CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The chapter reviews the areas connected to English for Specific Purposes, hereafter referred to as ESP. It then moves on to the principles of ESP, language descriptions and the theories of learning. This is followed by a discussion of needs analysis and the conclusion of the chapter. I will base my discussion largely on Hutchinson and Waters (1987), since, till today, this work has been central to the study of ESP.

2.2 English for Specific Purposes

The English language courses traditionally taught to learners of the language either as a second or foreign language in schools and institutions of higher learning is referred to as English for General Purposes (EGP). Far (2007) finds that EGP serves to provide a broad foundation in the language rather than focus on specified goals. EGP learners learn English in order to use the language in a variety of situations for a variety of purposes. They will have to acquire a command of the semantic and syntactic aspects of the language. Thus the teaching and learning of EGP focuses on the mastery of the four basic language skills of listening, speaking, reading and writing.

ESP is tailored for learners who seek to learn English for specific purposes, with the intention to use it to achieve some other goal in the performance of a specific task or activity, for example, to understand the instructions in aircraft maintenance manuals. Munby (1978) defines ESP courses as "those where the syllabus and materials are determined in all essentials by the prior analysis of the communication needs of the learner" (cited in Al-Ahdal, 2009).

2.2.1 The Origins of ESP

Brunton (2009) dates the origins of the term English for Specific Purposes (ESP) to the 1960's

when "it became increasingly aware that general English courses frequently did not meet learner or employers wants."

Hutchinson and Waters (1987), hereafter referred to as H & W, attribute the development of ESP to three factors: the demands of "A Brave New World", a revolution in linguistics, and a focus on the learner in language teaching. The aftermath of the 2nd World War from 1939 to 1945 witnessed significant expansion in scientific, technical and economic activity on a global scale which generated a demand for an international language to facilitate international trade and the transfer of scientific and technological knowledge. H & W (1987, p.6) state that "the effect was to create a whole new mass of people wanting to learn English, not for the pleasure or prestige of knowing the language, but because English was the key to the international currencies of technology and commerce". This led to the development of ESP in the early 1960's.

H & W (1987) find that at about the same time, there was also a revolutionary change in the way linguists viewed the study of language. While earlier studies attempted to describe the rules of English usage, or its grammar, there was now an emphasis on the way English was used in real communication. Proponents of this approach contended that spoken and written language varied according to the context in which they were used. They argued that there were important differences in the language used for different purposes, for example, the English used in law and medicine. This called for the development of different courses for specific groups of learners. "The idea was simple: if language varies from one situation of use to another, it should be possible to determine the features of specific situations and then make these features the basis of the learners' course" (Hutchinson and Waters, 1987, p.7). A. H. Abdul Raof and Masdinah (2006) support this view as they believe that language acquisition is most effectively facilitated if it is embedded within the

learners' field of study or work. They argue that learners would be more receptive to an ESP course which is in tandem with their present course of study or their future working environment.

H & W also credit developments in educational psychology as having contributed to the emergence of ESP. The new view was that learners performed better in a 'learner-centred' environment, i.e. the use of material that catered to their knowledge, skills, experience, schemata and learning strategies and situations. For example, texts for business students could be extracted from business documents.

Although these three factors provided the initial impetus for the emergence of ESP in the early 1960s, ESP has further evolved over the years to suit the different contexts and situations in which it is used.

2.2.2 The Development of ESP

Dudley-Evans and St John (1998) find that in the initial stages of the development of ESP, there was a greater demand for English for Academic Purposes (EAP) with English for Occupational Purposes (EOP) occupying a smaller, but nevertheless significant, role. The authors define EAP as English used for the study of a particular discipline and EOP as English used in the practice of a profession. For example, English taught to medical students is EAP while an ESP course for practising doctors is categorised as EOP. However, they find that with the massive growth in international trade, there is a greater demand for English for Business Purposes (EBP) in recent years. This view is shared by Hewings (2002) who attributes the increasing percentage of publications in Business English in publishers' catalogues to the rapid growth of courses in Business English around the world.

