CHAPTER 2

LITERATURE REVIEW

The study evaluates the effects of meta-cognitive strategy training on learners' writing ability and learner autonomy

Meta-cognitive strategy training focuses on meta-cognitive strategies related to planning, monitoring, evaluation and planning for future improvements of learners' writing, based on Oxford (1990), and deals with self -evaluation, the identification of problems, and finding solutions. Meta-cognitive strategy training includes techniques such as reflective practice, mind-mapping, paragraphing, rubric use, peer-editing and self-editing. All of which are discussed in further detail in the following review.

Learners' writing ability, which is their ability of to write essays that successfully reflect the criteria stated in the writing rubric, and that reflects the use of meta-cognitive strategies, are also under scrutiny.

Learning Autonomy relates to the second main objective of the study, which is the evaluation of meta-cognitive strategy training on learners' autonomy as learners, referring to learners' ability to plan their own learning by using four meta-cognitive strategies, namely planning, monitoring, evaluating and planning for future improvement. These strategies are discussed, together with reflective

practice, which is a technique used in training learners in the use of these meta-cognitive strategies.

2.1. Meta-cognition and Strategies

2.1.1 Definition of Meta-cognitive Strategies

Meta-cognitive Strategies are strategies which learners focus on the development of their own thinking processes, enabling them to identify and solve learning problems by themselves. An ability of learners to use these strategies successfully, imply a degree of learner autonomy.

The Components of Meta-cognitive Strategies include knowledge of the task, learning strategies, and that of the learners themselves. The meta-cognitive experiences of self-management this study focuses on, include:

- *Planning*: (using a mind-map and/or a writing rubric to plan essays; to identify and solve problems in advance, to be selective; goal prioritization and content structuring and organization)
- *Evaluation*: (learners judging their own progress; judging own writing ability and outcomes; being conscientious of the planning and monitoring of performance; of completing tasks and the attainment of goals)
- *Monitoring*: (monitoring the clarity of content in essays; monitoring language use, content organization, and sentence control; error-monitoring; performance-monitoring; strategy use; problem-solution)

- *Planning for Future Improvement*: (using current knowledge of strategies and experience from mistakes and tools such as a writing rubric)

2.1.2 Classification of Meta-cognitive Strategies

Strategy groups are organized using a factor analysis. This procedure allows us to divide the instrument into dimensions usually referred to as subscales or factors. Six subscales were developed (Oxford & Ehrman, 1995), with the intent that each subscale would have an adequate number of items to facilitate more in-depth understanding of the learning strategies for ESL/EFL. These subscales included:

1. Memory strategies, such as grouping, imagery, rhyming, and structured reviewing.

2. Cognitive strategies, such as reasoning, analyzing, summarizing (all reflective of deep processing), as well as general practicing.

3. Compensation strategies (to compensate for limited knowledge), such as guessing meanings from the context in reading and listening and using synonyms and gestures to convey meaning when the precise expression is not known.

4. Meta-cognitive strategies, such as paying attention, consciously searching for practice opportunities, planning for language tasks, self-evaluating one's progress, and monitoring errors.

5. Affective (emotional, motivation-related) strategies, such as anxiety reduction, self-encouragement, and self-reward.

6. Social strategies, such as asking questions, cooperating with native speakers of the language, and becoming culturally aware.

From the above-mentioned strategies, the study incorporates mainly on *Meta-cognitive strategies*, focusing on learners consciously searching for practice opportunities, planning for language tasks and writing activities, and monitoring and evaluating progress and errors.

2.2. Meta-Cognitive Strategy and Learner Autonomy

The following focus on writing ability and meta-cognitive skills linking reflective practice to application and learner autonomy.

2.2.1 Definition of Learner Autonomy

Learner Autonomy is the ability of learners to plan their own learning by using four meta-cognitive strategies, namely planning, monitoring, evaluating and planning for future improvement.

Meta-cognition literally means *big thinking*. Thinking about thinking. During this process you are examining your brain's processing. Teachers work to guide learners in becoming more strategic thinkers by helping them understand the way process information. Questioning, visualizing and synthesizing information are all ways in which reflective practitioners can examine their thinking process. Through scaffolding and reciprocal teaching, learners are able to practice the

skills that lead to these overt acts becoming automatic (Fountas and Pinnell, 2000).

Because some meta-cognitive strategies may appear obvious or taken for granted, some teachers might believe that students in intermediate grades begin the school year cognizant of these strategies and experienced in using them, while most students are in fact unaware of the meta-cognitive process. Yet, according to Fogarty(1994),students really learn only through "thinking about thinking" and using meta-cognitive strategies. With that in mind, Fogarty (1994) suggests that the following *reasons* for teaching meta-cognitive strategies should be considered:

To develop deeper understanding of themes or topics for writers to learn or "construct knowledge" (using cognitive strategies) through a variety of methods, and then *recognize* (using meta-cognitive strategies) when they lack understanding and consequently choose the right tools to correct problems.

