

CHAPTER THREE

THEORETICAL FRAMEWORK FOR THE STUDY

3.0 Introduction

In this chapter, the researcher will discuss Oxford's (1990) model of language learning strategies or popularly known as **SILL (Strategy Inventory for Language Learning)**. O'Malley and Chamot's (1990) model is subsumed under Oxford's (1990) model for this study. Examples from the TAPs transcripts (see **Appendices H1 to H5**) will be used to show how Oxford's SILL is actually used by the five participants (part-time translators from the University of Malaya) who participated in the TAPs. The researcher will then compare and contrast the translation models proposed by Bell (1991), Sager (1994) and Darwish (1989, 1995 and 1999). After this, the researcher will show how the language learning strategies may be used to realise the basic activities proposed in these three translation models. Using the SILL model by Oxford, the researcher will investigate whether the translation process and the second or foreign language or better referred to as target language learning process share similar features and approaches, for example the need to use language strategies such as the direct strategies (memory, cognitive, compensation) and indirect strategies (metacognitive, social and affective strategies) to facilitate and execute the translation process and the target language learning process. The researcher also agrees with Robinson (1997:49) who has suggested that the translation process is actually a language learning process in his book, *Becoming a Translator* and in this study the researcher will prove via research that this is the case. Besides being used just for target language learning, SILL will be shown to have been used in various fields such as teaching content subjects, reading comprehension and problem-solving tasks etc.

The aim of establishing a relationship between Oxford's model and the translation models is to show that language strategies or sometimes called 'thinking

skills' (Oxford, 1990:2) which are needed during the target language learning process may also be needed during the translation process. The researcher suggests that in order to translate a source language text to a target language text, a translator needs to use these language learning strategies which form the core tools used by translators in the translation process. These strategies are tools used for solving problems, accomplishing tasks, meeting objectives or attaining goals (Oxford, 1990:11).

The researcher suggests that translating is a problem-solving task involving besides two languages, a host of other disciplines such as linguistics, rhetoric, culture, concepts, equivalence, communication and writing and to complete the process of translating a text from a source language to a target language, some strategies must be used to form a 'bridge' between theory and practice. From the researcher's own informal observation of the strategies that second language learners employ in the classroom, from the researcher's own informal analysis of a translation process of a scientific text by a colleague using the Think-Aloud Protocol or TAP technique and from discussions with translators, the researcher was led to believe that there are similarities in approach and features between language learning and the translation process and the strategies used to realise them. Based on this intuitive knowledge, the researcher explored the translation process in light of the well-known and proven model, which is Oxford's (1990) target language learning model.

The researcher agrees with Robinson (1997:51) that translation is basically a language learning process when he suggests that, "translation is an intelligent activity, requiring creative problem-solving in novel, textual, social and cultural conditions". Robinson (1997:49) further suggests that it involves "complex processes of conscious and unconscious learning". Based on this suggestion by Robinson, the researcher suggests that the translator, as a learner, has to constantly face and solve new problems in conscious, analytical ways. In other words, translation is a language learning and

problem-solving task. To produce a translated target language text, a translator has to use tools and it is suggested in this study that the SILL model proposed by Oxford (1990) is such a set of tools which translators can use to achieve his or her goal. This guess or intuition will be investigated by the researcher in this study.

In this study, the researcher will transcribe and analyse the five Think-Aloud Protocols or TAPs by the five non-professional Malay part-time translators (the participants) translating English language scientific texts into the Malay language to investigate what strategies and approaches they use while translating. Then the researcher will match the strategies used by them in their translation process against the language strategies put forward in Oxford's (1990) SILL. This will be done to see which language strategies are used by the participants and whether there are other strategies used besides the SILL in their translation process.

3.1 Oxford's Model of Direct and Indirect Language Learning Strategies

(1990: 37-51 and 135-148)

A summary of Oxford's (1990) and O'Malley and Chamot's (1990) language learning models are given in **Chapter Two** under **Section 2.5.3** and also in **Appendices G1 and G2**. This taxonomy is a well-established, highly reliable and valid language category and it has been used in many previous language tasks by many researchers. Oxford's (1990) SILL forms the theoretical framework for this study. It will be mapped on to the translation process of the five participants who will participate in the Think-Aloud Protocols or TAPs. This is done to investigate whether SILL proposed by Oxford (1990) is used by the participants while translating.

Oxford's (1990) SILL model comprises the direct strategies and indirect strategies. The **direct strategies** consist of the memory, cognitive and compensation strategies and the **indirect strategies** comprise the metacognitive, social and affective strategies. These have been discussed in **Chapter Two** under **Section 2.5.3**. The SILL

is discussed in detail in **Appendix G3**. In the description of the SILL categories, the researcher has inserted examples from the transcripts of the five TAPs (given in **Appendices H1 to H5**) where applicable. The findings of this mapping process of SILL on to the TAPs will be discussed in Chapter Six.

3.2 Major Aspects Shared in the Translation Models by Bell (1991), Sager (1994) and Darwish (1989, 1995 and 1999)

In order to find out the major aspects shared in the translation models by Bell Sager and Darwish which have been described in detail individually in **Chapter Two** under **Section 2.6**, a comparison and contrast of the three translation models were made to find their similarities and differences. The models were compared and analysed by the researcher along the lines of type, mode, level of operation, focus, theme and activities as shown in **Table 3.1**. on page 178. These categories are described below:

1. **Type** refers to whether the models are concerned with the external or internal processes.