H & W (1987, p.9) identify five stages in the development of ESP. According to them, ESP is currently in its fourth phase and a fifth is beginning to emerge. Each of these stages is characterised by the emphasis on a particular area of interest.

The first stage, referred to as "The concept of special language: register analysis" took place in the 1960s and early 1970s. Thompson (2004, p. 40) defines register as "variation according to use; that is, we typically use certain recognisable configurations of linguistic resources in certain contexts". Bloor and Bloor (2004, p. 288) define it as "variety of a language as determined by social context; e.g., formal written academic English; casual spoken English." The aim of register analysis was to identify the grammatical and lexical features of a particular register, e.g., Scientific English. Dudley-Evans and St John (1998, p.21) refer to a work of register analysis by Barber (1962) and Ewer and Hughes Davies (1971, 1972) whose assumption was that while the grammar of scientific and technical writing did not differ from that of General English, certain grammatical and lexical forms were used much more frequently. They found that the predominant tense was the simple present and that the passive voice was used much more frequently than in General English but not more frequently than the active voice. They also identified semi- or sub-technical vocabulary, such as 'consists of', 'contains', 'enables' and 'acts as', that was more likely to occur in scientific, technical or academic writing than in general contexts. Dudley-Evans and St John (1998) also found that most material based on register analysis began each chapter with a long passage on a specialised area. This led them to believe that most of these were General English material supplemented by subject-specific reading passages. The main motive behind register analysis was probably to make the ESP course more relevant to learner needs. However Hutchinson and Waters, (1987, p.10) found that some widely used textbooks "neglected some of the language forms commonly found in science texts".

The second stage followed these perceived weaknesses in Register Analysis and came to be known as Rhetorical or Discourse Analysis in the early 1970s. While Register Analysis focussed on language at the sentence level, Rhetorical or Discourse Analysis concentrated on the level above the sentence. It looked at writing as a text and not as sentences to find out how cohesion is achieved. Bloor and Bloor (2004) state that "when people use language to make meanings, they do so in specific situations, and the form of the language that they use in *discourse* is influenced by the complex aspects of those situations" (p. 4). Attention in the second stage was on how sentences were combined in discourse to produce meaning. "The concern of research therefore was to identify the organisational patterns in texts and to specify the linguistic means by which these patterns are signalled" (Hutchinson and Waters, 1987, p.11). Dudley-Evans and St John (1987) make a distinction between Discourse Analysis and Genre Analysis. They find that Discourse Analysis is the study of the cohesive links between sentences, of paragraph structure, or the structure of the whole text. While Discourse Analysis focussed on the cohesive links of any one particular text, Genre Analysis focussed on the text analysis to identify the regularities of structure that distinguish one type of text from another. Geoff Thompson (2004, p. 42) find that "genre includes the more general idea of what the interactants are doping through language, and how they organise the language event, typically in recognisable stages, in order to achieve that purpose."

The third stage, Target Situation Analysis, was merely a fine-tuning of Rhetorical or Discourse Analysis. According to Sarjit Kaur and Clarke (2009), an ESP course is meant to enable a group of target learners to function adequately in a target situation, the place where the learners will use the specific English for specific purposes. Since it was found that ESP would be more relevant if it were focussed towards the situation in which it would be used, it would be necessary to first identify the linguistic features of that target situation.

Attention thus shifted to an analysis of the learning needs of the situation or what is termed as Target Situation Analysis. "What had previously been done in a piecemeal way, was now systematised and learner need was apparently placed at the centre of the course design process" (Hutchinson and Waters, 1987, p.12).

The fourth stage, the Skills-Centred Approach, attempted to incorporate the thinking processes that underlie language use – contrary to the first three stages in the development of ESP which looked only at the linguistic features of the target situation. The thrust of this approach was to draw upon common reading and interpreting processes that enables the reader to extract meaning from discourse. These included guessing the meaning of words from context, the use of visual layout to determine the type of text and words which are similar in the mother tongue and the target language. This eliminated the need for a subject register as the aforementioned skills are not specific to any subject register.

