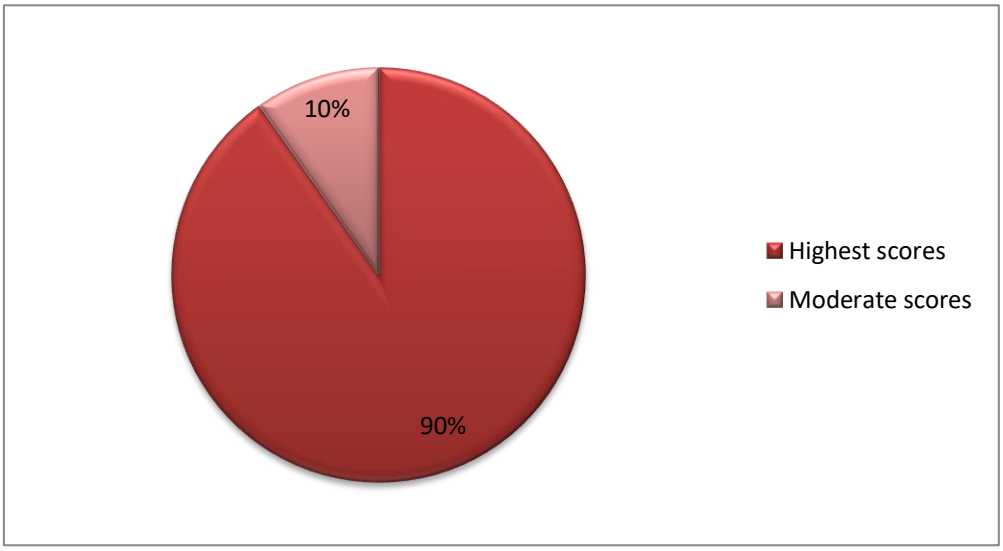
	N	MIN	MAX	X	SD
SE	25	24	37	30.04	3.07

Note. N= Number of participants; Min= Minimum score; Max=Maximum score; X= Mean value; SD= Standard deviation.

As for the description provided in the table above, the standard deviation of 3.07 highlights that the individual score has diverged by 3.07 units from the mean (30.04) which signals no huge distance between the values and the mean. In addition the results showed that EFL students' scores ranged from moderate (90%) to high (10%).

Figure 3.1

Students 'moderate and high scores of "SE percentages"



Furthermore, the test scores were grouped according to the tests 'scoring conventions in which the score of 40 is considered as the highest value achieved for determining SE level. In the present study the scores ranged from 24 to 37 as the lowest and the highest values recorded from the sample. The mean and the calculated scores of participants indicated that

90% of the sample scores were moderate (scores more than 10 and less than 34). Also, only 10% of the sample scores were considered high (respectively the scores of 34 and 37). From the obtained data it can be concluded that Master one students of English at the university of Biskra possess a moderate level of self-efficacy where 23 participants marked moderate scores, whereas only 2 participants obtained high scores. These findings could not be generalized to the whole population due to many reasons; therefore, these reasons are further discussed in the subsequent sections of this investigation.

Table 3.4

Descriptive statistics of the GSE Scale items

The scale's Items	**Mean**	**SD**
I can always manage to solve difficult problems if I try hard enough	3.36	0.63
If someone opposes me, I can find the means and ways to get what I want	3.24	0.81
It is easy for me to stick to my aims and accomplish my goals	2.64	0.63
I am confident that I could deal efficiently with unexpected events	2.80	0.57
Thanks to my resourcefulness, I know how to handle unforeseen situations	3.16	0.62
I can solve most problems if I invest the necessary effort	3.64	0.49
I can remain calm when facing difficulties because I can rely on my coping abilities	2.76	1.01
When I am confronted with a problem, I can usually find several solutions	2.84	0.74

If I am in trouble, I can usually think of a solution	3.20	0.70
I can usually handle whatever comes my way	2.76	0.77

As it was mentioned before, the GSE scale contained 10 statements or items each reflecting a different aspect of SE such as coping skills, persistence, adaptability, problem solving abilities, and the capacity to overcome challenges. Thus, each statement is analyzed separately and in relation to what aspect of SE indicated by the participants of this study.

The first statement "I can always manage to solve difficult problems if I try hard enough" reflects people's problem solving abilities, in which high SE levels indicate to what extent they are confident that they are capable of challenging life's complications and preserve in the journey of achieving their goals. Concerning the participants in this study, the mean (M= 3.36) indicated that they can moderately deal with the challenging situations they face if they have invested the necessary efforts. In addition, the second statement "If someone opposes me, I can find the means and ways to get what I want revealed a similar moderation in the level of SE (M=3.24). However, this item describes the participants' readiness to preserve in the face opposition or rejection because they are confident that they are able to use the best strategies and methods to get what they truly want.

In the same vein, the third and the fourth items showed the same level of moderation (M= 2.64); (2.80). The third item which states "It is easy for me to stick to my aims and accomplish my goals" shows the participants determination in being committed to do what leads them towards achieving their goals including maintaining focus, being disciplined, and

following a more goal directed behaviors. Furthermore, the fourth statement "I am confident that I could deal efficiently with unexpected events" displays the learners' capacities to navigate the unexpected events with confidence and certainty that they can handle them efficiently.

Equally important, the degree of the moderation is strongly established in the participants' responses. Concerning the fifth and the sixth statements "Thanks to my resourcefulness, I know how to handle unforeseen situations" and "I can solve most problems if I invest the necessary effort" there was sense of closeness as indicated by the mean of both statements (M=3.16) and (3.64). As for the fifth item, having the ability to find quicker solutions with a resourceful mind is one of the traits of highly efficacious persons. On the other side, the sixth statement reflected the perceived self-efficacy of participants in tackling problems successfully. As a result, it can be said that the sixth item is relatively similar to the first item's idea.

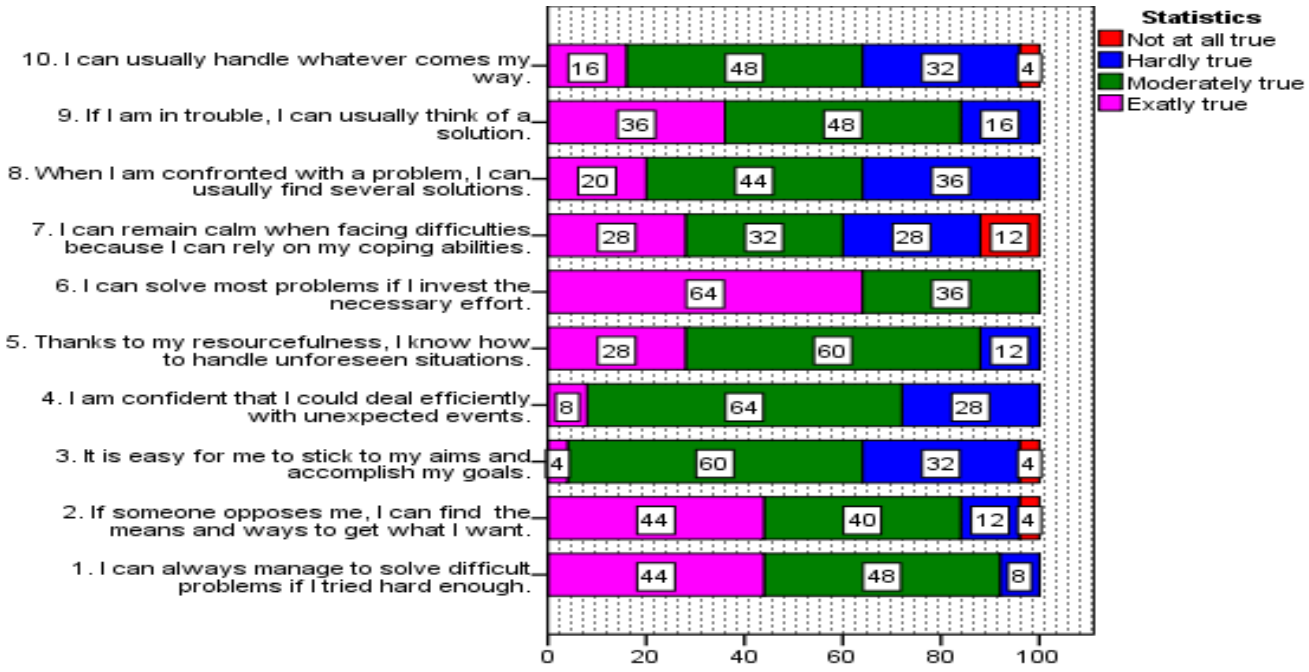
In the frame of emotion regulation capacities, the seventh item of "I can remain calm when facing difficulties because I can rely on my coping abilities" and the tenth item "I can usually handle whatever comes my way" are similar in testing people's abilities in regulating emotions and adapting to different changes. Highly efficacious people are able to cope and adapt to various emotional and environmental (external) circumstances because they can effectively rely on their coping mechanisms to manage stress, make changes in one's routine and take responsibility. As the results of the scores revealed, the students' scores were commonly moderate like the other statements with the same mean value (2.76). Finally, the eighth and ninth items were addressing the same aspect of problem solving strategies. As the means varied, the mean of the eighth statement "when I am confronted with a problem, I can usually find several solutions" was (M=2.84) and the ninth statement as (M=3.20) "If I am in trouble, I can usually think of a solution" indicated that English Language learners of Master

one moderately know how solve problems and find suitable solutions while facing challenges including their educational issues.

To conclude, the results of the administrated test revealed the moderate level of SE among a sample of Master one students. The representation of the students' choices along with their percentages is illustrated in the Figure 3.2.

Figure 3.2

SE Scale Items Percentages



As the histogram in figure 3.2 demonstrates, the majority of the participants chose the option of "Moderately True". This proves the moderateness of SE levels of the students of master one at the University of Biskra.

3.2.1.2 The results of the Metacognitive Awareness Inventory (MAI)

This section is dedicated to analyze the data obtained from the students' responses on the chosen items from the MAI, namely planning, monitoring, and evaluating. Based on the research question of trying to statistically assess the frequency of metacognitive strategies use among EFL students at the University of Biskra (Master one level), three main items were adopted as a self-rating test and given to students to answer by choosing true or false.

The results were displayed in tables of frequencies and percentages. As for the differences found between students' choices, the items of planning, monitoring, and evaluating were discussed separately each in a table and accompanied with an explanation for each item's statement. Hence, the data analysis and the representation were as follows:

Table 3.5

Participants' Self-Assessment of Their Abilities in Planning

Statements (from 4 to 45)	**False**				**True**			
	F.	**P.**	**V.P**	**C.P.**	**F.**	**P.**	**V.P.**	**C.P.**
4. I pace myself while learning in order to have enough time.	6	24	24	24	19	76	76	100
6. I think about what I really need to learn before I begin a task.	4	16	16	16	21	84	84	100
8. I set specific goals before I begin a task.	5	20	20	20	20	80	80	100
22. I ask myself questions about the material before I begin.	4	16	16	16	21	84	84	100
23. I think of several ways to solve a problem and choose the best one.	2	8	8	8	23	92	92	100
42. I read instructions carefully before I begin a task.	3	12	12	12	22	88	88	100

45. I organize my time to best accomplish my goals.	10	40	40	40	15	60	60	100

Note. F= Frequency; P=Percent; V.P= Valid Percent: C.P= Cumulative Percent

Statement 4: "I pace myself while learning in order to have enough time"

Statement 45: "I organize my time to best accomplish my goals"

These two statements are not quite similar in meaning, but they discuss the importance of time in planning. As indicated in the table 3.5 on the statement 4, (6) participants have chosen "False" and (19) participants choices were marked as "True". This information means that participants are able to manage their time and make sure learn with the available time limits. On the other side, the statement (45) is related to time organization and management, where (15) participants showed that they really regard time management as a crucial skill while the rest (10) participants showed that they find it difficult to manage their time effectively.

Statement 6: "I think of what I really need to learn before I begin a task"

For this statement, it is displayed that (21) participants reflect first on what they need to learn before launching the process of learning, whereas only few participants (4) did not agree with that and choose "False" as a response.

Statement 8: "I set specific goals before I begin a Task"

The table 3.3, in the statement meaning, demonstrates that (20) participants start their learning with a clear vision about what they want to achieve (their objectives). In contrary, (5) participants seemed to indulge directly in learning without putting specific goals ahead.