To take learners' thinking to a higher level, learners need opportunities to express themselves clearly. Small-group activities, especially those with guidance, may provide them with the right opportunities, as do reflective writing practice, which for the purposes of this study, was provided through a structured questionnaire.

According to Fogarty (1994), meta-cognition is a four-part process. To be successful thinkers and writers, learners must be mindful to observe the following meta-cognitive strategies (adapted from Fogarty, 1994):

1. Developing a plan before writing. Through techniques such as (mind-mapping, topic research, brain-storming activities and discussions) reasoning, analysis, and asking questions)

3. Evaluating their thinking (cognition) after doing writing activities. (By answering writing questionnaires, making journal entries, self-evaluation, error monitoring and practicing self- and peer-editing using a rubric), and finally

4. Planning for future improvement by recognizing problems and finding solutions.

In the socio-cultural view of autonomy, and according to Oxford (2003), *autonomy* is equal to *self-regulation,* which is gained through social interaction with a more capable mediating person in a particular setting. It can also occur through appropriate, meaningful interaction and internalization with books, technology and other means or activities such as reflective practice.

Agency refers to the power to control ones' learning through self-regulation. Autonomy is not the primary goal; it is participation (first peripheral and then more complete) in the community of practice. This is mediated through *cognitive apprenticeship* and in participating actively with expert practitioners. In the

language teaching classroom, and particularly in academic writing classes, such cognitive apprenticeship materialize in meta-cognitive strategy training, with the goal of providing learners with agency. Providing ways of strengthening learners' autonomy and writing ability in English.

Learner autonomy has also been defined as learners' acceptance of responsibility for their own learning and sharing in the decisions and initiatives that provide structure and direction to the learning process (Little,1995; 2000). Little (1995) further suggests that learners who take up responsibility for their learning are more likely to achieve their learning targets and more likely to maintain their motivation for learning in the first place. When students take greater responsibility for their learning, they achieve at higher levels because of the self-reliant, self-directed nature of their learning (Hom and Murphy, 1983). They are more motivated to learn, and are more efficient in their learning (Hom and Murphy, 1983), and better understand their strengths and weaknesses as learners, enabling them to leverage their strengths in learning situations (Blakey and Spence, 1990).

Little (2000) gives an example of autonomy in action, describing students working in groups and individually, on projects with different themes, taking responsibility for their own research and learning.

Similar projects have been launched by Bankowski (1999) in Hong Kong, who conducted research on promoting learner autonomy through project work, by giving out 25 project packages that provided the basis for first year undergraduates' independent research. The majority of students in her project favoured this approach and one of the reasons given was that it helped them to learn independently. He concludes that in order to facilitate students' skill and independence in handling research-related work, EAP teachers need to take a more active role in guiding learners and in helping them to make the transition from prior learning practices to the inquisitive and individualistic style of tertiary education.

The relevance of the above to this study is not only the importance of meta-cognitive strategy training in the translation between secondary and tertiary education, but also in the role of meta-cognitive strategies in enabling learners to become more autonomous, by teaching them the strategies they need to learn and write more independently. This can be done by using techniques such as reflective practice, mind-mapping, paragraphing, rubric use, peer-editing and self-editing.

Cotterall (1995) believes that autonomy in language learning is a desirable goal for philosophical, pedagogical and practical reasons. She points out though, that even for ESL practitioners who claim to believe in autonomy, many regularly subvert that goal by excluding learners from decisions about planning, theme,

topics, classroom rules, pace and the evaluation of tasks. Suggesting that a learner-centered approach promotes learner autonomy, and that through meta-cognitive strategy training and learner empowerment, learners would become the more autonomous writers in English.

Ho and Crookall (1995) suggest that learner autonomy should be understood, exercised and facilitated within the context of specific cultures, religious views and customs, and that teachers and curriculum developers should keep these consideration in mind. They have for instance designed a simulation to change the learning environment, to offer learners opportunities to make decisions and to override the Asian notion of authority, which makes learners passive receivers of knowledge. The target group was encouraged to speak out and share ideas, and cultural differences in teaching and learning were discussed. In a similar cultural setting, Yang (1998) reported how students were guided through the process of *self-assessment, planning and monitoring* which helped them become autonomous learners. It seems that in an Asian setting, learners have to be guided step by step towards autonomy, or provided with a framework which is far more restricted in scope compared to what Dickinson (1987) suggests, in terms of choosing instructional materials, setting and scheduling work on learning objectives. Teachers should thus be mindful in adapting their pedagogy in pace with the culture of the host nation, finding the best way to guide the learners on the pace of the self-actualization and learner autonomy.