Where type is concerned, Bell's model is concerned solely with the internal process going on in the minds of the translators that is, it is concerned very heavily on the memory processes – both short-term and long-term. Sager's is more concerned with the external processes and elements while Darwish's models deal with both the internal as well as the external processes.

2. **Mode** refers to the direction of the translation process.

Where mode is concerned, all the three translation authorities – Bell, Sager and Darwish agree that the translation process is not a linear one but rather a bi-directional, iterative process which involves forward and backward-looking mental operations and revision is always deemed necessary. However, the adjectives they use to describe this differ from one and the other, for example

Bell uses terms like “cascaded”, “integrative” etc, Sager uses “bi-directional” etc and Darwish uses “iterative” etc.

3. **Level** refers to the level of operation with which the model is concerned, for example micro level, that is word and sentence levels versus macro that is, at the level of paragraph and beyond.

Where level is concerned, Bell emphasizes working at the micro level. He suggests that translators work at the linguistic level of the clause or sentence. Sager emphasizes the macro level leaving Darwish who recommends working at both the micro and macro levels.

4. **Focus** refers to whether the model is process, product or translator-focused.

Where focus is concerned, Bell suggests that the translation process is process-based involving information processing in short-term and long-term memory systems. He also emphasizes the communication process involving decoding and encoding and other aspects include the psycholinguistic, sociolinguistic and the sociocultural aspects of the target readers. Sager, however feels that the translation process should be product-based and translator based and it should deal with the four constituents – content, form, text-type and intention. Darwish, on the other hand, feels that the translation process should be both process and translator focused. Both Sager and Darwish feel that translation is translator-focused because a translator has to carry out the needs analysis of the readers of the target translated text and the final translation product must fulfill the needs of the target readers.

5. **Activities** refer to the breakdown of translation activities into phases, stages or tasks.

Bell, Sager and Darwish agree that translating involves activities. Bell proposes that translating involves three major activities - syntactic, semantic and

pragmatic analysis and synthesis which function in a top-down and bottom-up manner and are not sequential as revision is deemed necessary. However, Sager emphasizes the process of establishing and expressing equivalents and for Sager during the translation process which involves two phases, that is from the source language phase to the target language production phase, a translator uses four approaches – specification, preparation, translation and evaluation. Sager also emphasises the use of the four approaches which are the cognitive, linguistic, communicative and pragmatic. Sager feels that a translator has to make decisions in choosing the closest, natural equivalents in the target language. Furthermore, he thinks that the translator has to focus on the four constituents of the input document which are the content, form, text-type and intention of the translation. In addition, Sager's model (1994:217) is product-based and comprises four stages. The sequence of the four stages are specification, preparation, translation and evaluation/revision. Sager also emphasises decision-making while translating, especially in finding equivalents in the target language. He suggests that translating involves making decisions because a translator has to search for pragmatic, cognitive and linguistic equivalents at the various levels appropriate for the particular act of communication that is to be mediated. Darwish (1999) suggests that translating involves the external and the internal processes. He suggests that the external process concerns the mechanical and procedural whilst the internal comprises the cognitive processing of information. The external translation process according to Darwish (1999) involves nine major iterative activities which are planning for the translation, analysing the source language text, translating, revising, editing, proofreading, reviewing, completing the translation and delivering the translation. On the other hand, Darwish's (1999) internal translation process

comprises visual sensory perception which involves active reading, comprehension and production.

6. **Theme** refers to the main idea proposed by the translation authorities regarding their model.

Bell's theme is that translation is a communication process and his model is based on Halliday's systemic grammar and he suggests that translators work at the linguistic level of the clause. Bell strongly suggests that translation involves decoding the original text in the source language and then encoding the message to the target language.

For Sager, translation is an industrial activity. He suggests that translation is a psycholinguistic, decision-making process which involves choosing of appropriate equivalents in the target language. His model emphasises the purpose or *skopos* of the translation. He recommends the use of existing translations to serve as examples, substitutes and drafts for current, on-going translation tasks. Sager suggests that the four constituents that a translator must bear in mind while translating a text are the content, form, text-type and intention of the translation.

Darwish suggests that translation is a bi-directional process involving two language repertoires and it is a decision-making process under constraints. He also feels that translation is a communicative process and he emphasizes translation standards that meet the requirements of the target readers needs. Darwish's external translation process consists of nine major iterative activities whilst his internal translation process comprises three activities (see page 174).

7. **Comments** refer to the researcher's opinion of the models.

It must be noted that Bell's (1991) model is based on Halliday's systemic grammar whereby he emphasises that translators work at the linguistic level of the clause.