The fifth stage in the development of ESP is what H & W refer to as a Learning-Centred Approach. They contend that the earlier approaches are flawed as they are all based on language use or what people do with language and that a truly valid approach to ESP must be based on an understanding of the processes of language learning. This approach which was introduced in the mid 1980s focuses on the process of language learning. Since learning demands thinking, the activities planned should allow for prediction – to anticipate what is likely in a novel situation, integration – to use a range of skills and creativity – allow for different possible answers. The lessons should also be enjoyable and carried out in a co-operative social climate within the class.

Hussein Hassan Ibrahim (2006) identifies further approaches to ESP which he terms as 'Skills and Strategies Approaches'. He finds that the focus of attention in the 1960s and early 1979s were the four basic language skills, namely listening, speaking, reading and writing. However, in subsequent years, the focus shifted to the sub-skills within the four

basic skills with considerable attention on the means of developing strategies/ techniques to enhance learners' ability to function well in their study and to interact effectively in various study and job-related situations (p.45). He says that from the 1990s, there was more attention on the context in which skills were put into practice. The skills and methodologies involved in a particular discipline were practised in simulated situations in the ESP classroom.

Therefore, the teaching of ESP which began with the approach of identifying the grammatical and lexical aspects of language in Register Analysis has evolved in stages over the years into approaches which focus on the skills needed in specific contexts in a particular discipline. Fiorito (2005) sums it up by stating that ESP now concentrates more on language in context than on teaching grammar and language structures where English is not taught as a subject separated from the students' real world but is integrated into a subject matter area important to the learners.

2.2.3 Principles of ESP

The fundamental requirement of ESP is that it must cater to the specialised needs of a specific group of learners. H & W (1987, p.19) view ESP as "an approach and not as a product [...] it is an approach to language learning, which is based on learner need." From this definition, it can be assumed that the content and method of an ESP course are based on the learner's reason for learning English. In other words, we would have to first identify the needs of the learner.

In their definition of ESP, Dudley-Evans and St John (1998, p.3) identify the absolute and variable characteristics of ESP as given below:

a) The Absolute Characteristics

- ESP is designed to meet specific needs of the learner.

- ESP makes use of the underlying methodology and activities of the discipline it serves.

- ESP is centred on the language (grammar, lexis, register), skills, discourse and genres appropriate to these activities.

b) The Variable Characteristics

- ESP may be related to or designed for specific disciplines.

- ESP may use, in specific teaching situations, a different methodology from that of general English.

- ESP is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could, however, be used for learners at secondary school level.

- ESP is generally designed for intermediate or advanced students. Most ESP courses assume basic knowledge of the language system, but it can be used with beginners (p. 4).

Munby (1978) states that "ESP courses are those where the syllabus and materials are determined in all essentials by the prior analysis of the communication needs of the learner". It must be pointed out that in the above definitions too, it is emphasised that the ESP course must meet the needs of the learner. H & W (1987) also say that what distinguishes ESP from General English is not the existence of a need as such but rather an awareness of the need. Both the teacher and the learners must have an awareness of the learners' needs for the ESP course to be successfully designed and implemented. The needs of different groups of learners vary according to the reasons for and the situations in which they learn English. This is emphasized in the definition of Robinson (1980): "Quintessential ESP, if we can pinpoint it, is perhaps this: materials produced for use once only for one group of students in one place at one time".

English for General Purposes (EGP) learners learn English in order to use in a variety of situations for a variety of purposes. They will have to acquire a command of the various

semantic and syntactic aspects of the language in order to cope with this variety. Strevens (1980) notes that the ESP differs from general English in that it is based on a close analysis of the learners' communicative needs for a specific occupation or activity, as well as a detailed analysis of the language of that occupation or activity. Thus, the learners and their purposes for learning English constitute the major difference between ESP and EGP. ESP learners seek to learn English for specific purposes, with the intention of using it to achieve some other goal in the performance of a particular task or activity, for example, being able to read academic texts in English. English language proficiency, at least at the basic level, would be an advantage but is not a necessity.