Statement 22: "I ask myself questions about the material before I begin"

In the light of the twenty-second statement, (21) participants selected "True" and (4) selected "False". This means that the majority of participants engage their mental processes while learning via asking critical questions about the materials they have in hand.

Statement 23: "I think of several ways to solve a problem and choose the best one"

Concerning the results related to the statement 23, (23) participants indicated that that they think of many potential solutions to a problem and then select the appropriate one based on evaluation. However, only (2) participants stated "False" whom may not rely on such a strategy.

Statement 42: "I read instructions carefully before I begin a task"

According to the table 3.3, (22) participants stated that they have the habit of reading the task's instruction before starting to answer, while only (4) participants chose "False".

Table 3.6

Participants' Self-Assessment of Their Abilities in Comprehension Monitoring

Statements (from 1 to 49)	**False**				**True**			
	F.	**P.**	**V.P.**	**C.P.**	**F.**	**P.**	**V.P.**	**C.P.**
1. I ask myself periodically if I am meeting my goals.	6	24	24	24	19	76	76	100
2. I consider several alternatives to a problem before I answer.	7	28	28	28	18	72	72	100
11. I ask myself if I have considered all options when solving a problem.	8	32	32	32	17	68	68	100
21. I periodically review to help me understand important relationships.	11	44	44	44	14	56	56	100
28. I find myself analyzing the usefulness of strategies while I study.	7	28	28	28	18	72	72	100

34. I find myself pausing regularly to check my comprehension.	6	24	24	24	19	76	76	100
49. I ask myself questions about how well I am doing while learning something new.					25	100	100	100

Note. F= Frequency; P=Percent; V.P= Valid Percent: C.P= Cumulative Percent

Statement 1: "I ask myself periodically if I am meeting my goals"

In this statement there was an examination on how individuals evaluate and reflect on their progress. Participants' results showed that (19) participants tend to periodically check their progress, whereas only (6) participants answers recorded that they do not self-assess their performance.

Statement 2: "I consider several alternatives to a problem before I answer"

Statement 11: "I ask myself if I have considered all options when solving a problem"

These two statements centered on the idea of problem solving and mainly whether participants are taking the right options. For statements 2 and 11, (18) and (17) participants selected "True". While the rest (7) and (8) participants for both statements chose "False".

Statement 21: "I periodically review to help me understand important relationships"

As it was displayed in table 3.4, (14) was the number of participants who stated that they review their work (Tasks) to find out the existing relationships. On the other hand, (11) participants answers were not with such a practice.

Statement 28: "I find myself analyzing the usefulness of strategies while I study"

For this statement, the participants who chose "True" (18) were more than those who selected "False" (7). This can mean that the majority of participants like to analyze the usefulness of the strategies they use.

Statement 34: "I find myself pausing regularly to check my comprehension"

The results depicted that (19) participants are regularly checking their comprehension and the rest (6) participants did not agree with that option.

Statement 49: "I ask myself questions about how well I am doing while learning something new"

Concerning this statement, the total number of the participants (25) selected "True". This result shows how critical learners can be while monitoring their studies.

Table 3.7

Participants' Self-Assessment of Their Abilities in Evaluating

Statements (from 7 to 49)	**False**				**True**			
	F.	**P.**	**V.P.**	**C.P.**	**F.**	**P.**	**V.P.**	**C.P.**
7. I know how well I did once I finish a test.	9	36	36	36	16	64	64	100
18. I ask myself if there was an easier way to do things after I finish a task.	6	24	24	24	19	76	76	100
24. I summarize what I've learned after I finish.	12	48	48	48	13	52	52	100
36. I ask myself how well I accomplish my goals once I'm finished.	12	48	48	48	13	52	52	100
38. I ask myself if I have considered all options after I solve a problem.	9	36	36	36	16	64	64	100
49. I ask myself if I learned as much as I could have once I finish a task.	2	8	8	8	23	92	92	100

Note. F= Frequency; P=Percent; V.P= Valid Percent: C.P= Cumulative Percent

Statement 7: "I know how well I did once I finish a test"

In this statements the number of the participants who marked "True" as an answer were (16) and the rest who selected "False" were only (6). The 16 participants' results

demonstrated that they are able to assess their performance after the completion of a certain test.

Statement 18: "I ask myself if there was an easier way to do things after I finish a task"

As it was demonstrated in the table 3.5, (19) participants in this case ask themselves if they had another way to do things after finishing a task.

Statement 21: "I summarize what I've learned after I finish"

According to this statement intent, the number of the participants who chose "True" and "False" was relatively equal to those who selected "False", only with one difference in those who agreed on the idea of summarizing what they have learned after finishing a task or a lesson.

Statement 36: "I ask myself how well I accomplish my goals once I'm finished"

This statement involves evaluating one's performance and the way tasks have been carried to lead to an established success. (13) Participants agreed on that while the other (12) others do not.

Statement 38: "I ask myself if I have considered all options after I solve a problem"

The aforementioned statement responses indicated that (16) participants check and evaluate their post problem solving results while the other (9) participants do not.

Statement 49: "I ask myself if I learned as much as I could have once I finish a task"

As the table 3. 7 displayed, more than half the participants (23) selected "true" on the statement 49 unlike the other (2) participants, who selected "false" as they do not ask themselves about their learning outcomes after finishing a specific task.

To illustrate, the results that has been demonstrated through the analysis of the obtained data indicated that the utilization of metacognitive strategies is significantly elevated among the chosen sample for this inquiry. Up to this point, the research question related to the frequency of metacognitive strategies use among Master students has been answered.

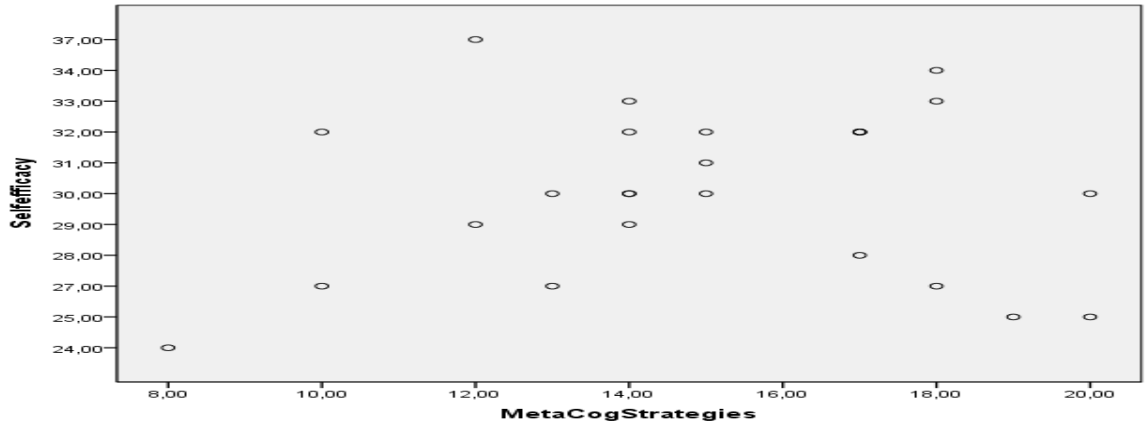
3.2.1.3 The Results of the Correlation Analysis

In statistics, two distinct variables may be related to each other at many levels. Correlational tests are designed to check the existence and the significance of the association that could potentially exist between two variables. The term correlation gives an idea about the degree of the relation in terms of its strength and direction. In the same way, the direction of the correlation may be positive or negative, as it can demonstrate the strength and the weakness of the findings. In the frame of assessing correlation, a relationship between variables may be established, as it may not be possibly established at all (Kumar & Gautam, 2020). The interpretation of the correlational tests is always based on its magnitude and direction. A positive correlation denotes that the variables have the tendency to increase or decrease together, whereas a negative correlation indicates inversely that one variable tends to increase as the other decreases. The closeness of the correlation coefficient is to -1 or +1, the stronger the correlation. Moreover, determining the significance of a correlation coefficient is statistically found (denoted as alpha, α) as P= 0.05.

In relation to this research investigation, assessing the potential correlation between self-efficacy and metacognitive strategies through testing the null hypothesis is needed. To complete this operation the spearman's rank correlation coefficient test was used to test the association of between the variables. More details are discussed in the subsequent lines:

Figure 3.3

The graphic representation of the correlation test



As Figure 3.3 displayed, there is little to no significant correlation found between Self-efficacy and Metacognitive strategies use. As a result, we fail to reject the null hypothesis that claims that "there is no correlation between SE and MES use".

Table 3.8

The correlation between Self-Efficacy and Metacognitive strategies

			Selfefficacy	MetaCogStrategies
Spearman's rho	Selfefficacy	Correlation Coefficient	1,000	,044
		Sig. (2-tailed)	.	,835
		N	25	25
	MetaCogStrategies	Correlation Coefficient	,044	1,000
		Sig. (2-tailed)	,835	.
		N	25	25

Observation: the alpha value was 0.83 meaning that the assumed correlation is not statistically significant.

3.2.2 The Interpretation of the Findings

The utilization of the GSE Scale and the MAI as a research instruments to undertake this investigation was based on the aim of answering the research questions and meeting the research objectives. In this study, the obtained results were significant; therefore, providing a thorough interpretation is a necessity in order to have a clear picture about the research findings.

To begin with, the results from the GSE Scale provided a variety of responses collected from a sample of (25) participants. After calculating, grouping and comparing the scores, the results showed that Master students of English at the university of Biskra have a moderate level of self-efficacy. However, the underlying meanings of each item in the adopted scale and their multifaceted relation with other domains needed further clarification. It could be noticeable that the scale's items reflected some aspects that have a direct or an indirect borderline with self-efficacy. According to the 25 participants' responses, the highest and the lowest mean scores were associated with the first item and the third item in the scale. For the first item "I can always manage to solve difficult problems if I tried hard enough" the results indicated that the majority of the participants are moderately capable of applying the problem solving strategies accompanied with investing the necessary efforts. On the other side, the lowest mean value was for the third item of "it is easy for me to stick to my aims and accomplish my goals" that conversely indicate that the majority of the participants face a hard time in their attempt to accomplish their goals. In addition, it is important to note that each item on the scale is discussing a different aspect like time management, goal setting, problem

solving, persistence and coping strategies. The participant's scores indicated having a moderate level in the aforementioned aspects in relation to self-efficacy that can potentially be a mediator in cultivating and developing these aspects.

Moreover, reporting the frequency of the metacognitive strategies use was the focal interest of the second research question, the results obtained from analyzing the adopted questions from the metacognitive awareness self-rating inventory revealed significant information about how students are planning, monitoring and evaluating their performance. Concerning planning, the majority of the participants proved to be good at preparing what they need before commencing a task. (23) Students reported that they are able to think of several ways to solve a problem and choose the best ones. In addition, they also showed being good at considering the time duration dedicated to a task completion, setting achievable goals and asking themselves about the materials needed for to complete a given task. In contrast, only (10) participants rated that they are not capable enough to organize their time to accomplish their goals, thus we can deduce that being good at managing time is challenging. To summarize, the results revealed that the participants use the planning strategy consistently in their daily educational tasks.

Concerning the item of comprehension monitoring, the total number of the participants (25) rated themselves as being consistent in asking about how well they were performing a task, this indicates that they are good in monitoring. Furthermore, it was noticed that the other vast majority are keen on checking their performance via questioning the usefulness of the steps and the strategies they are using to accomplish what they really want. As a result, the monitoring strategy use is moderate to high among the participants.

Regarding the six statements that have been implemented to know how frequent the evaluating strategy is being used among the participants who took the test, (23) participants

scores indicated that they are interested in evaluating their progress once they finish doing a task. The other frequencies were between (16, 19, and 13) indicating that participants were moderately able to evaluate their progress through critically reviewing their study methods, strategies and outcome in order to decide the effectiveness of their learning.

Additionally, the third main research question was made to investigate the potential correlation between self-efficacy and metacognitive strategies use among the participants of the targeted sample. The results were not expected; however, they were justifiable. The spearman's rank correlation coefficient test was used to determine the correlation between both bivariate variable. As a result, there was no significant link between believing in one's abilities to execute a task and the use of the appropriate strategies ($r = 0.04$ and the p value = 0.83). To conclude, self-efficacy as a general psychological construct gives ample attention to the mental processes and the appropriate implementation of the metacognitive strategies specifically. Therefore, we estimate that these results were due to a possible deficiency in the sample of this study.

As a conclusion, the research questions of the first quantitative part have been answered and the results were significant in the field of English as a second language research. Self-efficacy and metacognitive strategies use were found not to be correlated in the current investigation. Nonetheless, the level of students' self-efficacy and the frequency in which they tend to use the metacognitive strategies are both established and revealed.