2.3. Teaching Techniques that Enhance Meta-cognitive Strategies

The techniques discussed in the following section, include self-editing, peer-editing, types of feedback, mind-mapping, paragraphing and reflective practice. An important theme here, is allowing learners to critique and re-submit work, which enables them to learn from and apply instructor and peer feedback (Mourtos, 1997) through monitoring and evaluation. It also gives learners the opportunity to continue reflecting on material until they firmly understand it, as opposed to receiving a one-time grade and moving on to new material (Chance, 1997). Allowing for critique using a rubric, and for re-submission of drafts, learners improve the quality of their work, as work that is to be re-submitted is often held to a higher standard than the original work was (Armacost and Pet-Armacost, 2003). Learners are also encouraged to leverage their learning styles to best shift the focus of control from the instructor to themselves, important in getting students to take more responsibility for their learning (Felder and Brent, 1996). Additionally a review of the re-submitted work provides the instructor with an understanding of how feedback is being interpreted by the learner.

2.3.1 Self-editing

Proficient writers learn how to evaluate their own work, and improve through checking their own text, looking for errors and making sure that their ideas are conveyed clearly. Learners may initially use a writing rubric, which will help them to identify areas in their writing they still need to improve.

The Constructivist notion regarding self-editing, is of it being part of an active process by which learners construct new ideas and concepts based on their knowledge (Bruner, 1986). Learners are encouraged to analyze and interpret information, and use meta-cognitive strategies to recognize, notice and solve problems. In this way, self-assessment becomes part of the learning process, and allows learners to play a greater part in the assessment of their own progress.

Self-assessment can take many forms, such as in the context of writing conferences, discussions (whole-class or small-groups), reflective practice, self-assessment checklists or rubrics and teacher-student interviews. The idea is for the learners to gain from the process of processing feedback on their own work, and coming up with ways to improve on orchestrate positive change

These types of self-assessment share a common theme. They ask students to review their work and determine what they have learned and what problems or areas of confusion still exist. Although each method differs slightly, all should include enough time for students to consider and evaluate their progress. Thoughtfully, so that their planning for the future improvement (Oxford 1990) can be as thorough as possible, and they can gain so much as possible from the experiences.

When students understand the criteria for good work, through a thorough understanding of a writing rubric, before they start a writing task, they are more likely to meet those criteria. The key to this understanding is to make the criteria clear. This applies not only to writing, but also to all aspects of language instruction, and to the education in the broader sense.

2.3.2 Peer-editing

During peer-editing activities, the texts are interchanged and other students or peers do the evaluation. According to Oshima and Hogue (1997), the purpose of peer-editing is for the peer editor to suggest ways to improve the essay, as well as to gain experience in using the writing rubric. Both parties benefit from the exercise, gaining experience in rubric use and assessment, and gaining from the feedback they receive from their peer.

Peer evaluations of writing help learners to become aware of an audience other than the teacher. Other learners are asked to comment on what they liked or didn't like about the work, what they found unclear and what they would change or improve upon, so that these comments can be incorporated into the second draft. The teacher can also use the opportunity to give constructive feedback by commenting on the content and the organization of ideas, without yet giving a grade or correcting details.

2.3.3 Types of Feedback and Assessment

It takes a lot of time and effort to write, and so it is only fair that learners' writing is responded to suitably. Positive comments can help build learner confidence and motivation learners. Relevant types of feedback in this study include both feedback from peers and from the instructor. Through the use of the writing rubric used in this study (see appendix 5), learners may self-assess. This type of reflection may provide them with avenues toward future improvement and finding solutions to the problems.

Feedback in education

Considering the pastoral role of teachers, spending a fair amount of time and effort thinking about how to respond to learners, may be a worthwhile time investment. Some general types of feedback can be used in many types of student assessment:

Table 1: Types of feedback

Confirmation	Your answer was incorrect.
Corrective	Your answer was incorrect. The correct answer was Jefferson.
Explanatory	Your answer was incorrect because Carter was from Georgia; only Jefferson called Virginia home.
Diagnostic	Your answer was incorrect. Your choice of Carter suggests some extra instruction on the home states of past presidents might be helpful.
Elaborative	Your answer, Jefferson, was correct. The University of Virginia, a campus rich with Jeffersonian architecture and writings, is sometimes referred to as Thomas Jefferson's school.

(Adapted from Flemming and Levie, 1993.)

There are two main types of assessment, namely:

- *Summative assessment*, which is generally carried out at the end of a course or project. In an educational setting, summative assessments are typically used to assign learners a course grade.
- *Formative assessment*, which is generally carried out throughout a course or project. Formative assessment, also referred to as educative assessment, is used to aid learning. In an educational setting, a formative assessment might be a teacher, peer or the individual learner, providing feedback on learners' on their own work, and would not necessarily be used for grading purposes.

Summative and formative assessments are referred to in a *learning* context as 'assessment of learning' and 'assessment for learning' respectively.

A common form of formative assessment and also used by participants in this study is diagnostic assessment, which measures a learner's current knowledge and skills for identifying a suitable program of learning in order to facilitate skills or competency development. Self-assessment is a form of diagnostic assessment that involves students assessing themselves through monitoring and evaluating the state and purpose of progress.