Far (2008) rates three features as the most important among those identified by Widdowson as distinctive features which differentiate ESP from EGP (Widdowson, 1983, cited in Far, 2008). The first is that EGP focuses on education while the focus of ESP is on training. Second, the course content of an EGP course tends to be more varied as the target or future needs of the student are more varied. The appropriate content for an ESP course is easier to select as the situation or vocation in which it is going to be used is specified. Finally, the syllabus content of an EGP course should have a high 'surrender value' in general, where 'surrender value' is defined as the overall utility (value) of the English taught by the end of a specific course: the higher the surrender value, the greater the utility (usefulness) of the English taught. On the other hand, an ESP course is only required to have a high surrender value of the English for the relevant context in which it is to be used. In her study of the English language needs of medical students in two Malaysian universities, Ponnampalam (2003) lends credence to the contention that an EGP course is inadequate to meet the language requirements of students in a specific discipline of study. She found that students had difficulty in understanding spoken English, speaking in English, reading and understanding written English and writing in English despite having

passed the Malaysian University Entrance Test (MUET). She calls for greater effort to integrate the present syllabus in line with the needs of undergraduates.

Strevens (1980) defines ESP as English language instruction, devised to meet the learner's particular needs, related in themes and topics to designated occupations or areas of study, selective as to language content, and where indicated, restricted as to the language skills included. Fiorito (2005) finds that ESP courses usually cater to adult students, frequently in a work-related setting, who are more motivated than learners of English as a Second Language (ESL).

Gatehouse (2001) cites three characteristics of ESP courses identified by Carter (1983) as: a) the use of authentic material, b) purpose-related orientation, and c) self-direction. It is possible to use authentic material, in original as well as modified form, as the target situation, i.e. the situation in which English would be used, is identified prior to teaching the course. Purpose-related orientation implies that the course content incorporates the tasks required to be performed in the target situation. She explains that self-direction refers to that the learners must have a certain degree of freedom to decide when, what, and how they will study.

Besides the learners, the facilitator, and the administrators as stakeholders in ESP and EGP courses, ESP may have additional stakeholders, for example, the end-users of the learners' products. ESP is normally sought for by adults while proficiency courses may be begun with very young learners. Cost, too, may become an important issue in ESP, with the paymaster dominating all transactions. There may also be negotiations among the stakeholders in terms of course contents and objectives.

The syllabus of the ESP course will conform to the requirements of the stakeholders. The syllabus will focus on specific skills geared towards the needs of the learners, and be dictated by time and monetary constraints.

Johns (1990) believes that no one ESP text can meet the needs of all ESP courses. He suggests that the only real solution is that a resource bank of pooled materials be made available to all ESP instructors (Johns, 1990, also cited in Gatehouse, 2001). Authentic materials and tasks are highly recommended in ESP, and the methods have to be learner-centred to equip learners with the use of English as a tool in order to achieve some specific purpose, and this too within a very limited period of time. Evaluation is not compulsory in ESP. Even when done, it is usually task-based and would simulate real-life situations in which the learner is emplaced.

Finally, ESP courses are usually based on needs analyses, and therefore require research to identify the relevant needs. In fact, Dudley-Evans and St John contend that "needs analysis is the corner stone of ESP and leads to a very focused language course" (p. 122).

Gatehouse (2001) emphasizes that because ESP requires comprehensive needs analysis and because the learning-centred curriculum is not static, it is only the instructors who are in the best position to identify changing learner needs and who are in the best position to ensure that all students receive a balanced diet of language.

2.3 Language Descriptions

H & W (1987) trace the evolution of language descriptions from traditional grammar through structural linguistics, transformational generative grammar, language variation and register analysis, functional/notional grammar into discourse analysis.

Traditionally, descriptions of English and other languages were based on the grammars of the classical languages, Greek and Latin. This involved an analysis based on the role played by each word in the sentence. In the classical languages, the function of each word in the sentence was indicated by the use of appropriate inflections. The form of a word would change according to whether it was a subject, object, indirect object and so on

(Hutchinson and Waters, 1987). Classic, or traditional grammar, did not exert a major influence on ESP, as ESP emerged after the classical form of description had been largely abandoned. However, it remains an indirect source of guidance.