3.2.3 Students' Questionnaire Analysis

Section One: General information

Item 01: What was the reason behind choosing to study English as a major at university?

The answers of this question and some other similar questions in questionnaire were displayed in tables of frequencies. For the current question answer the table below shows the respondents' answers:

Table 3.9

Participants' Reasons behind studying the Specialty of English

Sentences	Frequency	percent	Valid Percent	Cumulative Percent
1. You were passionate and interested in learning English	9	45	45	100
2. You were good at English at high school	9	45	45	100
3. English is an international language	2	10	100	100
4. Someone else's recommendation	4	20	100	100
5. It was the only good choice	2	10	100	100

The table 3.9 demonstrates that the majority of students chose to study English at university because they were passionate and interested in English as a language (45 %) and also, for their positive experience in learning English at high school (45%).

Item 02: How would describe your level at English?

The reason for including the question number two is to figure out the students' level of English as it may be one of the influencing factors in their choice and use of the Metacognitive strategies.

Table 3.10

Students' Level of English

Level	Frequency	percent	Valid Percent	Cumulative Percent
Beginner	/	/	/	/
Pre-intermediate	2	10	100	100
Intermediate	14	70	100	100
Advanced	4	20	100	100

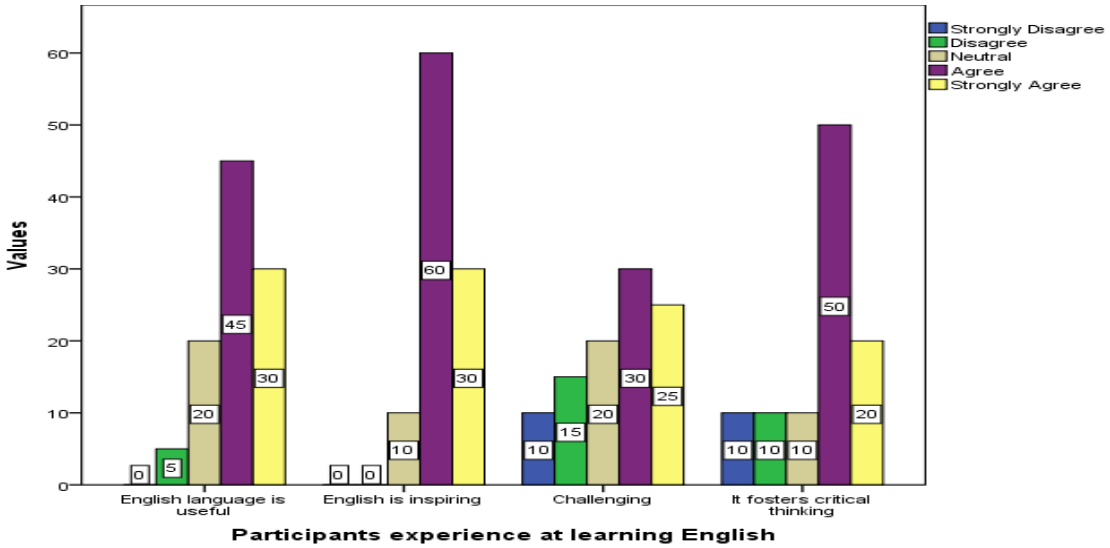
As it was indicated in table 3.10, most respondents' level of English was recorded as Intermediate (14), and only (2) students chose pre-intermediate as the lowest level with an exception of (4) students with an advanced level. None of the respondents selected "beginner" because they have already studied English before.

Item 03: how was your experience at learning English?

In this question the aim was to have a clear understanding of how learners viewed English language learning. Respondents were provided with a five point likert scale (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree) to rate their experience. The results are represented in the Figure below:

Figure 3.4

Students' experience with Learning English by Percentages



With a great consideration to the aim of gaining more information about the respondents, the students' answers also sought to be an element in the analysis and the interpretation of the coming parts and sections. From the sample of 20 students, only (9) and (6) students who selected agree and strongly agree for the option that states "English language was useful in many ways". Whereas, one individual student who did not agree at all with the statement, besides that (4) students held a neutral position.

Furthermore, the second option "English is inspiring" was selected by (12) students for "Agree" and (6) students for "Strongly Agree" which means that they found it really interesting. On the other side only (2) students who preferred to hold a neutral position.

Concerning the third option, (6) students chose "Agree" and (5) of them chose "Strongly Agree", while (2) individuals strongly disagreed, (3) for "disagree" and 4 for "Neutral". Results are relatively close, but we can estimate that the majority have found English challenging.

For the last option regarding "English allowed me to learn the skill of how to think critically", the majority of students agreed (10) which mean that they partially know how to think in a critical way thanks to learning English.

Section Two: Metacognitive Strategies

Item 04: would you describe yourself as a foreign language learner?

The decision of integrating such a question was to see how students view themselves as foreign language learners. The results are displayed in the frequency table 3.9:

Table 3.11

Student's perception of themselves as FLL learners

The statement	Frequency	percent	Valid Percent	Cumulative Percent
Goal oriented and strategic	6	30	100	100
Responsible for my own learning	9	45	100	100
Flexible in managing my learning activities	8	40	100	100
Aware of my learning process	9	45	100	100

The following values were obtained via taking the percent and the frequency from each statement's frequency table and summarizing them in one table for a better understanding. For this reason it is not possible to get 100% after summing each statement's percentage; therefore, it is not due to wrong calculations.

For the first option 6 students out of 20 selected the idea that describes those being goal oriented and strategic in approaching leaning while the rest 14 other students were not possibly that goal oriented. In addition 9 students selected the option of being responsible for their own learning and 8 students out of 20 had the flexibility to manage their learning activities. Similarly 9 students know that they are aware of their learning process.

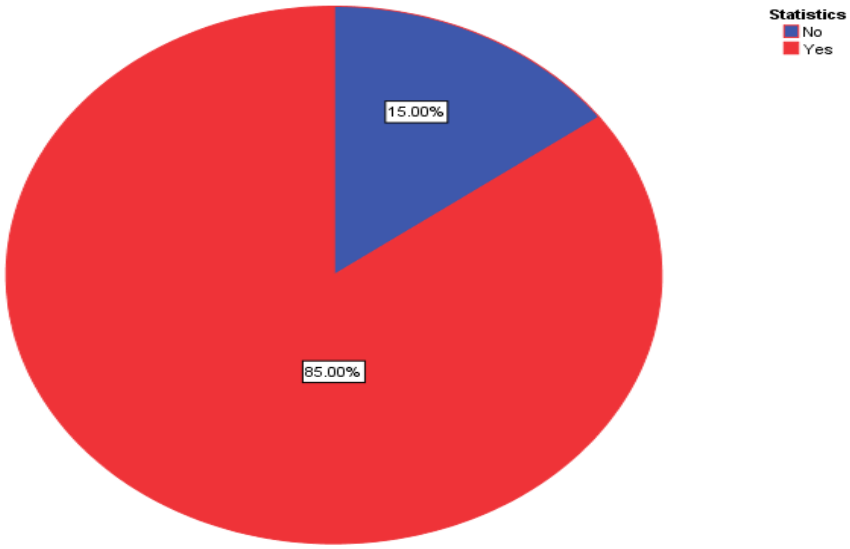
Item 5: is it important to you to stay focused while doing a task or homework?

In relation to the previously reviewed item, displaying some qualities of the cognitively/ mentally engaged learners was an introduction to the current question.

Maintaining focus has been viewed differently according to the respondents' point of view:

Figure 3.5

The importance of Maintaining Focus



Respondents were required to choose between yes and no in order to answer this question, the results in the graph revealed that 17 students said Yes (85% out of 100%) and only 3 students chose No (15% out of 100%). This significantly means that the majority of respondents views maintaining focus as a crucial skill in learning.

Respondents who were in favor of "maintaining focus" were asked to illustrate why it is important to them. Answers were collected and categorized according to common, yet different themes (Thematic Analysis):

Theme 01: focus is the key to eliminate distraction

According to the answers of a three students, focus is important because it helps in decreasing distractions. Respondents reported that they tend to be a lot distracted, but once

they prepare themselves to be fully focused distraction diminishes gradually, as one of respondents concluded “focus is everything, distraction may lead one’s to lose his/her train of thoughts”. The limitations of distraction can basically manifest in the inability to carry on a task effectively.

Theme 02: focus develops the academic achievement

Maintaining focus is crucial for academic achievement as it results several outcomes. Respondents declared that it guaranties better results by enabling them to produce high-quality work and deepens their understanding. Furthermore, focus increases the level of awareness giving space to creativity and new ideas to take place while learning; therefore, distractive thoughts are pushed away and more task engagement is shown. As the respondents contributed “focus increases my English level”; “focus allows me to self-evaluate my progress”; “focus guarantees a better learning experience to me”.

Theme 03: focus helps in avoiding errors and mistakes

As the levels of concentration increases the possibility to commit mistakes and errors decreases. Respondents commonly related focus with lesser number of mistakes making and awareness is the mediator between the two factors.

Item 06: In your opinion, in what way being aware of what and how you are learning can influence your performance in class?

For this statement the answers are delivered in a table of frequencies:

Table 3.12

The influence of Awareness on Classroom Performance

The statement	Frequency	percent	Valid Percent	Cumulative Percent
Recognizing my strengths and weaknesses while learning	11	55	100	100
Increasing my level of autonomy	8	40	100	100
Helping me address the faced challenges the best ways possible	8	40	100	100
Identifying which learning strategies work best for me	12	60	100	100

As it was mentioned earlier the values were collected from different tables and gathered in one table of frequencies. To analyze the following results, 11 students out of 20 showed that being aware helps them recognize their strengths and weaknesses. Moreover, 8 learners indicated that their autonomy is influenced by their level awareness. Similarly, 8 respondents showed that awareness can help them address the challenges they face. And lastly, 12 respondents out of 20 demonstrated that being cognizant of the learning process leads to a better choice of the learning strategies.

Item 07: which metacognitive strategy are you aware of using?

For this question respondents were provided with a three metacognitive strategies to check their degree of familiarity with each of Planning, monitoring and evaluating. It is important to note that the percentages and the frequencies of each strategy are calculated individually; as a result, each item in the table 3.13 is not dependent on the results of the other items:

Table 3.13

The students' Use of Planning, Monitoring and Evaluating Strategies

The Strategy	Frequency	percent	Valid Percent	Cumulative Percent
Planning	13	65	100	100
Monitoring	6	30	100	100
Evaluating	7	35	100	100

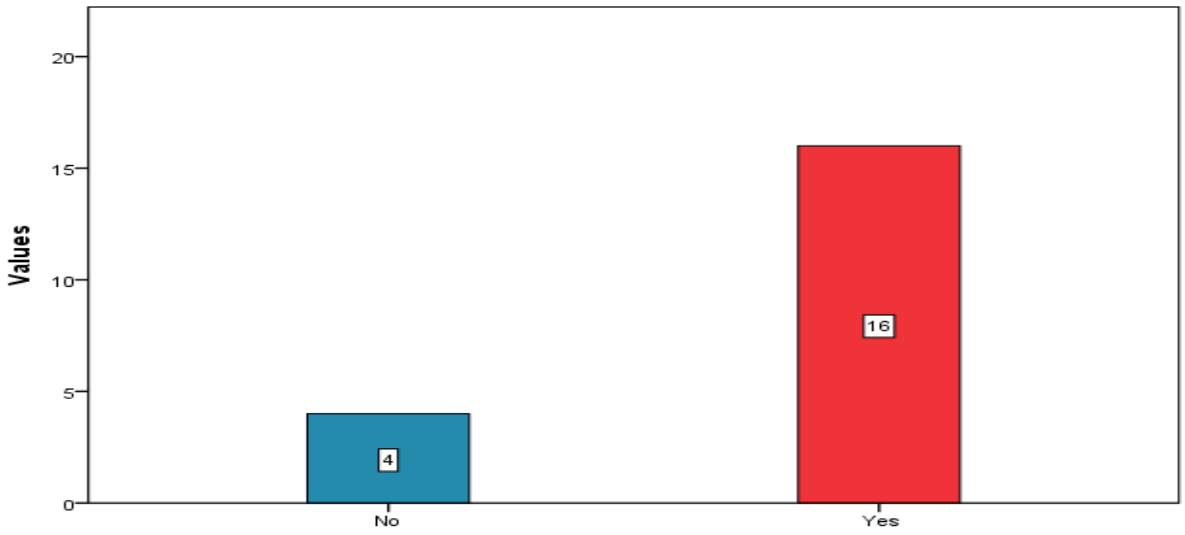
In the above table the number of the respondents who did report the use of each strategy was not mentioned. However, for planning strategy we can deduce that the majority (13) are aware of what and how they need to do in order to learn something or approach an activity. Importantly, respondents' answers concerning monitoring were not really significant were only (6) students out of 20 indicated that they check their learning progress regularly. Finally, only (7) participants out of 20 are able to evaluate their learning process and outcomes after they finish a task or a test. This in general means that the respondents are relatively good at planning.