Formative assessment is a self-reflective process that intends to promote learner attainment or strategy development (Crooks, 2001). Cowie and Bell (1999) define

it as the bi-directional process between teacher and student in order to enhance, recognise and respond to learning. Black and William (1998) consider an assessment 'formative' when the feedback from learning activities is actually used to adapt the training/instruction to meet learners' needs. Nicol and Macfarlane-Dick (2006) have done re-interpreting research on formative assessment and feedback and have shown how these processes can facilitate learner autonomy by helping learners take control of their own learning (self-regulated learning).

In the training field, formative assessment is described as assessing the formation of the learner. Facilitators do this by observing learners as they respond to questions, ask questions and interact with other learners, which are in themselves important language production activities or automizing learners' language use, and facilitating learner autonomy.

Although the key concepts of formative assessment, such as constant feedback, modifying instruction and information about learners' progress do not vary much among different disciplines or levels, the methods or strategies may differ. For example, researchers developed *generative activities* (Stroup et al., 2004) and *model-eliciting activities* (Lesh et al., 2000) that can be used as formative assessment tools in mathematics and science classrooms. Others developed strategies for computer-supported collaborative learning environments (Wang, 2007).

Formative assessment in Second or Foreign Language Education, as an ongoing assessment focusing on the process of language learning, helps teachers to check the current status of learners' language ability and if and how they use relevant strategies in writing and other tasks. It also creates an opportunity for learners to participate in modifying or planning for future improvement (Bachman and Palmer, 1996). Participation in their own learning increases learners' success and motivation to learn the target language. It also raises learner awareness of the target language, which may result in them resetting their goals, and expectations of themselves as learners. In the language classroom, short quizzes, reflective journals/questionnaires, rubrics or portfolios can be used as formative assessment instruments (Cohen, 1994).

According to Boston (2002), the benefits of formative assessment include the following:

- That teachers are able to determine what standards learners have already achieved
- That teachers can decide what minor modifications or major changes they need to make in the training/instruction.
- That it can assist teachers and current developers creating appropriate lesson-plans and activities for groups or individual learners

- That it provides teachers with the means to inform and advise students about their current progress in order to help them set goals for future improvement

2.3.4 Mind-mapping

Mind maps or 'clustering" (Oshima and Hogue, 1997), can be used for a multitude of purposes, and can effectively be used to help support and develop learners' writing skills. It is usually employed as a pre-writing activity, as a technique to produce, develop and organize ideas.

Mind-mapping is also a strategy for making notes on a topic, prior to writing an essay, or as a note-taking strategy. It is a structured strategy that illustrates the relationship between ideas in a way that is easy to follow and adjust.

Having an organized display of information from the outset of the writing process may help learners, as it is more easily converted into a draft. Participants in this study found it very useful in planning for writing tasks, and to incorporate the criteria/expectations set out by the writing rubric.

Making mind-maps, learners usually start with the topic at the centre and then generate a web of ideas from that, developing and relating or connecting these ideas with each other, as their minds make associations with more their ideas, facts or other detail they wish to incorporate in their writing/essay.

For the purposes of this study, mind-mapping was taught as a meta-cognitive strategy, which learners mainly used to organize their content and plan the order or their main paragraphs.

Mind-maps work well, as their visual design enable learners to see the relationship between ideas, and encourages them to group certain ideas and related concepts together as they proceed. Mind-maps can also be created in groups, since the discussion this engenders aids the production of new ideas and ways to organize content (Oshima and Hogue,1997).

The use of mind-maps was first introduced to participants in this study, through an activity whereby learners in pairs, interviewing each other and taking notes on aspects of the other person's life, interests, education, likes, dislikes and goals. These notes were organized/taken down in mind-map-format, and used to introduce the other person to the rest of the class. The main objective of the activity was to illustrate the variety of ways in which a mind-map can be used, namely for note-taking, organizing, and as a easy-to-follow format for notes used in a presentation.

Traditionally, students are given a topic to write about. In contemporary, learner-centered classrooms, learners may prefer to choose their own topics, which they may have more knowledge of, and greater interest in the task. During semi-

structured interviews which, according to Oxford (1990), are useful for gathering information on learners' strategy use, it has become clear that although learners sometimes find it hard to come up with an original topic, they feel that their writing on a topic of their own choosing is better than one that has been prescribed to them. In the order to facilitate the development of autonomy in learners, it is important to not only give them options and choices, but also to give them creative freedom.

The mind-map strategy can be used to explore most topics, though discursive essays and narrative work, as they front students' ideas and lend themselves to discussing ideas in groups. Learners researching a topic can also plan the structure and order of sub-topics for their essays, using mind-maps.

The mind-maps used in this study, are image-centered diagrams that represent connections between ideas. By presenting these connections in a radial, non-linear graphical manner, it encourages a brainstorming approach to organizational tasks, establishing an intrinsically appropriate or relevant conceptual framework to work in. Assisting learners in organizing the content of their writing, and planning resulting in clearer and more logical essays.

Ideas were arranged according to the importance of the concepts and organized into groupings, branches, or areas. In my experience this formulation of the structuring of information, aids the recall of learners' schema.