The second form of language description, which surfaced in the 1930s, is structuralism, or structural linguistics. Matthews (2001) dates the beginnings of structuralism to the late 1930s. In structural linguistics, the grammar of a language is described in terms of syntagmatic structures which carry the fundamental propositions (statement, interrogative, negative, imperative etc.) and notions (time, number, gender etc.). This form of description employed varying the words within a structural framework to vary meanings. This led to the development of substitution tables as a means of explaining grammatical patterns (Hutchinson and Waters, 1987).

The dominance of structural linguistics ended with the publication of Noam Chomsky's *Syntactic Structures* in 1957. Chomsky argued that structural description was too superficial, because it only described the surface structure of the language, but could not explain relationships of meaning which were not realised in the surface structure. Chomsky attributed these problems to language being analysed and described in isolation from the human mind which produces it. Chomsky proposed accounting for a language via a set of formal generative rules. Grammar is therefore not the surface structures themselves, but the rules that allow the generation of surface structures from the deep level of meaning. Generative grammar developed in the 1950s as a consequence of the 'the cognitive revolution' which marked a shift from a concern with the mechanics of certain limited aspects of language to a concern with the mental processes underlying a broader range of the properties of language.

H & W (1987, p.17) explain that Chomsky maintained that language should be seen as a reflection of human thought patterns. He distinguished between two different levels of

meaning – a deep meaning which referred to the organisation of thoughts, and a surface level which referred to how these thoughts were expressed through language. However for ESP, H & W contend that performance (what Chomsy referred to as the surface level) is important but competence (that which enables them to do so) is of more importance. This shifted the importance placed on performance needed for communication in the early stages of ESP development to an emphasis on the competence underlying it. The concept of communicative competence led to the next three stages of development in language description.

The fourth type of language description is Language Variation and Register Analysis. This is based on the rationale that language varies according to the context of use. This gave rise to the assumption that language variation implies the existence of identifiable varieties of language, or registers, related to specific contexts of use, such as legal English, medical English and business English. However this view was found to be unfounded as register analysis proved to be insubstantial for the selection of syllabus items. There are language forms that tend to be used frequently in one context than in another, but even if particular registers favour certain forms, they are not distinctive forms.

The next result of work into language as communication which has influenced ESP is the description of Functional/Notional grammar. H & W define functions as representing the intention of the communicator, for example, advising, welcoming and greeting, and notions as the way the human mind thinks and perceives reality, for example, time, space, frequency and gender. Bloor and Bloor (2004, p.10) equate function with situational use and further state that "each individual utterance in a given context has a particular use." They cite the example of "Good afternoon", as a greeting in the normal context but a reprimand in the context of a teacher using the phrase to greet a student who is late for a morning class. Thus, the 1970s witnessed a shift in language syllabuses based on structural

grammar to ones based on functional/notional grammar. This was the period during which the Communication Syllabus was introduced in Malaysian schools.

The functional syllabus had its appeal in that it was based on language in use as compared to the structural syllabus which showed only form. The move towards the functional syllabus was especially strong in ESP as learners' needs are not to learn grammar but rather how to use the language that they already have from learning EGP. The drawback of the functional syllabus is a lack of a systematic conceptual framework, and as such does not help the learners organise their knowledge of the language.

The next development was a shift from viewing language in terms of the sentence to looking at how meaning is generated between sentences. This is termed Discourse (Rhetorical) Analysis. This approach stresses that there is more to meaning than just the words in a sentences. The context of the sentence is also important as it creates sociolinguistic and discoursal meaning. The criticism of this view of language is that it establishes patterns but does not show how they create meaning. Making learners aware of patterns would not help them use these patterns in communication.

Hutchinson and Waters (1987) conclude that:

i.   a language course can derive its linguistic input from various sources. The ESP teacher needs to recognise that the various approaches are different ways of looking at the same thing. All communication has a structural level, a functional level and a discoursal level. They are not mutually exclusive but complementary in a language course.

ii.   Describing a language for purposes of linguistic analysis does not necessarily carry any implications for language learning. The purposes of the linguist and the language teacher are not the same.

iii.   Describing a language is not the same as what enables someone to use or learn a language. We need to draw a distinction between what a person does (performance) and

what enables them to do it (competence), and must not confuse between how people use a language and how they learn it.