Item 08: Do you usually think of a plan before doing an activity?

Prior to the administration of the seventh item results, the eighth item seeks to discover if learners are thinking of a plan before they start studying or not. This item has two sections one of them includes analyzing students' experiences about how they manage to plan:

Figure 3.6

Do learners usually think of a plan before studying?



To fully understand the figure 3.6, (80%) of the respondents choices were “Yes” meaning that (16) students think of a plan to effectively learn something. Meanwhile, the other (20%) was for “No”, “I do not usually think of a plan” special only to (4) students.

The second part involves gathering students’ experiences about how they plan; this item was under the question “if yes, please tell us briefly how you manage to plan?” Several responses were collected, coded, and analyzed according to common themes as follows:

Theme 01: planning is viewed as the steps taken by a learner in order to prepare the atmosphere for an effective learning to take place.

Planning is instrumental when it comes to learning. It guarantees satisfying results if done properly with taking many considerations into account. Respondents’ common perception on planning is that it happens through initiating different steps as a beforehand preparation. Accordingly, planning involves making outlines, identifying goals, organizing information available, setting a timeline, preparing the task requirements and the needed instruments, and choosing the right time and place to have a powerful fresh start. As for making an outline it is seen as identifying “what” exactly a learner needs to learn by setting

achievable realistic goals and organizing the information in hand in order to have a clear vision of the steps that should be taken. One example of outline setting as stated by respondents “I organize goals and information in tables and lists” also “when writing an essay, I think of steps of how to move from the introduction to the conclusion”. Equally important, planning is strongly associated with time management where setting a time limit and a deadline for doing a task is important “ I start planning by checking the available time to do a task, what it requires, the needed instruments (Laptop, book, or phone) this makes me finish a task with ease and satisfaction” . last but not least, the answers collected reflects different approaches to planning that may differ from one person to another, yet the essence is that planning is preparation and regulation.

Theme 02: planning may not be a combination of practical steps, yet it can be a mere mental activity

Planning through visualizing or planning through making a tentative outline is the conceptual definition of planning. For some learners, planning does not involves writing goals and task on paper “to do lists” as an example. However, it is the visualization of the process, its goals, its possible challenges and the alternative solutions. This relatively is considered a highly focused cognitive activity, and if companied with direction and action it would guarantee positive outcomes. As one of the participants’ opinions demonstrates “I plan everything in my mind. It is like making a tentative outline which is imaginary, based on my own envision on the future experience that I may go through while doing the activity, and aims at organizing my work and efforts for the activity with regard to some problem-prediction in order to be able to do it efficiently and with the bare minimum effort and time” planning is visualized mental blueprint that permits having a thorough examination on the task needs and requirements, the time dedicated to do it and so on…As a result, those who

tend to visualize their planning may maximize the chances to success because everything is predicted.

Item 09: As a learner why you sometimes make a temporary pause?

This question has a direct relationship with the strategy of evaluating. It serves at knowing why some learners pause and self-assess their learning performance.

Table 3.14

Participants' reasons of self-evaluation

The statement	Frequency	percent	Valid Percent	Cumulative Percent
To understand ideas well	16	80	100	100
To Seek feedback	5	25	100	100
To Check the effectiveness of the learning strategies being used	2	10	100	100
To Correct and evaluate your work	11	55	100	100
To Reflect on and reconsider your answers	10	50	100	100

The table 3.14 displays the frequencies and the percentages of every option alone where the maximum values are shown. The results indicated that the majority of learners pause to check their understanding, correct and evaluate their work and reflect on their answers. The majority of students (16 out of 20) for the first option seemed to care about their understanding. Also, (11 out of 20) indicated that consistently correct and evaluate their work. Lastly, only a small number of students showed that they evaluate their progress through seeking teachers or peer feedback, or by checking the effectiveness of the strategies.

Section Three: the relationship between Self-Efficacy and Metacognitive Strategies use

The third section of the questionnaire addresses the association between self-efficacy and the use of metacognitive strategies. To fully understand the potential link or influence, five questions were included in which the last one aim is to gather a brief report on the participants' attitudes towards how their level of confidence can impact their studies in general. Similar to the preceding sections, IBM SPSS software is used for performing the descriptive statistics and thematic analysis is used as a mere qualitative analyzing method for the last question.

Item 10: Is the way you think of yourself is affecting your academic performance?

Respondents were required to choose between "Yes" it affects my academic performance and "No" it has no influence at all. Results are displayed in the pie chart below:

Figure 3.7

Does Self-Efficacy affect Students' Academic Performance?

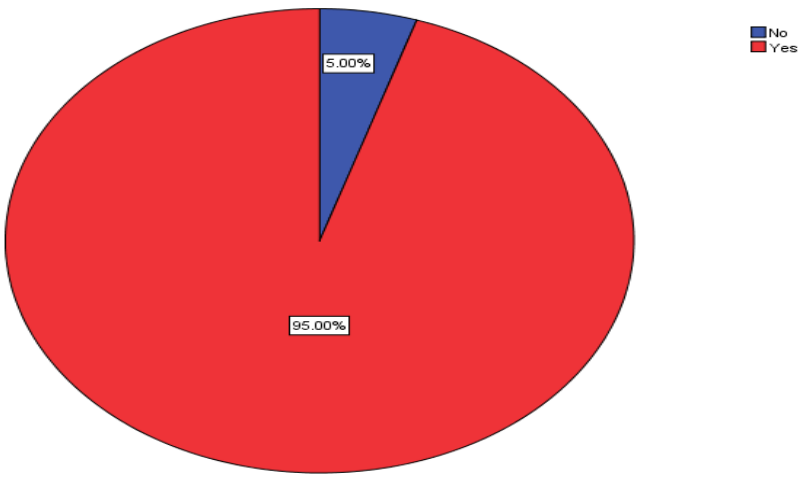


Figure 3.7 displayed that the majority of students 95% indicated that "Yes" it affects their academic performance, meanwhile, only 5% of the sample chose "No" for it does not

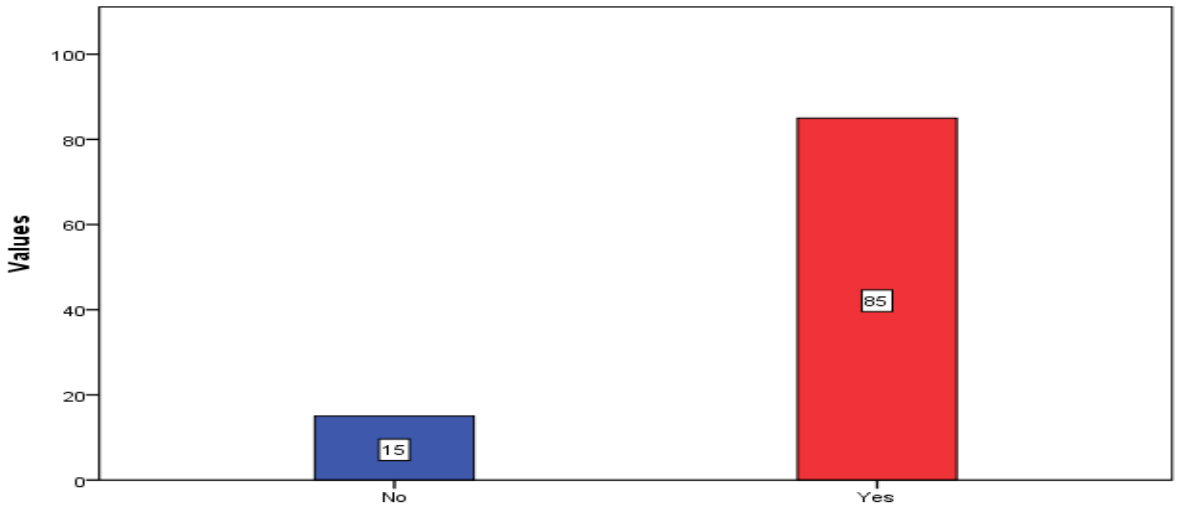
affect my academic performance. This leads to several implications that would be discussed in the next sections of this dissertation.

Item 11: Do you believe that Self-Efficacy is important in English language learning?

In a similar stance, the same requirements of answering the previous question were applied to the current question. Therefore, they were both analyzed in a similar way.

Figure 3.8

Is Self-Efficacy important in English Learning?



As the bar chart depicts, 85% of the respondents believe that self-efficacy is important in learning English, while 15% respondents chose to say "No" because they possibly do not believe that it could have an impact on their studies.

It is important to note that both items 10 and 11 may appear identical; however, the tenth question deals with what self-efficacy can make learners feel towards their academic

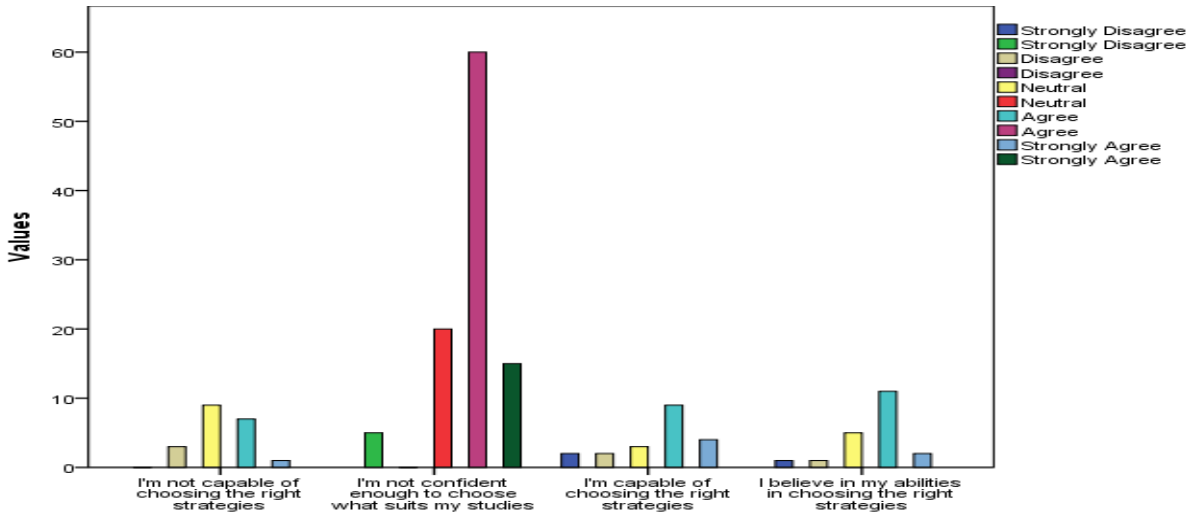
performance and the eleventh one is about the learners' attitude towards the potential impact of their self-beliefs on their learning.

Item 12: do you usually doubt your own capabilities while choosing the right strategy to study?

For the sake of answering this question, respondents were provided with a five points Likert scale and four options to choose. Answers were analyzed using normal and reverse coding especially with the first and the second statements.

Figure 3.9

Self-efficacy impact on strategies choice



The responses to this question were analyzed by reviewing the results of each statement alone for a better interpretation of the information provided in figure 3.9:

Statement 01: "I feel I'm not capable of choosing the right strategies to use"

According to the reversed items of the used likert scale, (3) of the respondents agreed that they see themselves not capable of choosing the right strategies to use. Conversely, only

one participant strongly disagreed with the statement of doubting the capability to choose the right strategy along with (7) others who disagreed.

Statement 02: "I feel I'm not confident enough to choose wisely what best suit my studies"

Regarding statement number 02, a considerable number of participants (12) disagreed with feeling unconfident in selecting what best suits their study requirements, similarly (3) participants selected "strongly disagree" while (1) student agreed with the idea of finding a difficulty in choosing the right way to study and no one strongly agreed . Lastly, (4) other participants showed no agreement or disagreement.