The semantic network was developed as a theory (Nast, 2006) to understand human learning, which developed into mind-maps by Dr. A. Collins and M. R. Quillian during the early 1960s. People have been using image-centered radial graphic organization techniques, also referred to as mental or generic mind-maps or spider-grams, for centuries. Mostly in areas such as engineering, psychology and education.

Buzan (2000) argues that traditional outlines rely on the reader to scan the page from left to right and from top to bottom, whilst what actually happens is that the brain will scan the entire page in a non-linear fashion. He also uses popular assumptions about the cerebral hemispheres in order to promote the exclusive use of mind-mapping over other forms of note making and planning techniques. During the course of this study, learners have been taught note-taking skills through the means of using mind-maps, as well as drawing up their notes for presentations, using the same format. Those who have tried it were surprised at how much easier it is to maintain the flow of their presentations using this format.

Mind maps have many applications in personal, family, educational and business situations, including note-taking, brainstorming (wherein ideas are inserted into the map around the centre node, without the implicit prioritization that comes from hierarchy or sequential arrangements and wherein grouping and organizing

is reserved for later stages), summarizing, revising, and general clarifying of thoughts.

Buzan (2000) suggests using the following foundation structures for mind-mapping:

- Start in the centre with an image of the topic
- Use images, symbols, codes and dimensions throughout the mind-map
- Develop your own personal style of mind-mapping
- Use emphasis and show associations in your mind-map
- Keep the mind-map clear by using radial hierarchy, numerical order or outlines to embrace your branches

Scholarly research on mind-maps in learning, according to Buzan (2000), claims that the mind-map is a vastly superior note taking method, because it does not lead to the alleged 'semi-hypnotic trance' state induced by other note taking forms. There are merits in applying a wide range of graphic organizers, and it follows that the mind-map, specifically, is not equally suited to all learning tasks. It is however widely used in planning writing and in note-taking.

Scholarly research by Farrand, Hussain, and Hennessy (2002) found that the mind map technique has a limited but significant impact on recall, in undergraduate students (a 10% increase over baseline for a 600-word text) as compared to preferred study methods (a -6% increase over baseline). This

improvement was only robust after a week for those in the mind map group, and there was a significant decrease in motivation compared to the subjects' preferred methods of note taking. They suggested that learners preferred to use other methods because using a mind-map was an unfamiliar technique, and its status as a "memory enhancing" technique engendered reluctance to apply it. Pressley, Van Etten, Yokoi, Freebern, and Van Meter (1998) found that learners tended to learn far better by focusing on the content of learning material rather than worrying over any one particular form of note taking.

Applied to essay planning, brainstorming and note taking, the technique received positive feedback from participants in this study. Mind-mapping correlates with aspects such as 'paying attention' and 'planning for language tasks' in meta-cognitive strategies, as noted by Oxford and Ehrman (1995), and in developing a plan before writing, as suggested by Fogarty (1994). Oxford (1990) has also highlighted the use of mind-mapping as a technique in "planning", which is the first of the meta-cognitive strategies this study is based upon.

2.3.5 Presentations

This three-tier essay format is also applied to *speechmaking*, making it easier for learners to plan and deliver class presentations, should they wish to use this format. Although some prefer to write a draft and then refine the material, some prefer to simply use a mind-map. It does however provide a springboard for

presenting essays to peers, in a clear and organized manner. Most importantly in content organization and clarity in writing.

2.3.6 Reflective Practice

Student reflection is a valuable tool that allows learners to get the most from their education and related activities. It sets the scene for and creates on awareness of and capacity for life-long learning. For the purposes of this thesis, reflective practice was employed *to identify the meta-cognitive strategies used by learners.*

A number of key thinkers such as Dewey (1933); Boud, Keough and Walker (1985) and Schon (1987), have shaped the theory of reflective practice. A few definitions include:

- "...reflection is about maximizing deep and minimizing surface approaches to learning." (Hinett, 2002).
- "A reflection in a mirror is an exact replica of what is in front of it. Reflection in professional practice, however, gives us back, not what is, but what might be, an improvement on the original." (Biggs, 1999).
- "Reflection is an important human activity in which people recapture their experience, think about it, mull it over and evaluate it. It is this working with experience that is important in learning." (Boud *et al.*,1985).

Reflective study stands central in this study. The writing questionnaire is designed to help learners reflect on their strategy use, and by reflecting on their

practice and implementation of meta-cognitive strategies, learners become more aware of what they do and how they plan their writing.

Authors such as Moon (2001) and Hinett (2002), make the link between reflection and deep learning, whilst Kolb (1984) gives reflection a key role in his cycle of experiential learning.

Reflection provides a bridge between experiencing and understanding or learning, or deepens learning. The act of reflecting is one that causes us to make sense of what we have learned, why we learned it, and how that particular increment of learning took place. Reflective practice is about linking one increment of learning to the wider perspective of learning – with an aim of seeing the bigger picture.

Reflective practice makes the above applicable to the context of language learning, the evaluation of learners' writing abilities and in becoming more autonomous.