They state that the importance of these points can be fully realised by considering the psychological processes that lie behind language use and language learning.

2.4 Theories of Learning

Although the emphasis of ESP research and materials has been on language analysis, the starting point for language teaching should be an understanding of how people learn.

"A learning theory is a systematic integrated outlook to the nature of the process whereby people relate to their environments in such a way as to enhance their ability to use both themselves and their environments more effectively" (Bigge, 1982, p. 3).

As H & W state, the first theory of learning was the Behaviourist Theory based on the work of Pavlov and Skinner. This theory states that learning is a mechanical process of habit formation, and proceeds by a frequent reinforcement of a stimulus-response sequence. Kearsley (1994) lists three principles that dominate behaviourist learning:

i. Behaviour that is positively reinforced will reoccur; intermittent reinforcement is particularly effective.

ii. Information should be presented in small amounts so that responses can be reinforced.

iv. Reinforcements will generalize across similar stimuli ("stimulus generalization") producing secondary conditioning.

This theory had an enormous impact on language teaching and formed the theoretical base for the widely used Audiolingual Method (the use of audio recordings) of the 1950s and 1960s, and the drills which are still used today. This method of pattern practice or drills has been modified for use in ESP to make it more meaningful and interesting.

The second theory of learning was Mentalism (thinking as rule-governed activity). This theory was based on the belief that a finite small set of rules enables the mind to cope with a potentially infinite range of experiences. The proponent of this theory, Chomsky concluded that learning consists not of acquiring habits but of learning rules, where individual experiences are used by the mind to formulate a hypothesis, which is then tested by subsequent experiences. Therefore, the mind discovers the hypothesis (underlying system) for prediction.

The next theory of learning was the Cognitive Approach (learners as thinking beings). This theory believes that the learner is an active processor of information. Learning and using a rule require learners to think and make sense of stimuli, that is, what they see, feel and hear (Hutchinson and Waters, 1987). The basic teaching technique associated with the cognitive theory of language learning is problem-solving. The cognitive theory treats learners as thinking beings and are placed at the centre of the learning process.

The fourth theory of learning is the Affective Approach (learners as emotional beings). It is based on the rationale that learning is an emotional experience. The cognitive theory assumes that learners will learn when they actively think about what they are learning, but before learners can actively think about something, they must want to think about it. In other words, they must be motivated to think. Therefore, affective factors will precede the onset of cognitive factors.

2. 5 Needs Analysis

According to Hutchinson and Waters (1987), what distinguishes ESP from General English is not the existence of a need as such but the awareness of the need. To be aware of the needs requires us to first identify the needs. This process of identifying the needs is referred to as Needs Analysis. Dudley-Evans and St John (1998) define Needs Analysis as the process of finding out what to teach and how to teach it.

Berwick (1989, p.50) finds that among the various approaches to language programme planning, the approach that has been commonly used in the past twenty years is that based on the needs and interests of the learner. "The central characteristics of the approach include systematic assessment of learners' language needs, along with consultation of learners at various points in the planning and instruction processes". Berwick attributes the popularity of this approach firstly to legislation that mandated the identity of needs as a prerequisite to qualify to receive United States government funding for education, and the influence of the behavioural objectives' movement which required specifying measurable outcomes of learning in educational programmes. The second reason for the clamour for needs-based was the proliferation of language for specific purposes (LSP) programmes.

Needs Analysis has gone through various stages of evolution. Hutchinson and Waters (1987) opine that the publication of Munby's Communicative Syllabus Design in 1978 marked a watershed in the development of ESP. Munby's model of needs analysis comprises two stages: Communication Needs Processor (CNP) and the interpretation of the profile of needs derived from the CNP in terms of micro-skills and micro-functions (cited in Phan, 2005). The CNP involves acquiring information on eight variables that Munby considers affect communication needs, namely purposive domain, setting, interaction, instrumentality, dialect, target level, communicative event, and communicative key. The interpretation of the profile of needs entails processing of the information obtained employing three alternative ways: specification of syllabus content by focusing on micro-skills specification, by focusing on micro-functions, and specification by focusing on linguistic forms. Phan (2005) finds that the biggest drawback in Munby's Model is that it is a very teacher-directed method, in which students' inputs about purpose are superficial and only required at the beginning of the course.