Statement 03: "I feel that I am capable of choosing the right strategies but not able to use them appropriately"

As it was displayed in figure 3.9, (9) participants agreed and (4) others strongly agreed with the statement whereas (3) participants who were not certain about the choice and the use of the appropriate strategies to use. On the other side, (2) participants selected "disagree" and (2) other participants strongly disagreed with the idea in the statements.

Statement 04: "I do believe in my abilities in choosing the right strategies"

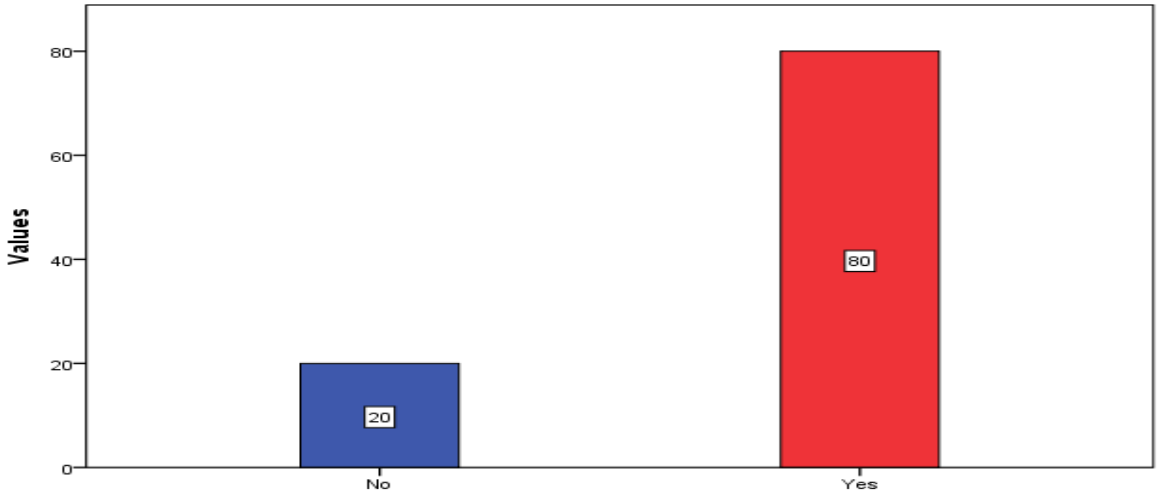
For the last statement, (9) participants agreed with the statement along with (4) other participants who strongly agreed with that they believe in their abilities in choosing the best strategies. In contrast, (2) participants strongly disagreed and (2) more disagreed. Holding a neutral position, (3) participants remained conservative with following one of the two trends.

Item 13: do you think that there is a relationship between self-efficacy and metacognitive learning strategies use?

In line with the previous tenth and eleventh questions, this question is similar in terms of the analysis and representation of the findings.

Figure 3.10

The relationship between Self-Efficacy and Metacognitive Strategies



The figure 3.10 describes 80% of the participants answers were “yes” for the association between self-efficacy and metacognitive strategies while the rest 20% of the choices was against the existence of this relationship.

As a second part in this question, respondents who chose “yes” previously were asked to tell what kind of relationship is this through choosing from two distinct options as shown below:

Table 3.15

The nature of the relationship between Self-Efficacy and Metacognitive Strategies

The statement	The option "Yes"	The option "No"
	percent	Percent
SE promotes the use of the metacognitive strategies	72.2%	27.8%
SE is an obstacle in the face of metacognitive strategies	36.8%	63.02%

According to the results presented in the table 3.15, the majority of the respondents were aligned with the idea of that self-efficacy can promote the use of the metacognitive strategies (72.2%) while a lower percent (27.8%) of the participants choices was for the option "No". To illustrate more, respondents were given another option to choose which states that" SE is an obstacle in the face of the metacognitive strategies use" , interestingly the majority of responses was against that option by (63.02%) and only (36.8%) was in favor the aforementioned idea.

Item 14: Please briefly say why your level of self-confidence can influence the way you choose to deal with your studies?

Self-efficacy and self-confidence are intertwined in which higher levels of SE can lead to higher confidence levels as well. This question aims at knowing how individuals' beliefs in their abilities to perform a task can influence the way they manage their studies in general. As an essential part in this research investigation, analyzing students' responses qualitatively ensures obtaining a good grasp of the different attitudes related to such a human, not to say behavioral, phenomenon. As for the previously analyzed answers, students' answers are analyzed using thematic analysis again.

Theme one: self-confidence can enhance the overall academic performance.

The majority of the students' responses were centered on the conventional idea that self-confidence plays a crucial role in developing the academic performance by influencing various aspects of a learner's academic journey.

Initially, self-confidence promotes the implementation of the right study methods and guaranties the right choice and use of the some learning strategies such as time management skill. As in this excerpt "self-confidence originates from the understanding that comes from within an individual, if you are confident then you are able to make suitable decisions in your studies because you have it all inside of yourself"; confident people know exactly what they need to accomplish their goals. Additionally, self-confidence increases motivation and discipline. Confident learners believe in their abilities to succeed, which in return fuels their intrinsic motivation to succeed. They are ready to start taking actions when they are more motivated as one of the respondents answered "being confident means you are motivated to achieve more, my confidence helps me be more disciplined when it comes to my studies". The combination of both motivation and discipline is the drive that leads to commitment and this later leads to high achievement. Moreover, it has been discussed that confident learners know who are they and what they are doing, so they know their preferable learning style that goes along with their personality. These factors increase their abilities to comprehend and grasp information efficiently, as one of the chosen respondents stated "confidence allows learners to discover their learning styles". Furthermore, facing challenges and taking risks are the qualities of confident learners. "Self-confidence has a positive effect on learning because it makes students more responsible for their actions and gives them strength to face and endure challenges" this excerpt highlights the concepts of autonomy and perseverance in approaching learning with the mindset of facing the possible challenges.

Theme two : being overly confident can be misleading as it hampers learning.

As one of the participants concluded, “lower levels of confidence triggers inhibition, and being overly confident is misleading. I would rather focus on a task itself and do my best rather than estimating how successful I might be”. This belief suggests having a good balance in the level of confidence to avoid inhibition or getting lost with other complex behaviors that may hamper the learning process. Instead, the focus should be on the task itself by increasing the level of engagement and investing the required effort in order to maximize the chances of success. Therefore, it can be concluded that having a healthy realistic level of confidence is a key to achieving more satisfying results.

Theme three: confidence can be trained and better academic results can be obtained.

This following excerpt “confidence is something that can be trained, by just adopting the confident people mindset things will start changing like planning and goal setting” suggests that confidence is not a fixed trait but rather a skill that can be developed . It implies that by adopting the mindset and behaviors of confident individuals, one can begin to see positive changes in various aspects of life including the academic performance, such as planning, study methods and goal setting. By consciously embracing a confident mindset, individuals can start to believe in their abilities, set ambitious goals, and develop effective strategies to achieve them. This shift in mindset can lead to increased motivation and a willingness to take on challenges. Through practice and consistent effort, individuals can train themselves to become more confident; therefore, better results are predicted.

3.2.4 Students’ Questionnaire Interpretation

After analyzing and presenting the data, the results of the students’ questionnaire were reasonable and sufficient to some extent to answer the fourth research question of “what are the attitudes of Master students of English towards the relationship between SE beliefs and metacognitive strategies use?”

To begin with, the participants in this study were 20 in total; the respondents provided answers via this qualitative research instrument. The first section of the questionnaire was meant to gather some general information about the respondents. In general, the answers of respondents regarding the reasons why they chose English as a major at university were different. (18) Participants chose English because of their positive past experience with learning English and their passion and interests. In addition, a small number of participants claimed that it was recommended to them and the others chose it in regard to its universal significance. This item aims to know the drive that led students to study English; therefore, these reasons can be linked with the subsequent results.

Moreover, the question reviewed the different levels of English. The majority of the participants' level was intermediate, and a little number of them was pre-intermediate and advanced. Then the participants were asked about their learning experience. A larger portion of the respondents said that their English language learning was "inspiring", "useful in many ways" and "as it fostered their critical thinking". Conversely, 30% of their answers mentioned that English was challenging that means that they faced some difficulties while learning.

Concerning the second section of the metacognitive strategies, the participants' answers varied regarding how they see themselves as foreign language learners. The majority their choices indicated that they are more goal oriented, flexible, and aware of their learning. However, an average number of them selected the option of being goal oriented and strategic; we deduce this to the difficulty of finding the suitable strategies and sticking to them.

Regarding the fifth item, most respondents agreed with the statement of the importance of maintaining focus (85%) and briefly explain why it is important. The answers were categorized into categories and themes that have a common ideas with each other "focus is a key to eliminate distraction", "focus develops the academic achievement", and "focus

helps in avoiding errors mistakes". For the first category, focus and distractions can influence each other; however, distraction can be diminished through focus. The aim from this comment is to signal that individuals are able of creating situation and preparing the atmosphere to be more focused. The second and the third themes are primarily discussing that working with an increased level of focus leads learners to better in their studies; therefore, the chances to commit mistakes are reduced.

Similar to highlighting the importance of focus, the sixth and the seventh questions were about awareness in the classroom and the awareness about metacognitive strategies use. Interestingly, the responses of the sixth question concluded that being aware of learning increases the performance in terms of knowing one's strengths and weaknesses and choosing the right strategies to work with. Nevertheless, lower values were recorded concerning increasing the level of autonomy and enduring in the face of challenging learning situation. Concerning the awareness of the learning strategies, 65% of the choices were with planning which means that the biggest number of the participants is aware of how to plan effectively; in contrast, close values were recorded for monitoring and evaluating.

Later, the respondents were asked if they really plan before doing an activity and the majority of them answered "yes". Similarly, they were required to explain how they manage to plan and the results were analyzed based on the thematic analysis conventions. As the results varied, the respondents mentioned that they plan through breaking the process into steps to be followed, these steps includes preparing the environment for work through checking the needed instruments availability, setting small goals, organizing the studying materials and dedicating a time line for each task. The other category declared that planning is a provisional activity that relies primarily on visualizing the learning process: here it can be said that it is a mental task that involves predicting outcomes and suggesting several solution to a problem. Subsequently, the last item in the section of metacognitive strategies deals with

knowing why students pause to check their progress. Respondents agreed much with that they evaluate their performance to primarily check their understanding, correct their work and reflect and reconsider their answers.

Furthermore, the questions of the third section are dealing with the relationship of Self-efficacy beliefs and metacognitive strategies use. The tenth and the eleventh items are dealing with individuals' self-efficacy importance and its effects on the academic performance. A larger portion of the respondents (95%) agreed that the way they think of themselves is affecting their academic performance. in the same vein, (85%) of the participants' choices were in favor of the important role that SE can have in learning English. Likewise, the respondents were asked if they doubt their own capabilities in finding the right strategies to use to study with. The majority of the respondents disagree with the first two statements of "not being capable of choosing the right strategies to use" and "not feeling confident enough to choose wisely what suits their studies", this could mean that their self-perception is not the obstacle in determining the best choices to carry their studies, but it could be related to other reasons. Along with the first and the second statements, most respondents selected "agree" and "strongly agree" for the content of the third and the last statements that display that they believe in their abilities to choose the right strategies; however, the problem remains in their inability to use them appropriately. Equally important, the penultimate question's responses revealed that respondents believe that there is a relationship between self-efficacy and metacognitive strategies use (around 80%), in an attempt to know what kind of relationship two more options were added, (72.2%) of the participants' responses concluded that SE promoted the use of MES and (36.8) of their choices indicated that they see SE as an obstacle in the face of metacognitive strategies use. On top of that, the last question provided a deeper understanding through reviewing the participants' attitudes on the influence of their level of confidence on their studies. From

examining students obtained excerpts, it was concluded the self-confidence can enhance their performance via allowing them to know themselves better, so they can have an idea of what style, method or strategy is suitable for them, also it enables them to execute actions an solve the faced problems. The second theme intent was to describe how having a low level of confidence can trigger inhibition and how being overly confident can be misleading, hence a balanced level of confidence with maintaining focus can guarantee good results. The last theme discusses that self-confidence is a skill that can be trained by adopting the mindset of the confident or the highly self-efficacious people and observing their behaviors (vicarious experience).