Sager's (1994) process and psycholinguistic models are based on the notion that translation is an industrial activity. He suggests that translation is a bilingual, iterative decision-making and a bi-directional process activity. Furthermore, he emphasises the purpose or *skopos* of the translation whereby translators must thoroughly understand the content, form, text-type and intention of the source text and of the translation task required from them. Sager recommends using existing translations like examples, drafts and substitutes for current, on-going translation tasks. He suggests that the input, output and process activities are all variables which sequentially influence each other. The researcher agrees with Sager's perspective of translation as an industrial activity. Darwish (1999) emphasizes that translation is a bi-directional process involving two parallel linguistic and cultural repertoires that must be borne in mind by the translator while translating. He emphasizes that translation is a decision-making process under constraints. He also emphasizes that translation is basically a cognitive process and shares with Bell the notion that translation is a communication process. Darwish suggests in his models that translation is a bi-directional, iterative, cumulative and dichotomous process that musters a host of cognitive activities relating to language, culture, linguistics, rhetoric and communication. For Darwish, translation requirements and standards are important and all translators must fulfill the needs of the target readers of their translated texts. Unlike Sager, Darwish delves into the internal and external translation processes, which to him, makes the overall translation process. His

definition of translation is wider than Bell's and Sager's. His model focuses on the translator and the process, unlike Sager who emphasizes the translation product. Sager and Darwish's models focus on the purpose of the translation task. Both Sager and Darwish feel that a translator must be able to bring in other aspects such as culture and linguistics to convey the message effectively in the target language so that the target readers will not experience any difficulties in trying to comprehend the content of the translated text. Sager and Darwish strongly feel that the culture, language proficiency level and intelligence of the target readers and the purpose or *skopos* of the translation product must be kept in mind by the translator while translating.

From the models of the translation process proposed by Bell, Sager and Darwish, the researcher understands that the translation process involves making decisions, solving problems and finding equivalent terms in the target language based on the academic subject, culture of the target readers and the contextual meaning of the terms as used in a scientific text. Bell, Sager and Darwish agree that translation is in essence a cognitive process although Bell puts a lot of emphasis on memory and meaning (which indirectly also calls for cognitive processing) and his model and application depend on insights from linguistics and cognitive science. The researcher strongly feels that cognitive processing is very necessary in understanding the source text and then reproducing it in the target language text.

3.2.1 Summary

The major aspects shared by Bell's, Sager's and Darwish's translation models are that the translation process involves analysing and comprehending the source language text first using the cognitive, linguistic, communicative and pragmatic approaches. This involves understanding the syntax, semantic and pragmatic aspects of

Table 3.1

Comparison of the Three Translation Models by Bell, Sager and Darwish

Model	Type	Mode	Level	Focus	Activities	Theme	Comments
Bell (1991)	Internal	Cascaded Interactive Integrated Bi-directional	micro	Process-based Involves information processing in short-term and long-term memory system. Based on communication process of decoding and encoding. Also emphasises psycholinguistic, sociolinguistic and sociocultural aspects of target readers.	Stages: Syntactic, semantic and pragmatic analysis of source text first and then translate into target text using the same three operations that is the syntactic, semantic and pragmatic synthesis Norm of processing to be a combination of bottom-up and top-down processing Involves decoding and encoding activities. Requires there to be for both languages a visual word-recognition system and a grammar processing system in the memory.	Translation is a communication process.	Based on Halliday's systemic grammar. Operates at linguistic level of the clause.
Sager (1994)	External Theoretical Psycholinguistic	Iterative - forward and backward looking mental operation Bi-directional Discontinuous	Macro	Product-based/ translator focused. Deals with four constituents - content - form - text type - intention	Stages: Process of establishing and expressing equivalents. Has four phases: a. specification b. preparation c. translation d. evaluation/revision. Uses four approaches: a. cognitive, b. linguistic, c. communicative d. pragmatic	Translation is an industrial activity. Translation is a decision making process.	Based on an industrial view of translation - Purpose/skopos oriented. Emphasises use of existing translations as examples or substitutes or drafts for present translation tasks. Input, output and process are all variables which sequentially influence one another.
Darwish (1989, 1995, 1999)	Internal and external	dichotomous, cumulative, iterative bi-directional	Macro and micro	Process And translator focused	External translation process comprises 9 major iterative activities. Internal translation process comprises three steps: - a. visual sensory perception which involves active reading, b. comprehension	Translation is a bi-directional process involving language repertoires. Translation is a decision-making	Emphasises decision making under constraints, cognitive processes, communicative processes Focus on purpose or skopos of translation. Translation requirements

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Sager (1994)	External Theoretical. Psycholinguistic	Iterative - forward and backward looking mental operation Bi-directional Discontinuous	Macro	Product-based/ translator focused. Deals with four constituents: - content - form - text type - intention	Stages: Process of establishing and expressing equivalents. Has four phases: a. specification b. preparation c. translation d. evaluation/revision. Uses four approaches: a. cognitive, b. linguistic, c. communicative d. pragmatic	Translation is an industrial activity. Translation is a decision making process.	Based on an industrial view of translation - Purposes/skopos oriented. Emphasises use of existing translations as examples or substitutes or drafts for present translation tasks. Input, output and process are all variables which sequentially influence one another.
Darwish (1989, 1995, 1999)	Internal and external	dichotomous, cumulative, iterative bi-directional Translator works with two parallel linguistic and cultural repertoires	Macro and micro	Process And translator focused	External translation process comprises 9 major iterative activities. Internal translation process comprises three steps: - a. visual sensory perception which involves active reading, b. comprehension c. production. Translator makes decision based on purpose/skopos of translation task.	Translation is a bi-directional process involving two language repertoires. Translation is a decision-making process under constraints.	Emphasises decision making under constraints, cognitive processes, communicative processes Focus on purpose or skopos of translation. Translation requirements and standards are important - must fulfil the needs of the target readers.

the text in the source language first. At the same time the communicative and pragmatic approaches are also used in tandem with the cognitive and linguistic approaches in trying to understand what the writer of the source text is trying to say in the context of the subject area. While translating into the target language, these same four approaches and activities, though expressed in different ways by the three authorities (Bell, Sager and Darwish), come again into play, in helping the translator yield a translation product.