Berwick (1989) distinguishes between discrepancy analysis, democratic approaches and the analytic view as methods of needs assessment. Discrepancy analysis is based on the discrepancy between what people know and what they need to know, democratic approaches examine the views of a reference group while the analytic view relies on informed judgement or the seeking of expert opinion. Braine (2001, p.196) finds the methods of needs analysis cited by Robinson (1991) to be more comprehensive and reflective of current practices. The methods are questionnaires, interviews, observation, case studies, tests, authentic data collection and participatory needs analyses.

In their definition of needs, Hutchinson and Waters (1987) distinguish between target needs, i.e. what the learners need to know in the target situation, and learning needs, i.e. what the learner needs to do in order to learn. Berwick (1989) defines needs as a gap or measurable discrepancy between a current state of affairs and a desired future state. Their framework for a target situation requires determining why the language is needed, how it will be used, who the learner will use the language with, where and when it will be used and what the resources for teaching the language are. Dudley-Evans and St John (1987) outline the sources of information for a needs analysis as the learners, people studying or working in the field, ex-students, documents relevant to the field, clients, employers, colleagues and ESP researchers in the field. The main data collection methods for needs analysis are questionnaires, analysis of authentic spoken and written texts, discussions, structured interviews, observations and assessments.

2.6 English Language Needs of Aircraft Maintenance Technicians

In Shawcross' (2005, p.1) words, "English language has become an indispensable tool in the aircraft Maintenance, Repair and Overhaul (MRO) business". He finds that there is an increased need for aircraft maintenance personnel to acquire English proficiency in recent years due to the following:

1. new regulations imposed by civil aviation authorities world wide which prescribe the standards to which technicians are trained and work have resulted in increased paperwork, which inevitably is in English

2. standardisation and the need for savings have made many airlines dispense of in-house training development in favour of the use of manufacturer courseware, which is again in English. This results in a growing need to master the less controlled style of Training Manuals and to be able to understand the oral commentaries of computer-assisted training.

3. the global economy and hard times have spurred the airlines towards various forms of co-operation, alliance, load sharing and partnership where national boundaries have less and less significance. This requires a maintenance workforce that is increasingly mobile, multicultural and cosmopolitan, thus reinforcing the need for a common language.

Sarmento (2005) laments that despite a lot of effort put into standardizing aviation language, there are very few studies which aim at verifying the language used in aviation documents. Standardisation is essential for aviation communication since pilots and mechanics from various linguistic and communication backgrounds will have to read and understand every detail in manuals. A minor misunderstanding can cause serious damage. There are two different standardized aviation languages: Aviation Phraseology - the spoken communication between pilots and air traffic controllers, and Simplified English (SE), which deals with maintenance documents. Shawcross (2005) finds that Simplified English has become accepted as the industry norm creating a few problems but attenuating many more. He also reports that many manufacturers have implemented the use of simplified English in their documentation and that the findings of research sponsored by the FAA reveal that the use of Simplified English has reduced the error rate in reading

comprehension among technicians from 18% to 14% for native English speakers and from 31% to 13% for non-native speakers.

Shawcross (2005, p.4)) lists the English language requirements of Aircraft Maintenance Technicians as reading, writing and communication skills. He rates reading as the predominantly used skill as he estimates that an aircraft maintenance technician spends about 20 % of his working hours consulting written material in the form of the Aircraft Maintenance Manual, Illustrated Parts Catalogue, Troubleshooting Manual, Service Bulletins, Airworthiness Directives, Service Information Letters, Structural Repair Manual or Component Maintenance Manual and Engine Shop Manual. Writing is required to document their work and to justify in writing the actions they perform, e.g. in log books, troubleshooting and test reports. Communication skills are called upon, for instance, in training in their exchanges with the instructors and to liaise with the flight and cabin crew.

2.7 Conclusion

This chapter has described the origins and the principles of ESP, and the theories of language and the theories of learning. It also examines the types and the methods of needs analyses and provides an insight into the English language needs of aircraft maintenance technicians.