To summarize, we can deduce from the presented data that students were aware of their mental processes. As the questionnaire's items shaped a series of related questions that focuses on understanding how learners see themselves as an active autonomous agents who are capable of managing their learning in relation to SE effects. A significant number of students were familiar with the metacognitive strategies of monitoring and evaluating, and especially with planning as their answers indicated that they used to plan with maintaining focus as a key to avoid distraction. For the part of relating the two variables together, Students regarded SE as an important variable where one's beliefs can control the way they deal with their studies and choose the appropriate strategies that may work for them. Also, this questionnaire found that the implementation of the MES may be governed by other variables away from self-efficacy.

3.3 Discussion and Synthesis of the Key Findings

After performing the analysis and providing a comprehensible interpretation to the results obtained from the three main instruments, namely the GSE and MAI scales and the students' questionnaire. This section will be dedicated to discuss and synthesize the major key

findings, establishing the relationships and showing the points where the quantitative and the qualitative methods converged and diverged.

This study was undertaken to investigate, as a general aim, the correlation between self-efficacy beliefs and the use of the metacognitive strategies. Moreover, within this process we tried to determine students' level of self-efficacy and the frequency of the metacognitive strategies use among the chosen sample, as well as understanding the attitudes of students towards the potential relationship between self-efficacy and the metacognitive learning strategies.

Initially, the results obtained from the first and the second research question data analysis was with a big importance, as it describes one of the most influential aspects in students' academic performance. The abstract nature of self-efficacy as a multidimensional psychological construct was simplified through the well-structured psychometric tests and scales; therefore, the current inquiry findings reported that participants' levels of self-efficacy ranged from average to high to some degree, 90% represented the moderate scores and 10% was attributed to the highest scores. It was a positive outcome that the majority of students' levels were intermediate rather than being low, thus their own beliefs about their capabilities can be increased as it influences their learning. This level was a representation to the degree they can endure and face difficulties, cope with different circumstances, and show a capacity to solve problems. Hence, the hypothesis that states that the students' level of self-efficacy was moderate to high corresponds with the presented findings.

Furthermore, the second question results provided insights about the metacognitive awareness of students by displaying the different obtained frequencies. In general, students' use of metacognitive strategies exhibit frequencies ranging from moderate to high. Planning scores fell between 20 to 23 scores for participants' agreement with the subscale items and

from 2 to 10 for disagreeing with the items, which could potentially mean that students sometimes plan for their studies by organizing and preparing ahead of time. Analogously, participants' scores of comprehension monitoring ranged from 14 to 25 estimating that they occasionally check their learning through tracking their goals, considering different solutions to a problem and analyzing the usefulness of the employed strategies. Finally, for the strategy of evaluating the scores of on subscale ranged from 13 to 23 indicating a moderate frequency as well. Students rated themselves being keen on knowing how well they did after finishing a task. In this context, these strategies are aspired to be one of the elements of self-regulated learning which reflects the degree of autonomy of learners, thus the moderate level of students may attribute to their level of awareness of the metacognitive strategies or to other external factors related to the study.

Notably, the hypothesis that states that there is no correlation between self-efficacy and metacognitive strategies use was accepted as the obtained results proved the validity of the aforementioned hypothesis. The absence of a correlation was not predicted, yet it was justified. We may deduce this absence to the small sample size of participants who took part in the current investigation to rate their self-efficacy and their metacognitive strategies use and awareness. It is worthy highlighting that the scales were completely reliable and valid as they have been administrated by researcher in different research contexts around the world. Concerning the divergence of the current study findings with the existed literature, a number of possible reasons aroused from comparing the results. In Hayat and Shateri's (2022) study a significant moderate correlation was found between self-efficacy and planning (r = 0.24), monitoring (r = 0.30), and evaluating (r = 0.31); therefore, a positive and statistically significant effect on metacognitive strategies ($\beta = 0.42, p < 0.001$). The researchers in this study used a different methodology, where the quantitative cross sectional design was implemented using PLS-3 approach on a sample of 225 medical students chosen via using a

simple random sampling technique. The findings of this investigation greatly differed from the current investigation's findings in terms of the large size of the sample, the adopted scales and the study design. In the same vein, a study concluded that the EFL Iranian learners' use of language learner strategies was influenced by the motivation, proficiency, and language learning beliefs (SE). The differences were all centered on the sample size and the study design, thus we can conclude that the sample size may greatly impact the investigation's path.

Furthermore, the qualitative part seeks to understand the nature of the relationship that may exist between self-efficacy and metacognitive strategies use along with comprehending learners' metacognitive awareness. The evidenced outcomes showed that learners are aware of their mental processes, as they see themselves goal oriented and strategic, flexible and responsible, and able to check and reflect on their strengths and weaknesses while learning. Moreover, the majority of learners regard planning as an important strategy (80%). In addition to this, participants' perspectives were directed towards the importance and the role of self-efficacy in their academic endeavor as a variable that can promote the implementation of the metacognitive strategies.

In relation to the qualitative investigation, students' narratives provided insights on why they regard focus as an important mental practice, how they manage to plan, and lastly how their level of self-confidence (self-efficacy) can influence the way they choose to deal with their studies. The performed analysis revealed that learners viewed focus as a factor that can eliminate distraction and results in an error free high performance. Besides, planning was considered as a focused mental activity manifested in a deliberate steps of organization and preparation. Ultimately, participants regarded self-confidence as a variable that can enhance their entire academic performance including the use of effective strategies. To conclude, the relationship between SE and MTE, from a qualitative point of view, is described as a cause-

and-effect relationship where it can be inferred that self-efficacy is a variable that can determine the use and the choice of the metacognitive strategies.

Conclusion

The aim of this chapter is to present and thoroughly analyze the obtained data of the current investigation and draw conclusions at the end. Therefore, the elements of this chapter were presented in three main sections. The first section was dedicated to clarify the methodological notions and the rationale in relation to the current study content and objectives including the research paradigm, research approach, and the research design. In addition, the procedures of data collection, analysis, and sampling techniques were all examined. The second section was devoted to present, analyze, and interpret in details the findings of this investigation. In this part the results obtained from the three data collection tools, mainly the GSE scale/ the MAI and the students' questionnaire were reported and statistically analyzed. Finally, the last section was dedicated to the discussion and synthesis of the main key findings along with making meaningful inferences.

General conclusion

Research in foreign language education shifted from merely focusing on language structures to investigating the way learners learn. Language learner strategies role was disregarded in terms of use and misunderstanding. Metacognitive awareness gained familiarity as it stresses the idea of recognizing and understanding the cognitive processes and the ability to monitor and regulate thinking. Following this train of thought, the question about the variables that can influence the use and the choice of the metacognitive strategies have been raised, yet it was not completely answered due to the different existing factors. From a human perspective the psychological construct of self-efficacy was seen as a variable that can impact the use of metacognitive strategies. As humans, learning is always attached to the individuals' personal experiences. Therefore, the way learners perceive themselves can always influence the way they plan, monitor, and evaluate.

The observed lack in being aware of the use of the metacognitive strategies was the reason behind the conduction of the present study. As it was mentioned before, the use of MES is governed by SE based on what literature suggested. Individuals who see themselves as capable are more willing to show a more self-regulated behavior. On the other hand, other studies claimed that SE and MES are either ways positively or negatively correlated. This study aimed at understanding the existing relationship between the aforementioned variables by investigating the correlation that may exist between self-efficacy and metacognitive strategies use.

As an attempt to answer the main research question and the corresponding ones, a number of procedures have been taken into consideration starting from the methodology to the analysis of data. Accordingly, the pragmatic assumption was the research paradigm for this study. Following the same trend a mixed method approach required doing the study in the

frame of the explanatory sequential design. The data collection process comprised of using three main data gathering tools, namely the general self-efficacy scale, the metacognitive awareness inventory, and the students' questionnaire. The tools were validated and piloted to eliminate any possible inconveniences; therefore, the obtained data was analyzed using descriptive and the inferential statistics to ensure getting complete answers for the research questions.

The results showed that Students of Master one at the University of Biskra, section of English, possessed a moderate to high level of self-efficacy by doing a comparison of the means on each item on the scale. Equally important, the results regarding the frequency with which targeted sample is using the metacognitive strategies indicated the existence of a moderate frequency for each strategy use; that could potentially mean that the students occasionally plan, monitor, and evaluate their learning. Interestingly, the results of the correlation test revealed that there was little to no correlation between SE and MES use and that the variables are statistically non-significant ($p = 0.83$). On the counter part, the qualitative question results demonstrated a number of significant facts concerning SE, MES use, and the relationship between them. To start with, learners viewed themselves as aware of their learning processes because they positively agreed with the importance of maintaining focus and planning before approaching their learning. In the same manner, learners considered SE as an influential factor in their learning as it reflects the way they choose to deal with their learning requirements.

In closing, the results of both methods differed underlying a lack in the sample size that changed the results; however, a conclusion can be drawn from the qualitative inquiry that SE predicts the effectiveness of the use of the MES. To compensate the lack of awareness and understanding of the mental processes, teachers may start initiating the change by

encouraging students to implement planning, monitoring and evaluation strategies and link it to the way they see themselves succeeding in doing a task.

Implications and recommendations

This part examines the implications and the recommendations stemming from results of the current study on the correlation between SE and MTE. The attempt to understand the impact of these two psychological variables had several crucial implications for education in general and language teaching specifically. The recommendations included raising the awareness of both teachers and learners about the relationship between SE and MTE use taking into account their manifestations in the EFL classroom.

- Self-efficacy as a psychological construct needs to be introduced to teachers and learners together in order to form an idea how teachers' self-efficacy affects students' self-efficacy as well.
- The necessity to develop self-efficacy beliefs for EFL teachers by organizing training programs or workshops at universities.
- EFL teachers are the key to activate students' mental processes through implementing activities that fosters students' planning, monitoring, and evaluating strategies.
- EFL teachers must be aware of their modeling role (vicarious experience) in shaping their learners self-efficacy beliefs.
- EFL teachers are seen as the creators of the pedagogical supportive environment that supports their students' metacognitive thinking and impacts their decision making.
- The use of the metacognitive prompts by teachers inside the EFL classrooms is beneficial to students' metacognitive abilities.
- The need to replicate the current study using pretest-posttest design along with the instruction of the MSE and SE basis (an intervention).

Limitation and suggestions for further research

Limitations are an indispensable part of any research investigation. The elements that were not under the control of the researcher can pave the way to further future studies to take place and compensate the produced lacks. It is important to note that findings of this study were specific to one area with a specific group of participants. The following lines provided the major limitation along with its possible suggestions.

In the context of the current investigation, a number of constraints related to the methodology and the choice of the research tools were found within the process of analyzing the data. The first issue we noticed was that the study opted for one general scale while there are many other scales suitable to verify students' academic SE in a better way,. We deduce this limitation to the confusion created after coming across a number of psychometric analysis tests and scales. The second issue that came up to the surface was the possibility of having inaccurate measurements due to the complex and multifaceted nature of both variables. As the obtained results varied, the calculations might be affected by the social desirability bias as a possible factor. Furthermore, another limitation that affected the study results was the small sample size of 25 participants for the first quantitative part (for correlation only). According to similar studies, the correlation test were done after collecting information from a sample of 50 and more participants, which was not available as condition to carry on this study.

Regarding future research, it is recommended for future researchers to take the adopted scales and tests with a great consideration. It is essential to have a comprehensive coding outline for each scale or test before the adoption. Although the needed efforts were made to ensure the accuracy of the results, the sample size impacted the results leading to spending more time and efforts in reconsidering the

calculations again. Another suggestion that may contribute to the findings in general is that the topic of self-efficacy should be addressed from different angles from qualitative in depth investigations to the practical quantitative classroom interventions (experimental and longitudinal studies).

References

Abdelaidoum, N.,& Chelli, S.(2021). The relationship between students metacognitive awareness and creativity in learning english (master thesis, Mohamed kheider university of Biskra, Algeria). Retrived from http://archives.univ-biskra.dz/handle/123456789/18455

Akin, A., Abaci,R.,& Cetin, B.(2007). The validity and the reliability of the Turkish version of the Mertacognitive Awareness Inventory. *Educational Sciences: theory and practice*,7(2,671-678. Retrieved *from* https://toad.halileksi.net/wp-content/uploads/2022/07/metacognitive-awareness-inventory-toad.pdf

Anderson, N. J. (2002). The Role of Metacognition in Second Language Teaching and Learning. ERIC Digest. Retrieved from https://files.eric.ed.gov/fulltext/ED463659.pdf

Arslan, A. (2019). The mediating role of prospective teachers' teaching self-efficacy between self-efficacy sources and attitude towards teaching profession. *International Journal of Educational Methodology, 5*(1), 87-96. doi:10.12973/ijem.5.1.101. Retrieved from https://www.researchgate.net/publication/331089196.