Bell, Sager and Darwish agree that the translation process involves backward and forward-looking activities. The forward-looking activities include detailed reading of the source language text again and looking up a lexical unit for confirmation. A translator has to go backwards to see that the terms used are consistent and make sure that there is no redundancy and repetition. All have clearly shown in their models that the translation process includes, besides linguistics, other disciplines such as psycholinguistics, sociolinguistics, and sociocultural perspectives.

All three agree that the translation process is really a bi-directional, iterative, integrative communicative process.

3.3 The Relationship Between The Translation Models and SILL

The translation models proposed by Bell, Sager and Darwish depict the translation process. In the translation process, a translator reproduces the content of the source language text into the target language text as accurately and naturally as possible. While translating, a translator needs to use the language strategies put forward in Oxford's (1990) model for the successful execution of the translation process as he or she follows the approaches put forward by Bell (1991), Sager (1994) and Darwish (1989,1995, 1999) in their translation models. Table 3.2 on page 182, shows the synthesis of the major activities in the translation models by Bell (1991), Sager (1994) and Darwish (1989,1995 and 1999) of the translation process and how language strategies are used to realise these translation activities.

For example to realise the syntactic activity in Bell's model, the researcher suggests that translators need to use all the direct (memory, cognitive and compensation) and indirect (metacognitive, social and affective) strategies. Details of each of these strategies are given in **Table 3.2**. For example, under metacognitive strategies, a translator will have to use planning, that is making decisions and implementing them, selective attention that is, analysing and translating sentence by sentence, self-monitoring, problem-identification and self-evaluation. Under social and affective strategies, a translator has to use self-talk, empathy and cooperating with others, maybe his colleagues, DBP authorities etc. To realise the semantic category or activity in Bell's model, the translator may have to use the indirect strategy (metacognitive) and the direct strategies (cognitive, memory and compensation). For realising the pragmatic aspect of Bell's model, the translator may have to use the indirect strategies, that is the social and affective strategies of Oxford's (1990) model the most because here the translator must make sure that the message in the source text is conveyed in a manner which can be understood by the readers of the target language text. The level of language proficiency of the target readers and their intelligence level must be kept in mind by the translators while translating.

The researcher thinks that Oxford's model can be projected on to the translation process and she has shown this in the data provided in Table 3.2 which shows how the direct strategies (memory, cognitive and compensation) and indirect strategies (metacognitive, social and affective) are used to realise each of the activities presented in the translation models by Bell, Sager and Darwish. For example to realise the cognitive, linguistic, communicative and pragmatic approaches and the process of establishing equivalents to suit the purpose (the *skopos*) of the translation product as proposed by Sager (1994) in his translation model, all the direct and indirect strategies must be used to realise all these activities. Each category is extracted from their models

and to execute these activities the direct (memory, cognitive and compensation) and indirect language strategies (metacognitive, social and affective) presented in Oxford's (1990) model are used to realise these activities and thus the researcher will investigate if there is a relationship between the two, that is whether Oxford's second language strategies model is used as a tool to realise the activities or categories or themes presented in the translation models by Bell, Sager and Darwish. For example to realise Bell's activities or categories of syntactic, semantic and pragmatic synthesis and production, a translator may have to use the metacognitive, cognitive, memory strategies as proposed by Oxford (1990) – see Table 3.2 which shows exactly the strategies used to realise the activities for the translation models. In order to realise these categories, translators while translating must be aware of the tools that they can use to facilitate and manage the translation process, and Oxford's model of second language learning may be a suitable tool for them. If it proves to be the case in this study, then the researcher supports what Robinson (1997:49) suggests, that is that translation is actually a language learning process. Both translation and language learning are inter-connected and thus the researcher will suggest that these translation models by Bell, Sager and Darwish and the SILL model by Oxford can support each other.