The important question of the value of reflection has been raised by McLaughlin (1999), asks whether 'reflection' is valued as an end in itself or as a means to other ends. For the purposes of this study, reflection is valued for its ability to raise learners' awareness of their use of strategies, as well as for its role in identifying the strategies learners use in their writing.

McLaughlin (1999) continues by saying that if reflection is valued because of the quality of judgments achieved or aimed for, attention focuses on the 'content' of reflection. This raises the question of the criteria that can be invoked for adequate reflective judgment. If reflection is valued because of the action to which it leads, a number of questions arise: does being reflective mean merely thinking about one's writing (activities) or *doing something about it*?
In light of the four meta-cognitive strategies this study focuses on, namely *planning*, *monitoring*, *evaluation* and *planning for future improvement*, the purposes of reflective practice in this case, is raising awareness of learning and progress, and to facilitate future improvements.

McLaughlin explains that if reflection is to be used in a meaningful way for learning, it requires *attention*. It is important to clarify what we mean by reflection (Moon, 1999), the quality of reflection (Schön, 1983; Barnett, 1997) and its impact on learning (Moon, 2004; Hinett, 2003), strategy use in writing, and learner autonomy. Attending to such issues forms the partial focus of this study, and of relevant research done by Maclellan (2004), Orland-Barak (2005) and Dysthe and Engleson (2004).

Most recently Davis (2006) in a study on reflection among pre-service elementary school teachers has identified various taxonomies of reflection. He makes a clear distinction between *productive* and *unproductive* reflection. The latter is

descriptive, lacking analysis and comprises disconnected ideas, while productive reflection Davis claims, is more likely to support learning and involves integration and analysis.

Throughout the literature, reference is made to the four levels of reflection, namely *technical*, *descriptive*, *dialogic* and *critical* (Hatton and Smith, 1995).

1. Technical reflection is described as 'decision-making about immediate behaviours or skills'.
2. Descriptive reflection is defined as 'analyzing one's performance and giving reasons for actions taken'. Technical and descriptive reflections do *not* require the use of explicit criteria to evaluate different viewpoints (apart from the criterion of personal preference). 'Knowledge replication' as opposed to 'knowledge generation' tends to dominate.
3. Dialogic reflection is more demanding because the logical strength of a particular view is considered and objections to that view are understood; our assumptions and beliefs are questioned. Hatton and Smith (1995) describe it as 'hearing one's own voice and/or exploring alternative ways to solve problems in a professional situation.'
4. Critical reflection involves a range of criteria, norms and value positions by which to evaluate the adequacy or reliability of a particular view. It is 'thinking about the effects upon others of one's actions, taking account of social, political and/or cultural forces...'

Maclellan's study of academic essays (Maclellan, 2004) suggests that reflective writing has the potential to trigger learning and that there are distinctive forms of reflection that represent a developmental hierarchy. Defining developmental differences in the quality of reflection can offer greater distinction of meaning to inform students in their own learning.

Reflective practice may develop learners' meta-cognitive skills, such as *planning for future improvement*, and assisting them in *evaluating* their own work and *monitoring* their own progress, based on Oxford (1990).

During the course of this study, learners were given four opportunities to reflect on their progress, by contemplating and answering a writing questionnaire (*see Appendix 4*), which also aims to extrapolate information on learners' use of meta-cognitive strategies and of their autonomy as learners. Learners' responses further relate to their reflective practice, which is discussed in more detail in chapter four.

2.4. Writing Ability

2.4.1 Definition of Writing Ability

In this study, *Writing ability* refers to the ability of learners to write essays that successfully reflect the criteria stated in the writing rubric, and that reflects the use of meta-cognitive strategies.

In the context of the research related to this thesis, *writing ability* can be defined as the independent use of meta-cognitive strategies in writing, that includes paying attention, planning, content organization, searching for practice opportunities, the use of mind-maps and rubrics, as well as self-evaluation, monitoring errors and planning. Although this study does not set out to prove or disprove changes in writing ability, the evaluation of training in meta-cognitive strategies on writing and learner autonomy, does suggest that there may be changes, and that learning may be 'triggered' by reflective practice and by the acquirement and implementation of meta-cognitive strategies in writing.

2.4.2 Rubric Use

Scoring rubrics, writing rubrics or editing checklists (Oshima and Hogue, 1997), are descriptive of scoring schemes that are developed by teachers or other evaluators to guide the analysis of the products or processes of students' efforts (Brookhart, 1999). Scoring rubrics are typically employed when a judgment of quality is required and may be used to evaluate a broad range of subjects and activities. One common use of scoring rubrics is to guide the evaluation of writing samples. Judgments concerning the quality of a writing sample may vary depending on the criteria established by the individual evaluator. One evaluator may weigh the evaluation process heavily upon the linguistic structure, while another evaluator may be more interested in the persuasiveness of the argument. A high-quality essay is likely to have a combination of these and other

factors. Developing a predefined scheme for the evaluation process reduces the subjectivity involved in evaluating an essay.