Bandura, A. (1977). Self- efficacy: the exercise of control. Retrieved from https://www.pdfdrive.com/self-efficacy-the-exercise-of-control-e188112982.html.

Bandura, A. (1977). Self- efficacy: the exercise of control. Retrieved from https://www.pdfdrive.com/self-efficacy-the-exercise-of-control-e188112982.html.

Benson, P. (2013). *Teaching and researching: Autonomy in language learning*. Routledge.

Blackmore, C., Vitali, J., Ainscough, L., Langfield, T., & Colthorpe, K. (2021). A review of self-regulated learning and self-efficacy: The key to tertiary transition in science,

Technology, Engineering and mathematics (STEM). *International Journal of Higher Education*, *10*(3), 169. doi:10.5430/ijhe.v10n3p169

Blackmore, C., Vitali, J., Ainscough, L., Langfield, T., & Colthorpe, K. (2021). A review of self-regulated learning and self-efficacy: The key to tertiary transition in science, Technology, Engineering and mathematics (STEM). *International Journal of Higher Education*, *10*(3), 169. doi:10.5430/ijhe.v10n3p169

Braun, V. & Clarke, V. (2012) Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds), *APA handbook of research methods in psychology, Vol. 2: Research designs: Quantitative, qualitative, neuropsychological, and biological* (pp. 57-71). Washington, DC: American Psychological Association.

Călinici, M.-S., Unk, I., & Călinici, T. (2020). Impact of regulatory emotional self-efficacy on depression, anxiety, stress and well-being. *European Proceedings of Social and Behavioural Sciences,85, 432-443*. doi:10.15405/epsbs.2020.06.43. Retrieved from https://www.europeanproceedings.com/article/10.15405/epsbs.2020.06.43

Cherian, J., & Jacob, J. (2013). Impact of self-efficacy on motivation and performance of employees. *International Journal of Business and Management, 8*(14). doi:10.5539/ijbm.v8n14p80. Retrieved from http://dx.doi.org/10.5539/ijbm.v8n14p80

Constantine, J., Fernald, J. Robinson, J., Courtney, M. B. (2019) Best Practices Guidebook: Supporting Students' Self-Efficacy. Barbourville, KY. Bluegrass Center for Teacher Quality, Inc. Retrieved from https://eric.ed.gov/?id=ED592850

Cramer, R. J., Neal, T. M., & Brodsky, S. L. (2009). Self-efficacy and confidence: Theoretical distinctions and implications for trial consultation. *Consulting Psychology Journal:*

Practice and Research, 61(4), 319–334. doi:10.1037/a0017310. Retrieved from https://www.researchgate.net/publication/230558944_Self-efficacy_and_confidence_Theoretical_distinctions_and_implications_for_trial_consultation.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications. Retrieved from http://www.ceil-conicet.gov.ar/wp-content/uploads/2015/10/Creswell-Cap-10.pdf

Derbali,F.Z.(2019) .the importance of metacognitive strategies in improving EFL learners listening comprehension (Master thesis, Mohamed kheider university of Biskra, Algeria). Retrieved from http://archives.univ-biskra.dz/handle/123456789/15229

Dhankar, A., Kaur, N., Mjumdar, O., & Grover, S. (2021). Role of Self-Efficacy in Dealing with Drug Use. *The International Journal of Indain Psychology, 9(1).* doi: 10.25215/0901.157 . Retrieved from https://ijip.in/wp-content/uploads/2021/04/18.01.157.20210901.pdf

Durukan, N., Kızkapan, O., & Bektaş, O. A. (2022). Metacognition Enhancing Strategies in Science Classrooms: Science Teachers' Practices. i.e.: Inquiry in Education, 14(1), Article 5.

Ede, A., Hwang, S., & Feltz,D. (2011). Current directions ib self-efficacy research in sport. *Revista de Iberoamericana de Psicologia sel Ejercicio y el Deporte*. 6 (2), 181–201. ISSN: 1886-8576. Retrieved from https://dialnet.unirioja.es/descarga/articulo/3857498.pdf

Eysenck, M. W., & Groome, D. (2015). *Cognitive Psychology: Revisiting the Classic Studies*. SAGE.

Fakhrou, A., & Habib, L. H. (2021). The relationship between academic self-efficacy and academic achievement in students of the Department of Special Education. *International Journal of Higher Education*, *11*(2), 1. doi:10.5430/ijhe.v11n2p1

Flanigan, A., Sudbeck, K., Beavers, J., McBrien, S., & Sierk, J. (2016). The Nebraska Educator, Volume 3: 2016 (complete issue).

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive–developmental inquiry. *American psychologist*, *34*(10), 906. Retrieved from https://psycnet.apa.org/record/1980-09388-001

Garaika, G., & Margahana, H. (2019). Self efficacy, self personality and self confidence on entrepreneurial intention: Study on young enterprises. *Journal of Entrepreneurship Education*, 22(1).doi: 1528-2651-22-1-275. Retrieved from https://www.abacademies.org/articles/Self-efficacy-self-personality-and-self-confidence-on-entrepreneurial-intention-1528-2651-22-1-275.pdf

Grover,V.K. (2015). Research Approach: An Overview. *Golden Research Thought*,4(8), ISSN: 2231-5063. Retrieved from https://www.researchgate.net/publication/273352276_RESEARCH_APPROACH_AN_OVERVIEW

Hacker, D. J., Dunlosky, J., & Graesser, A. C. (Eds.). (2009). *Handbook of metacognition in education*. Routledge/Taylor & Francis Group. Retrieved from https://psycnet.apa.org/record/2010-06038-000

Hayat, A. A., & Shateri, K. (2019). The role of academic self-efficacy in improving students' metacognitive learning strategies. *Journal of Advances in Medical Education &*

Professionalism, 7(4), 205. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6820011/

Hendricks, K. S. (2016). The sources of self-efficacy. *Update: Applications of Research in Music Education, 35*(1), 32-38. doi:10.1177/8755123315576535. Retrieved from https://journals.sagepub.com/doi/abs/10.1177/8755123315576535

Holec, H. (1981). Autonomy in Foreign Language Learning. Pergamon, Oxford.

Horaničová, Z. (2006). The influence of cognitive psychology in a second language instruction. *Department of Foreign Languages, PJ Šafárik University, Košice, Slovakia*, 153-156. Retrieved from https://www.phil.muni.cz/angl/thepes/thepes_01_17.pdf

Hsu, D. K., Wiklund, J., & Cotton, R. D. (2017). Success, failure, and entrepreneurial reentry: An experimental assessment of the veracity of self–efficacy and prospect theory. *Entrepreneurship Theory and Practice*, *41*(1), 19–47. doi:10.1111/etap.12166.

Huong Lan, N. T. (2020). Metacognitive skills with mathematical problem - solving of secondary school students in Vietnam - A case study. *Universal Journal of Educational Research*, *8*(12A), 7461–7478. doi:10.13189/ujer.2020.082530

Khikmah, N.A.N. (2018). Metacognitive strategies awareness among EFL learners listening comprehension (Bachelor thesis, Islamic university Surabaya, Indonesia). Retrieved from https://core.ac.uk/reader/151617080

Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.

Kumar, C., & Gautam, A. (2020). Correlation. *Encyclopedia of Animal Cognition and Behavior*, 1(4). doi:10.1007/978-3-319-47829-6_214-1. Retrieved from https://www.researchgate.net/publication/343682955

Lan, H., & Thi, N. (2020). Metacognitive Skills with Mathematical Problem-Solving of Secondary School Students in Vietnam-A Case Study. *Universal Journal of Educational Research*, *8*(12A), 7461-78.

Lee, R. (2013). A Quasi-Experimental Intervention to Improve Self-Efficacy for Eating and Exercise Weight Management: Short-Term Effects. *Journal of Nutritional Disorders & Therapy*,3(1), 1-7.doi 10.4172/2161-0509.1000121. Retrieved from https://www.researchgate.net/publication/234840074_A_Quasi-Experimental_Intervention_to_Improve_Self-Efficacy_for_Eating_and_Exercise_Weight_Management_Short-Term_Effects.

Livingston, J. A. (2003). Metacognition: An Overview. Retrieved from https://files.eric.ed.gov/fulltext/ED474273.pdf

M. Rahimi and M. Katal, "Metacognitive strategies awareness and success in learning English as a foreign language: An overview," *Procedia - Social and Behavioral Sciences*, vol. 31, Dec 2012, pp. 73-81. doi:10.1016/j.sbspro.2011.12.019

Maddux, J. (2012). Self-Efficacy: The Power of Believing You Can. The Handbook of positive Psychology. Retrieved from https://www.researchgate.net/publication/285193896_Self_Efficacy_The_Power_of_Believing_You_Can.

Mahdavi, M. (2014). An overview: Metacognition in education. *International Journal of Multidisciplinary and current research*, *2*(6), 529-535. Retrieved from

Malureanu, A., Panisoara, G., & Lazar, I. (2021). The relationship between self-confidence, self-efficacy, grit, usefulness, and ease of use of elearning platforms in corporate training during the COVID-19 pandemic. *Sustainability, 13*(12), 6633. doi:10.3390/su13126633. Retrieved from https://www.researchgate.net/publication/352324834

Marantika, J. (2021). Metacognitive ability and autonomous learning strategy in improving learning outcomes. Journal of Education and Learning (EduLearn), 15, 88-96.

Markway, B. G., & Ampel, C. (2018). *The self-confidence workbook: A guide to overcoming self-doubt and improving self-esteem*. Emeryville, CA: Althea Press. Retrieved from https://icrrd.com/media/01-11-2020-204705The%20Self%20Confidence%20Workbook.pdf

Martinek, D., & Kipman,U. (2016). Self-determination, self-efficacy and self-regulation in school: A longitudinal intervention study with primary school pupils. *Sociology Study, 6*(2). doi:10.17265/2159-5526/2016.02.005. Retrieved from https://www.researchgate.net/publication/310781121

Messaoudi, K. (2021). The importance of metacognitive strategies for developing speaking skills in the classroom (master thesis, Mohamed Kheider University of Biskra, Algeria). Retrived from http://archives.univ-biskra.dz/handle/123456789/16124

Miller, G. A. (2003). The cognitive revolution: a historical perspective. *Trends in cognitive sciences, 7*(3), 141-144. Retrieved from https://www.cs.princeton.edu/~rit/geo/Miller.pdf.

Mouton, A., Hansenne, M., Delcour, R., & Cloes, M. (2013). Emotional intelligence and self-efficacy among physical education teachers. *Journal of Teaching in Physical Education, 32*(4), 342–354. doi:10.1123/jtpe.32.4.342. Retrieved from

https://www.researchgate.net/publication/264626330_Emotional_Intelligence_and_Self-Efficacy_Among_Physical_Education_Teachers

Nuvitasari, I., Rizka Safriyani, R., & Rakhmawati, R. (2018). Students' self-efficacy in public speaking program at SMKN 1 Lamongan. *Proceedings of the International Conference on English Language Teaching (ICONELT 2017)*. doi:10.2991/iconelt-17.2018.52. Retrieved from https://www.atlantis-press.com/article/25889021.pdf

Obilor, E. I. (2023). Convenience and Purposive Sampling Techniques: Are they the Same?. *International Journal of Innovative Social & Science Education Research*, *11*(1), 1-7. Retrieved from https://seahipaj.org/journals-ci/mar-2023/IJISSER/full/IJISSER-M-1-2023.pdf

Oxford, R. (2001). Language learning styles and strategies: An overview. Retrieved from https://www.researchgate.net/publication/254446824_Language_learning_styles_and_strategies_An_overview

Pashayev, E. (2022). 1. Critical review of the Behaviorism theory. *Teacher Education and Special Education The Journal of the Teacher Education Division of the Council for Exceptional Children.* Retrieved from https://www.researchgate.net/publication/358729710_1_Critical_review_of_the_Behaviorism_theory

Peteranetz, M. S. (2016). Fostering metacognition in K-12 classrooms: Recommendations for practice.

Rahimi, M., & Katal, M. (2012). Metacognitive strategies awareness and success in learning English as a foreign language: an overview. *Procedia-Social and Behavioral Sciences, 31*, 73-81.