Strategies are steps taken to enhance the facilitation of the translation process. According to Oxford (1990:7), the word "strategy" comes from the ancient Greek term *strategia* meaning generalship or the art of war and in nonmilitary settings, the term "strategy" has come to mean a plan, step or conscious action towards the achievement of an objective. From the data presented in Table 3.2, we see that to realise the syntactic, semantic, pragmatic, psycholinguistic, cognitive, linguistic, communicative

Table 3.2

TRANSLATION MODELS	TRANSLATION ACTIVITIES/CATEGORIES/THEMES	OXFORD'S (1990) LANGUAGE LEARNING STRATEGIES NEEDED TO REALISE THE TRANSLATION ACTIVITIES/CATEGORIES/THEMES
Bell (1991)	Syntactic	<p>Metacognitive- planning, selective attention, self-monitoring, problem-identification, self-evaluation</p> <p>Social/affective - self-talk, empathising and cooperating with others</p> <p>Memory - creating mental linkages - placing new words into a context, applying images, reviewing well, employing action</p> <p>Cognitive-deduction/induction, analysing and reasoning - elaboration, transfer, translation, creating structure for input and output,</p> <p>Compensation - overcoming limitations in writing - paraphrasing, using synonyms</p>
	Semantic	<p>Metacognitive - making decisions, selective attention, self-monitoring, problem identification,</p> <p>Cognitive- finding equivalents, identifying difficult keywords, practicing, receiving and sending messages using resources, analysing and reasoning - analysing expressions, reasoning deductively, analysing contrastively, transferring, translating, summarising, inferencing,</p> <p>Memory - creating mental linkages -recalling items, placing new words into a context, applying images - semantic mapping, using imagery, using keywords, reviewing well, employing action</p> <p>Compensation - guessing, paraphrasing</p>
	Pragmatic	<p>Social/affective - empathising, cooperating, self-talk, questioning for clarification</p>
Sager (1994)	Process of establishing and expressing equivalents. (psycholinguistic)	<p>Metacognitive - selective attention, problem identification, self-evaluation,</p> <p>Cognitive - repetition, resourcing, deduction/induction, elaboration, transfer, translation</p> <p>social/affective - self-questioning, cooperation, self-talk.</p>
	Purpose-oriented	<p>Metacognitive- planning, selective attention,</p> <p>Cognitive- repetition, resourcing, substitution, elaboration, summarisation, translation, transfer, inferencing</p> <p>Social/affective- empathising, questioning, cooperation</p>
	Cognitive	<p>Cognitive - Repetition, resourcing, deduction/induction, substitution, elaboration, summarisation, translation, transfer, inferencing</p>
	Linguistic	<p>Metacognitive- planning, selective attention, self-monitoring, problem-identification, self-evaluation</p> <p>Cognitive-practicing, receiving and sending messages, analysing and reasoning, creating structure for input and output, deduction/induction, elaboration, transfer, translation</p> <p>Social/affective - self-talk, empathising and cooperating with others, asking questions, encouraging yourself.</p>
	Communicative	<p>Metacognitive- planning, arranging, identifying purpose, self-monitoring, self-evaluating</p> <p>Social - asking questions, cooperating and empathising with others.</p> <p>Memory - creating mental linkages, applying images, reviewing well, employing action.</p> <p>Cognitive- repeating, receiving and sending messages, analysing and reasoning, translating, creating structure for input and output.</p> <p>Compensation- guessing intelligently, overcoming limitations in writing.</p>
	Pragmatic	<p>Metacognitive - overviewing and linking with already known material, arranging and planning your writing, self-monitoring and evaluating.</p> <p>Social - asking questions, cooperating and empathising with others.</p> <p>Memory - grouping, associating/elaborating, placing new words into a context, applying images and sounds, reviewing well, employing action.</p> <p>Cognitive - practicing, receiving and sending messages, analysing and reasoning - translating, creating structure for input and output.</p>
Darwish (1989, 1995, 1999)	Making and implementing decisions	<p>Metacognitive - overviewing and linking with already known material, arranging and planning - setting goals, identifying purpose of translation, selective attention, problem identification, self-management, monitoring and evaluating</p> <p>Social - asking questions, cooperating and empathising with others</p>
	Active reading	<p>Memory - creating mental linkages, applying images and sounds</p> <p>Cognitive - practicing, receiving and sending messages, analysing and reasoning</p>
	Comprehension	<p>Metacognitive - overviewing and linking with already known material, arranging and planning - setting goals, identifying purpose of language task, self-monitoring and evaluating</p> <p>Memory - creating mental linkages, applying images and sounds, reviewing well</p> <p>Cognitive-practicing, receiving and sending messages - getting the idea quickly, using resources, analysing and reasoning - reasoning deductively, analysing expressions, creating structure for input and output - taking notes, summarising, highlighting.</p> <p>Compensation - guessing intelligently - using linguistic and other clues, overcoming limitations in speaking and writing - adjusting or approximating the message, coining words, using a circumlocution or synonym.</p>
	Production	<p>Metacognitive - planning and organising, selective attention, setting goals, identifying purpose of language task, self-monitoring and evaluation.</p> <p>Affective - encouraging yourself.</p> <p>Social - asking for clarification or verification of terms, asking for correction from colleagues, cooperating with peers and subject specialists, empathizing with others - developing cultural understanding, becoming aware of others' thoughts and feelings</p> <p>Memory - creating mental linkages - grouping, elaborating, placing new words into a context, applying images and sounds - using imagery, semantic mapping, using keywords,</p> <p>Cognitive - practicing, receiving and sending messages - getting the idea quickly, using resources, analysing and reasoning - reasoning deductively, analysing expressions, analysing contrastively, translating, transferring, creating structure for input and output - highlighting.</p> <p>Compensation - overcoming limitations in writing - switching to the mother tongue, getting help, avoiding communication, adjusting or approximating the message, coining words and using a circumlocution or synonym.</p>

translation activities, a translator may have to use Oxford's (1990) model of second language learning strategies – the direct (memory, cognitive, compensation) and the indirect (metacognitive, social and affective) strategies which are constantly repeated to realise each kind of activity or category such as syntactic, semantic, pragmatic, psycholinguistic etc in the translation models.