By having a description of the characteristics of responses within each score category, the likelihood that two independent evaluators would assign the same score to a given response is increased, although this cannot always be guaranteed, when variables such as the culture and academic backgrounds of graders are taken into account. This concept of examining the extent to which two independent evaluators assign the same score to a given response is referred to as *rater reliability.*

Rubrics are scoring tools or guidelines for subjective assessments. It is a set of criteria and standards linked to learning objectives, which are used to assess learners' performance on tasks, projects, essays, and other assignments. Rubrics allow for standardized evaluation according to specified criteria, making grading simpler and more transparent.

The rubric is an attempt to delineate consistent assessment criteria. It allows teachers and learners alike to assess criteria, which is complex and subjective and provide grounds for self-evaluation, reflection and peer review. It is aimed at accurate and fair assessment, fostering understanding and indicating the way to proceed with subsequent learning or teaching. This integration of performance and feedback is called "ongoing assessment."

Increasingly, instructors who rely on rubrics to evaluate student performance, tend to share the rubric with learners, so that learners know what is expected of them, and so they can use the rubric as a guideline to improve the quality of their work. This practice is especially relevant and advisable when it comes to writing, when it is important for learners to know which areas or skills in writing are being assessed. Shared rubrics help students understand how assignments relate to course content and assessments, and can increase learners' authority, procedural knowledge and independence in the classroom, fostering learner autonomy.

Common features of rubrics include the focus on measuring a stated objective, using a range to rate performance and contain specific performance characteristics arranged in levels, indicating the degree to which a standard has been met.

Rubrics are often used in alternative assessments in education, but have gained ground as a way of establishing written guidelines or standards of assessments for formal, professionally administered essay tests, such as used in teacher assessment exams. In alternative assessments, rubrics are designed to reflect the *processes* and *outputs* of 'real-life' problem solving. It is usually in the form of a matrix with criteria for success. The rubric focuses on stated objectives, which are tied to educational standards and objectives, and uses a range or scale to rate performance.

In my experience, the key advantage of rubrics for classroom teachers is that rubrics force clarification of success in the classroom, establishing clear benchmarks for achievement. By sharing scoring rubrics with learners, they become aware of the expected standards and thus know what counts as quality work. With rubrics, grading becomes more objective, consistent and defensible. Additionally, rubrics make grading more efficient, while the time spent developing a grading rubric is usually made up for in the ease and speed of the actual grading.

During the course of this study, the rubric has served different purposes and roles:

- During the pre-assessment phase, rubrics were used to clarify expectations and grading methods with learners. As a result, learners could perform a self-assessment before submission of their essays.
- During the assessment phase, rubrics helped evaluators remain focused on the standards set out by the writing rubric, and objectively assess the learner.
- During the post-assessment phase, after the peer-assessment and teacher feedback sessions, learners were given a scored rubric with clear explanations of their grade. They were made aware of their strengths and weaknesses, with the goal of helping them to plan for future improvement.

Types of Writing Rubrics

Several different types of scoring rubrics are available. There are important differences between analytic and holistic scoring rubrics and between task-specific and general scoring rubrics.

Analytic versus Holistic

In the initial phases of developing a scoring rubric, the evaluator needs to determine the *evaluation criteria*. For example criteria such as clarity of content, language use, sentence control and content organization, and length / number of words can be included, similar to the rubric used in this study. An analytic scoring rubric, much like a checklist, allows for the separate evaluation of each of these factors. Each criterion is scored on a different descriptive scale (Brookhart, 1999).

The rubric in *Table 2*, could be extended to include a separate set of criteria for the evaluation of the persuasiveness of the argument. This extension would result in an analytic scoring rubric with two factors, quality of written expression and persuasiveness of the argument, each of which would receive a separate score. Numerical weights are assigned to the evaluation of each criterion, but this is not always the case. The benefit of using a scoring rubric rather than weighted scores is that scoring rubrics provide a description of what is expected at each score level. Students may use this information to improve their future performance better understand their grades, and more effectively monitor their

own progress. The two aspects can also be combined in a single rubric, such as the example below, that focuses specifically on the *writing objectives* for learners taking part in this study. The rubric provides clear expectations and guidelines that learners can follow themselves in order to improve their writing.

The criteria of the writing rubric is adapted from Walker (1996), and is suitable for Thai learners doing IELTS preparation courses, and have also been piloted with private students. The participants in this study used the rubric to plan, evaluate and edit, while raters used it to grade learners' essays.

The criteria is divided under four headings:

Clarity of content deals with the clarity and purpose of ideas, combined with the level of relevance to the topic and logical support. The percentage of the mark is higher than the other sections (40% of the grade, opposed to 20% for each other section), because in modern/contemporary language learning, the focus is on communication skills. Conveying a clear and coherent message in the target language, is a priority.

Language use deals with sentence structure, punctuation, clear communication and whether or not the writer chose the appropriate words to express themselves.

Sentence control and content organization deals with the efficiency with which writers write sentences and organize the content of their essays.