Schraw, G., & Kauffman, D., & Lehman, S. (2006). Self-Regulated Learning. 10.1002/0470018860.s00671. Retrieved from https://www.researchgate.net/publication/229971208_Self-Regulated_Learning

Stajkovic, A., Luthans, F. (2002). Social cognitive theory and Self-efficacy: Implications for motivation theory and practice. In R.M. Steers, L.W. Porter, & G.A., Bigley (Eds.), Motivation and Work Behavior (7th ed., pp. 126-140).

Sternberg, R. J. (1996). *Cognitive psychology*. Harcourt Brace College Publishers.

Thorp, C.(2021). Fostering Self-Efficacy in the Classroom. Retrieved from https://digitalcommons.sacredheart.edu/cgi/viewcontent.cgi?article=1648&context=acadfest

Usher, E. L., & Pajares, F. (2008). *Sources of Self-Efficacy in School: Critical Review of the Literature and Future Directions. Review of Educational Research, 78(4), 751–796.* doi:10.3102/0034654308321456. Retrieved from https://sci-hub.se/10.3102/0034654308321456.

Weinstein, C. E., Husman, J.,& Dierking, D.R. (2000). Self-regulation interventions with a focus on learning strategies. Academic press. Retrieved from http://cachescan.bcub.ro/e-book/E1/580704/727-783.pdf

Wibowo, L.A., Sihaliho, L.,& Rahayu, A. (2018). The role of self-efficacy in improving student metacognitive skills. *Jurnal Pendidican Bisnis dan Manajamen,*4(3), 126-136.

Xiao, S. (2018). *The importance of self-efficacy to English Proficiency of Middle school students in China* (Master thesis, University of Wisconsin-Platteville, United States). Retrieved fromhttps://minds.wisconsin.edu/bitstream/handle/1793/78562/XiaoShuya.pdf?sequence=3&isAllowed=y.

Zhang, Y., & Jin, S. (2014). The impact of social support on postpartum depression: The mediator role of self-efficacy. *Journal of Health Psychology*, *21*(5), 720–726. doi:10.1177/1359105314536454.

Zimmerman, B. J. (2002a). Becoming a self-regulated learner: An overview. *Theory Into Practice*, *41*(2), 64–70. doi:10.1207/s15430421tip4102_2. Retrieved from https://www.leiderschapsdomeinen.nl/wp-content/uploads/2016/12/Zimmerman-B.-2002-Becoming-Self-Regulated-Learner.pdf

Zimmerman, B., & Schunk, D. (2003). Educational psychology: A century of contributions: A project of division 15 (educational psychology) of the American Psychological Society. Mahwah, New Jersey: Lawrence Erlbaum associates0..

Zlatanovic, L. (2016). Self-efficacy and health behaviour: Some implications for medical anthropology. *Glasnik Antropoloskog Drustva Srbije*, (51), 17–25. doi:10.5937/gads51-12156. Retrieved from https://scindeks-clanci.ceon.rs/data/pdf/1820-7936/2016/1820-79361651017Z.pdf.

Appendices

Appendix A: GSE and MAI

Investigating the Correlation between English as a Foreign Language students' Self-Efficacy beliefs and their use of Metacognitive Strategies

Case of Master students at Biskra University

Section One: Self-Efficacy

* Self-efficacy is defined as" the ability to define a goal, persevere, and see oneself as capable".

Instructions:

Please give the responses that best describe you following the provided scale below:

1= Not at all True
2= Barely True
3= Moderately True
4= Exactly True

* Glossary:
_ Accomplish: achieve or complete something successfully
_ Resourcefulness: the ability to find quick and clever ways to overcome difficulties.
_Unforeseen: not predicted
_Handle (verb): manage, cope, or deal with something.

1. I can always manage to solve difficult problems if I try hard enough.

2. If someone opposes me, I can find the means and ways to get what I want.

3. It is easy for me to stick to my aims and accomplish my goals.

4. I am confident that I could deal efficiently with unexpected events.

5. Thanks to my resourcefulness, I know how to handle unforeseen situations.

6. I can solve most problems if I invest the necessary effort.

7. I can remain calm when facing difficulties because I can rely on my coping abilities.

8. When I am confronted with a problem, I can usually find several solutions.

9. If I am in trouble, I can usually think of a solution.

10. I can usually handle whatever comes my way.

Section Three: Metacognitive strategies

*Metacognitive strategies are the techniques that help students develop an awareness of their thinking processes as they learn something.

Instructions

You are required to check "True" or "False" according to what best describes you concerning how to plan, monitor and evaluate. (Metacognitive strategies use).

A. Planning:

***** planning refers to what and how you need to learn something.

4. I pace myself while learning in order to have time.

6. I think about what I really need to learn before I begin a task.

8. I set specific goals before I begin a task.

22. I ask myself questions about the material before I begin.

23. I think of several ways to solve a problem and choose the best one.

42. I read instructions carefully before I begin a task.

45. I organize my time to best accomplish my goals.

B. Monitoring:

* monitoring refers to how learners track their learning process and if they are checking the effectiveness of the used strategies.

1. I ask myself periodically if I am meeting my goals.

2. I consider several alternatives to a problem before I answer.

11. I ask myself if I have considered all options when solving a problem.

21. I periodically review to help me understand important relationships.

28. I find myself analyzing the usefulness of strategies while I study.

34. I find myself pausing regularly to check my comprehension.

49. I ask myself questions about how well I am doing while learning something new.

C. **Evaluating**:

* evaluating involves reflection on how well you met your learning objectives after completing a unit of study.

7. I know how well I did once I finish a test.

18. I ask myself if there was an easier way to do things after I finish a task.

24. I summarize what I have learned after I finish.

36. I ask myself how well I accomplish my goals once I am finished.

37. I ask myself if I have considered all options after I solve a problem.

49. I ask myself if I learned as much as I could have once I finished a task.

Appendix B: Students' Questionnaire

Mohamed Kheider University of Biskra
Department of foreign languages
Devision of English

Students' Questionnaire:

Dear respondents ;

This questionnaire was designed to collect data for the accomplishment of a master dissertation on "The Relationship between Self-efficacy beliefs and Metacognitive Strategies use among EFL learners." In this regard, you are kindly invited to answer it by ticking (√) the appropriate choice(s) and attentively read and answer the corresponding questions.

Thank you for your contribution, time and effort.

Section one : General information

Q1. The reason behind choosing to study English as a major at University was:

a. You were passionate and interested in learning English ☐
b. You were good at English at high school ☐
c. English is an international language ☐
d. Someone else's recommendation (parents, friends…so on) ☐
e. It seemed a good choice in a list of unwanted choices. ☐

Q2. How would describe your level at English

a. Beginner ☐
b. Pre-intermediate ☐
c. Intermediate ☐
d. Advanced ☐

Q3. According to you, your **experience** at learning English for the past **3 / 4** years was:

- **Choose only one answer for each statement!**

	Strongly disagree	**Disagree**	**Neutral**	**agree**	**Strongly agree**
1. English was useful in many ways					
2. Inspiring (I became open to new things.)					
3. Challenging (I faced some difficulties while learning)					
4. It allowed me to learn the skill of how to think critically					

Section two: Metacognitive learning strategies

*Metacognitive strategies are the techniques that help students develop an awareness of their thinking processes as they learn something.

*In metacognitive strategies there are Planning, monitoring and Evaluating as the basic three strategies.

*** Reminder: multiple answers are accepted!**

Q4. How would you describe yourself as a foreign language learner?

a. goal oriented and strategic ☐
b. Responsible for my own learning ☐
c. Flexible in managing my learning activities ☐
d. Aware of my learning process ☐

Q5. Is it important to you to **stay focused** while doing a task or a homework?

YES ☐ **NO** ☐

PLEASE say why?
……
……
……

Q6. In your opinion, being **aware** of **what and how you are learning** can influence your performance in class in terms of:

a. Recognizing my own strengths and weaknesses while learning. ☐
b. Increasing my level of autonomy (self-reliance). ☐
c. Helping me address the faced challenges the best ways possible. ☐
d. Identifying which learning strategies work best for me. ☐

Q7. Which metacognitive strategy are you aware of using?

a. Planning (what and how you need to learn something) ☐
b. Monitoring (observing and checking the progress while learning) ☐
c. Evaluating (a reflection on how well you met your learning objectives) ☐

Q8. Do you usually think of a **<u>Plan</u>** before you start doing an activity?

YES ☐ **NO** ☐

If "YES", please tell us briefly how you manage to plan?
……...
……
.....

Q9. As a learner you sometimes pause/ stop to check whether:

a. you understood ideas well ☐
b. Seek feedback (teachers' feedback for example) ☐
c. Check the effectiveness of the learning strategies being used ☐
d. Correct and evaluate your work ☐
e. Reflect on and reconsider your answers ☐

Section three: The relationship between Self-Efficacy and metacognitive strategies use

*__Self-efficacy is:__ your positive or negative beliefs about your own capabilities.

Q10. Is the way you think of yourself is affecting your academic performance?

YES ☐ **NO** ☐

Q11. Do you believe that Self-efficacy is important in English language learning journey?

YES ☐ **NO** ☐

Q12. Do you usually doubt your own capabilities while choosing the right strategy to study?

- **Choose from the table below to answer this question.**

	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1. I feel I'm not capable of choosing the right strategies to use					
2. I Feel I'm not confident enough to choose wisely what best suit my studies					
3. I Feel that I'm capable of choosing the right strategies but not able to use them appropriately					
4. I do					

believe in my abilities in choosing the right strategies					

Q13. Do you think there is a relationship between self-efficacy and metacognitive learning strategies?

YES ☐ **NO** ☐

If yes, what kind of relationship:

☐ Self-efficacy promotes the use of metacognitive strategies.

☐ Self-efficacy is an obstacle in the face of metacognitive strategies use.

Q14. Please briefly say why your level of confidence can influence the way you choose to deal with your studies:

……
……
……
…….

"Thank you"

Appendix C: Students' Questionnaire Opinionnaire

1. HOW did you find the questionnaire?

……
……
……

2. Is there any unclear question in this questionnaire?

YES ☐ NO ☐

*IF YES? Please provide the number of the question(s) and why it was unclear to you?

……
……
……

ملخص الدراسة

تم إجراء العديد من التحقيقات العلمية لفهم تأثير المتغيرات الشخصية للمتعلمين على أدائهم. يبدو أن التركيب النفسي للكفاءة الذاتية يؤثر على الطريقة التي يدير بها المتعلمون متطلبات التعلم الخاصة بهم ، يمثل كيف يواجهون التحديات ، وينجحون في النهاية ؛ ومع ذلك ، لا يزال يتم التغاضي عن طبيعة العلاقة بين معتقدات الكفاءة الذاتية واستخدام الاستراتيجيات ما وراء المعرفية بسبب الغموض الناتج عن هذين المتغيرين المجردين. أسست الدراسة الحالية استقصاءها على فهم طبيعة العلاقة بين الكفاءة الذاتية والاستراتيجيات ما وراء المعرفية المستخدمة بين عينة من 25 طالب ماجستير في جامعة بسكرة. كونها متوافقة مع الإجراءات المنهجية المختارة ، تم فحص المتغيرات قيد التحقيق باتباع نهج طريقة مختلطة مع تصميم تسلسلي توضيحي. كما تطلب التصميم المختار، تم جمع البيانات باستخدام ثلاثة أدوات رئيسية لجمع البيانات ، وهي مقياس الكفاءة الذاتية العام ، وجرد الوعي ما وراء المعرفي ، واستبيان للطلاب. تم حساب البيانات التي تم الحصول عليها إحصائيا باستخدام برنامج آس بي اس اس الاصدار 19 لتحليل البيانات وتفسيرها بشكل كامل. و كشفت النتائج المتحصل عليها من خلال التحليل أن هناك علاقة ضئيلة أو معدومة بين استخدام الكفاءة الذاتية و استخدام استراتيجيات ما وراء المعرفية. علاوة على ذلك ، سعت الدراسة الحالية إلى بناء استنتاج بناءا على اجوبة المشاركين حيث أشار معظمهم إلى أهمية وتأثير الكفاءة الذاتية على الطريقة التي يستخدمون بها الاستراتيجيات. وبالتالي ، أظهرت نتائج هذه الدراسة أن الكفاءة الذاتية هي عامل رئيسي في استخدام استراتيجيات ما وراء المعرفية مما يمهد الطريق لمعلمي اللغة الإنجليزية كلغة أجنبية للتركيز على التعريف بالكفاءة الذاتية للمتعلمين واتخاذ خطوات عملية نحو تعليم الاستراتيجيات ما وراء المعرفية .