Bell, Sager and Darwish suggest that translation is an iterative, cascaded, integrative, bi-directional and cumulative process and the translation activities such as making decisions, ensuring that the translation product fulfills its purpose, that is, is presented at a language proficiency level suitable for the intelligence of the target readers, communicative in nature etc. may be realised by using Oxford's (1990) direct and indirect language strategies model whereby the strategies are actually repeated constantly for realising each translation activity and this is shown in **Table 3.2** (page 182).

For example, when a translator is going to start a translation task, he or she has to make decisions such as planning and organising his or her work and therefore he or she will use the metacognitive strategies of organising the translation work in sequence, for example he or she might say, "First I'll read the source text, then I'll summarise and after this I shall translate sentence by sentence" and this involves metacognitive strategies such as setting goals, identifying the purpose of the translation, self-management, monitoring etc. It might also include making use of social strategies such as empathising with others, asking questions etc. to ensure that the completed translation would be understood by the target readers. These language strategies help a translator to realise the translation activities which are important for the translators while translating to ensure that they produce a good translation product.

For this study, a translation process model will be proposed by the researcher which will be based on a combination of the three models presented by Bell (1991),

Sager (1994) and Darwish (1989,1995,1999) with the addition of Oxford's (1990) model of second language learning strategies and other strategies discovered from this study.

3.4 Application of Oxford's Model in Other Areas

The researcher thinks that the use of Oxford's (1990) language strategies may make the translation process easier, faster and more effective. The researcher strongly suggests that Oxford's (1990) target language learning strategies model may just be the main tool to realise the translation activities in the translation process as they help translators accomplish their goals. According to Oxford (1990:8), "learning strategies are operations employed by the learner to aid the acquisition, storage, retrieval and use of information". Certain cognitive strategies such as analysing and particular memory strategies like the keyword technique are very useful for understanding and recalling new information – important functions in the process of becoming competent in using the target language.

Research in metacognitive and cognitive learning strategies suggests that transfer of strategy training to new tasks can be maximised by pairing metacognitive strategies with appropriate cognitive strategies (Brown et al. in O'Malley and Chamot 1990: 8). In this context, translators without metacognitive approaches are essentially translators without direction or opportunity to plan their translation, monitor their progress, or review their accomplishments and future translation directions. To enhance the execution of the translation task, translators need to use these language learning strategies to facilitate the transfer of ideas from the source language to the target language by segmenting the source written language into meaningful units, generally at phrase boundaries (O'Malley and Chamot, 1990:40). Expert translators focus on the emerging meaningfulness of their text instead of focusing on mechanical aspects such as

handwriting, spelling or grammar. Gagne (1985 in O'Malley and Chamot, 1990: 41) points out that during the translation stage it is useful for a writer to have automatic mechanical skills of this sort so that attention can be freed for developing the cohesion, coherence and knowledge of audience that improve the quality of writing. Evaluation and revision of the translated work is important. This entails using the performance evaluation strategy to gauge one's performance in the translation task. In every stage of the translation process which involves nine major iterative activities – planning, reading, information analysis, translating, revising, editing, proofreading and reviewing - these language strategies help in enhancing the translation process. While translating, the translator uses the four approaches, which are the cognitive, linguistic, communicative and pragmatic as proposed by Sager (1994:125). These approaches ensure that the translation is done accurately and that the flow of the target language is natural so that the target readers will be able to understand the translated version easily. Here we see that there might just be a relationship between Oxford's (1990) SILL model to the translation activities in the translation models by Bell, Sager and Darwish which depict the translation process. If the translation activities depicted in the translation models are not used, the outcome would be a weak translated product which will not serve any purpose to the target readers. To ensure that the important elements in the translation models are practised while translating, these language learning strategies have to be applied to the translation task to ensure that it goes on smoothly and successfully. The relationship is that language learning strategies may help realise the translation activities in the translation process depicted in the translation models as they may help to ensure the execution and facilitation of a good translated product.

The target language learning taxonomy model by Oxford (1990) is a very highly reliable and valid Strategy Inventory for Language Learning (SILL) which has been used in many studies to do with language tasks. Research by Oxford (1990), O'Malley

and Chamot (1990) and Chamot (1994) show that language learning strategies are useful in any task, be it the learning of content subjects or language skills. Some examples of projects where Oxford's (1990: 217-221) model of second language learning have been put to practice are as follows:

1. The Language Learning Disk. This is a video disk used for giving training on the direct and indirect language learning strategies in USA. It is an exciting instructional tool which was produced by Joan Rubin, a founder of the research area of language learning strategies. This disk is a two-sided, one hour interactive videodisc with five accompanying diskettes providing an average of eight hours of instruction. From this Language Learning Disk, learners can expect to:
 - a. Gain insights into their own approach to learning.
 - b. Learn to choose strategies appropriate to a task and learning purpose.
 - c. Learn to use these strategies in a classroom, self-study, or job situation.
 - d. Learn to use strategies specific to reading, listening and conversation.
 - e. Be able to define strategies for improving memory for language learning.
 - f. Learn how to effectively transfer knowledge about language and communication from one language to another.
 - g. Learn to use resources wisely.
 - h. Be able to deal more effectively with errors.
2. The Cognitive Academic Language Learning Approach (CALLA) by Anna Uhl Chamot and J. Michael O'Malley for developing language and content area skills. This approach of using the direct and indirect strategies has been found to help students improve themselves in Mathematics, Science, Engineering etc. Students learn to be more organised and they learn to solve their problems by

using social, cognitive, compensation strategies etc. as proposed by Oxford (1990).

3. The CRAPEL Model of self-directed learning by Henri Holec in France, provides self-directed language learning opportunities for a variety of learners, such as university students and employees in local organisations desiring on-site courses. A variety of course structures is offered, all of which allow some degree of learner autonomy – the ultimate goal.
4. Training in language learning strategies for Peace Corps Language Instructors and Volunteers in Philippines by Anne Lomperis and Bibbet Palo using learner strategy material. This has improved their target language skills.
5. The GRASP (Getting Results and Solving Problems) Project. This is an in-service teacher training project involving self-direction for teachers and learners in England which was coordinated by Anna Smith and Peter Revill of the Dudley L.E.A. in the English Midlands which concerned the entire teaching-learning process. It focuses on providing in-service training to teachers, with the objective of encouraging active learning, self-direction and problem solving for both teachers and students.
6. Gurnam Kaur (2000) successfully completed her PhD thesis where she made an observation that students who were taught language learning strategies did very well in self-directed learning projects and she managed to prove this via collections of their journal writings.

The researcher in this study will also use Oxford's (1990) taxonomy as she views translators as advanced language learners. In this study, the participants had completed their secondary education with distinctions and credits in English language and the Malay language. The researcher feels that they need these strategies for finding equivalent terms in the target language in their translation process and this fact is

supported by Robinson (1997:49), who suggests that “translation is an intelligent activity involving complex processes of conscious and unconscious learning”. Translators learn words, phrases, styles, tones, registers, cultural and linguistic strategies while translating (Robinson, 1997:51).

According to Chamot (1994:284), readers who understand their own learning processes and who can exercise control over their own actions while reading, comprehend a text better than those who believe that reading consists of just decoding words. She feels that successful readers are able to monitor their own comprehension and seek remedies when comprehension breaks down. According to her, good readers use metacognitive strategies as well as cognitive strategies to assist comprehension. For example, good readers monitor their level of comprehension as they are reading. Here they use a metacognitive strategy and when they realise that they do not understand something in the text, they select cognitive strategies such as elaboration and inferencing to resolve their comprehension difficulties. The researcher thinks that this cognitively-oriented reading approach is also very useful for translators in understanding scientific source language texts. **Table 3.3 on page 189** shows the learning strategies for science based on Oxford’s model (1990) which translators too, the researcher suggests, can use indirectly for understanding scientific writing in their reading for translation purposes.

From **Table 3.3**, it can be seen that science students use Oxford’s metacognitive, cognitive and social/affective strategies in the learning of science. Chamot (1994:5) mooted the idea and conceptualised the Cognitive Academic Language Learning Approach (CALLA) that came out from their research conducted in the early and mid 1980’s which showed that these strategies when applied to the learning of content subjects like science actually helped enhance the performance of less effective learners. Teachers were encouraged to teach students these strategies as

Table 3.3

Learning Strategies for Science

Metacognitive Strategies: Students plan, monitor, and evaluate their learning of science concepts and skills.	
Advance Organisation	What's my purpose for solving this problem or doing this experiment? What will I use the information for?
Selective Attention	What is the most important information to pay attention to?
Organisational Planning	What are the steps in the scientific method I will need to follow?
Self-monitoring	Does the plan seem to be working? Am I getting the answer?
Self-assessment	Did I solve the problem/answer the question? How did I solve it? Is it a good solution? If not, what could I do differently?
Cognitive Strategies: Students interact with the information to be learned, changing or organising it either mentally or physically.	
Elaborating Prior Knowledge	What do I already know about this topic or type of problem? What experiences have I had that are related to this? How does this information relate to other information?
Resourcing	Where can I find additional information about this topic? Encyclopedia? Science book? Library?
Taking Notes	What's the best way to write down a plan to record or to summarise the data? Table? List?
Grouping	How can I classify this information? What is the same and what is different?
Making Inferences	Are there words I don't know that I must understand to solve the problem?
Using Images	What can I draw to help me understand and solve the problem? Can I make a mental picture or visualise this problem?
Social/Affective Strategies: Students interact with others to assist learning, or use attitudes and feelings to help their learning.	
Questioning for Clarification	What help do I need? Who can I ask? How should I ask?
Cooperating	How can I work with others to answer the question or solve the problem?
Self-talk	Yes, I can do this task-what strategies do I need?
<p>APPLYING LEARNING STRATEGIES TO SCIENCE Science Problem-Solving Steps Ask a Question Make a Hypothesis Collect Data Record Data Answer the Question</p>	