The length / number of words may not seem worth 20% of the total grade, but it is important for writers to keep within the time and word limits. When writing too much or too little, learners are penalized. Learning to stay within the word limit, prepares learners for language proficiency tests like the IELTS, and for future professional career demands.

Table 2: Writing Rubric

Components	Marks	Criteria
Clarity of content (X 10 = 40%)	3-4	Clear ideas and purpose, with relevant and logical support
	2-3	Not clear in ideas and purpose, with insufficient relevant and logical support
	1-2	Trying to express ideas and purpose, but lack of support
	0-1	Confusing ideas and purpose, with lack of support
Language use (X 5 = 20%)	3-4	A few mistakes in usage of words, sentence structure and punctuation, but clear in communication
	2-3	Some mistakes in usage of words, sentence structure and punctuation mistakes not affecting communication
	1-2	Many mistakes in usage of words, sentence structure and punctuation, but still communicating
	0-1	Full of mistakes in usage of words, sentence structure and punctuation, affecting meaning and communication
Sentence control and content organization (X 5 = 20%)	3-4	Effective sentence control with relevant and appropriate content organization
	2-3	Good sentence control with slightly irrelevant and inappropriate content organization
	1-2	Fair sentence control but slightly irrelevant and inappropriate content organization
	0-1	Poor sentence control with irrelevant and inappropriate content organization
Length / number of words (X 5 = 20%)	3-4	90-100% of requirement
	2-3	70-89% of requirement
	1-2	50-79% of requirement
	0-1	35-49% of requirement (below 35% is 0%)
Total:		

Where it is not possible to separate an evaluation into independent factors or when there is an overlap between the criteria set for the evaluation of the different factors, a holistic scoring rubric may be preferable to an analytic scoring rubric. In a holistic scoring rubric, the criteria are considered together on a single descriptive scale (Brookhart, 1999). Holistic scoring rubrics support broader judgments concerning the quality of the process or product.

2.4.3 Meta-cognitive Writing Strategies

Writers bring knowledge to a task, and employ a process of writing and strategies they use in composing. The use of cognitive and meta-cognitive writing strategies can be seen as a key approach to promote writing ability. It is evident in research on various aspects of cognitive and meta-cognitive writing strategy use in L1 (Emig, 1971; Flower and Hayes, 1981; Hayes, 1996).

Language-learning strategies are conceptualized in a broad way, to include the social and affective sides of the learner, as well as the cognitive and meta-cognitive. Therefore the 'whole learner' rather than only the cognitive and meta-cognitive aspects of the learner is involved. This implies that language learning is a venture of the whole learner and not just a mental exercise.

Strategy groups are organized using a factor analysis. This procedure allows us to divide the instrument into dimensions, usually referred to as subscales or factors. Six subscales were developed by Oxford and Ehrman (1995), with the

intent that each subscale would have an adequate number of items to facilitate more in-depth understanding of the learning strategies for ESL/EFL. These subscales include:

1. *Memory strategies*, such as grouping, imagery, rhyming, and structured reviewing
2. *Cognitive strategies*, such as reasoning, analyzing, summarizing (all reflective of deep processing), as well as general practicing
3. *Compensation strategies* (to compensate for limited knowledge), such as guessing meanings from the context in reading and listening, and using synonyms and gestures to convey meaning when the precise expression is not known
4. *Meta-cognitive strategies*, such as paying attention, consciously searching for practice opportunities, planning for language tasks and future improvement, self-evaluating one's progress, and monitoring
5. *Affective (emotional, motivation-related) strategies*, such as anxiety reduction, self-encouragement, and self-reward
6. *Social strategies*, such as asking questions, cooperating with native speakers of the language, and becoming culturally aware

This study focuses mainly on *meta-cognitive strategies*, which entails planning, monitoring, evaluating and planning for future improvement, exploring/evaluating the impact of meta-cognitive strategy training on learners' writing and learner autonomy. The ultimate aim is to discover whether or to what extent introducing

reflective practice and meta-cognitive strategies impact learners' writing abilities and learner autonomy.

Because meta-cognition is the type of learning strategy mainly used by (autonomous) adult learners (Cross, 1981), the study focuses specifically on certain aspects thereof. These are planning, monitoring, evaluating and planning for future improvement. Meta-cognitive strategies are problem-oriented tools. Learners use them whenever faced with learning problems (Ellis, 1997). Most learners however need to *learn* or *acquire* these strategies in order to become more aware of their learning, more motivated, and to incorporate meta-cognition into the planning and organization of their writing content.

Flavell (1976) suggests that meta-cognition is "thinking about thinking", and includes meta-cognitive knowledge of tasks and learning strategies, as well as meta-cognitive experiences of self-management, planning, monitoring, evaluating and planning for future improvement. By the management of their thinking and organization, it is suggested that learners are responsible for their own learning (Blakeys and Spence, 1990). The instruction of meta-cognitive strategies/skills give learners the opportunity to monitor, control and judge their own thinking, while evaluating their achievement and performance, planning for future improvement, improving their writing ability and ultimately their autonomy as language learners and writers.