(taken from Chamot 1994:204)

these strategies could help the students enhance their understanding of content subjects like science, mathematics etc. CALLA integrates language development, content area instruction and explicit instruction in learning strategies. If students can use Oxford's model of language learning strategies as shown in Table 3.3 to enhance their understanding of scientific concepts in scientific writing, then translators too, the researcher suggests, can improve their translation product if they apply these language learning strategies while translating. The direct strategies (memory, cognitive, and compensation) are important for carrying out the actual translation process while the indirect strategies (metacognitive, social and affective) help in the management of the translation task. The transfer of strategy training to translation tasks can be maximised by pairing metacognitive strategies with appropriate cognitive strategies as proven by research (Brown et al. in O'Malley 1990: 8).

3.5 Justification for Using Oxford's (1990) SILL in a Translation Task

In this study, the researcher will use the direct and indirect language learning strategies or SILL model proposed by Oxford (1990) to match against the researcher's own analysis of the strategies used by the five part-time Malay translators, the participants for this study, in their TAPs. These strategies have been proven to be highly reliable and valid by past studies, and even though, they are language learning strategies, they have also been used for many language tasks, such as, for solving problems, taking an action etc. Translation is also a language task, besides involving other disciplines such as communication, culture, linguistics etc involving the source and target languages, and thus, the researcher suggests that these strategies can be used in this problem-solving task of translation.

The participants in this study are all graduates and thus, advanced language learners. All of them obtained distinctions and credits for their SPM examination in both English language and the Malay language. Some of them even obtained principal

passes at STPM or Form Six level for the Malay language. All of them graduated in their respective fields of specialisation using both English language and the Malay language. Therefore, they can be considered advanced language learners and while translating, they are still coping with the Malay language in finding equivalent terms to solve the problems they encounter in the most efficient way. They have to make decisions on what translation techniques to use to solve their problems while translating. These translation techniques might include concretization, logical derivation, antonymic translation and compensation (Shveitser, 1973: 2-28 in Fawcett, 1997:28-31). They might also use other translation techniques such as borrowing (the source language form is taken into the target language, usually because the latter has a gap in its lexicon), calque (is a literal translation at the level of the phrase), transposition (used in dealing with grammatical changes in translation), modulation (is a variation in the message, obtained by changing point of view, lighting), equivalence (an equivalent translation of an idiom based on the culture of the target language) and adaptation (this kind of substitution is supposed to take place when the receiving culture has little or nothing in its experience that would allow it to understand a close translation, for example, Nida's example of the absurdity of translating *white as snow* for a culture which has no knowledge of the substance (Vinay and Darbelnet, 1958 in Fawcett, 1997:34-39). The translators use these techniques in producing their translation in the Malay language.

While being advanced language learners, they are also language builders where they sometimes have to coin their own terms for translation purposes and later inform DBP of this. It is the matching between the source language and target language which involves learning at different levels whereby the translators have to find equivalent terms in the target language to suit the context of the situation. To facilitate the execution of this task of translating, the translators use direct and indirect strategies.

According to Robinson (1997:51), “translators learn words and phrases, styles and tones and registers, linguistic and cultural strategies while translating, while interpreting...”. He adds, what “makes it possible to translate rapidly, reliably and enjoyably is the product of learning – which is to say, of experience stored in memory, in ways that enable its effective recall and flexible and versatile use”. The researcher agrees with him that translators are learners and in this study, she will prove this parallelism between language learning and the translation process.

Oxford’s (1990) language learning strategy classification suggests that good language learners or anyone involved in a language task, such as translation, use strategies in the following six broad groups: memory, cognitive, compensation, metacognitive, affective and social. These six subcategories emerge from two main categories of strategies i.e. “direct” which are the memory, cognitive and compensation strategies and “indirect” which comprise the metacognitive, affective and social strategies. The “direct strategies” relate to the ways in which the learner (here, the translator) deals with and works with the source and target languages including the mental processing of the languages in producing a translation product. The “indirect” strategies involve the general management of learning, or the language task or in this study the translation task. The direct and indirect strategies have already been discussed in Chapter Two, Section 2.5.3. **Appendices G1, G2 and G3** give further details and explanation of Oxford’s (1990) SILL which forms the theoretical framework for this study.

This study will map Oxford’s (1990) model of language learning strategies or SILL on to the translation process of the participants in this study. Based on the comparison between the researcher’s own analysis of the strategies used in the transcriptions of the TAPs, and then by mapping on to the language learning strategies put forward by Oxford (1990), the researcher will draw her own taxonomy of

translation strategies used by the participants in this study, while translating. The researcher will also investigate whether language learning strategies can be used to model the translation process. The steps or sequences used in the translation process of the participants will also be investigated. Furthermore, based on the translation models put forward by Bell, Sager and Darwish, the researcher will propose her own translation model based on the findings from this study.

In finding out about the current translation situation in Malaysia of scientific texts from English to Malay, such as the problems that the translators encounter while translating, their solutions to the problems identified, their recommendations for speedier and better translations etc, the researcher will use the questionnaire and the interview method.

The research methodology for this study will be explained in the next chapter.