CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

There are four strands to this chapter. The first strand traces the development of English for Specific Purposes (ESP) with the theoretical starting point of register analysis, the inadequacies of which ushered in the next level, discourse analysis. The contributions of Systemic Functional Linguistics (SFL) as a theory of language to ESP and discourse analysis are also examined. The second strand delineates critical discourse analysis before attempting a critique of SFL and discourse analysis. The third strand deals with genre analysis, the third level of ESP development: it traces the development of genre before looking at, first, Swales’ definition of genre, and then Bazerman’s definition of genre; this is followed by an account of the controversial issues over genre theories. Genre and its emphasis on writing as a product is balanced by its complementary view of writing as a process. The final strand investigates the introduction section of the research article, other introduction types as well as the abstract. Additionally, the studies based on the article introduction in genre analysis are discussed.
2.1 The Development of ESP

From the early 1960s onwards, ESP adopted the Register Analysis (RA) approach which was based on the idea of the prior ascertainment of the choice of language used in certain circumstances. The assumption that it is the situation or the subject matter that governs this pre-determination enables the matching of a special language or register with such situations or subjects. The analysis of these registers was therefore called Register Analysis. In further explication of this, Strevens (1977) notes that it does well to familiarize specialist learners with the essential grammatical features and lexis pertaining to their specialties. This was accomplished through the creating and analyzing of corpora of texts extracted from mainly scientific disciplines. According to West (1997 p. 36), the intention was to ‘establish the statistical contours of different registers’ and to identify the frequency of certain grammatical forms or vocabulary. This was due to the fact that the scientific text comprised intrinsic features that could be identified and used as the basis for teaching materials. However, there are 3 shortcomings to this ‘discrete-item’ (Swales, 1990 p.3) approach of viewing isolated features. First, it operated exclusively at sentential level. Moreover, the results of register analysis hardly showed up any difference between ‘scientific’ language and general English. Yet another problem was that this approach was purely descriptive, not explanatory. Finally, it was noted that users of such teaching materials found them below their expectations.

There was a waning interest in Register Analysis after the 1960’s, though certain projects bear evidence of its influence till this day. For instance, to Dudley-Evans and St.
John (1998, p.31), Register Analysis has become a more viable research approach with the development of computer technology and concordancing programmes. With broader textual, implications of discursal features and functions, Register Analysis, as West (1997, p. 35) asserts, was responsible for the development of projects related to transport safety, air traffic control and channel-tunnel communications. However, it is the shortcomings of Register Analysis that set in motion the next stage of development in ESP – Discourse or Rhetorical Analysis, which attempts to look at discourse beyond the sentence, and explicate concepts such as coherence and cohesion, as well as the use and usage of language. At this juncture, it is expedient to have a closer look at the contributions of Hallidayan or Systemic Functional Linguistics (SFL) as an approach to ESP and discourse analytic work generally.

2.2 Systemic Functional linguistics (SFL)

SFL is a theory of language based on the notion of language function. On the one hand, SFL gives an explanation of the syntactic structure of language, on the other, it places great importance on the function of language. There are three kinds of language functions or ‘metafunctions’ or meanings: ‘ideational’, ‘interpersonal’ and ‘textual’. Ideational linguistic resources are concerned with representation of events, interpersonal resources with personal interaction and textual resources with information flow. It begins with social context and how language acts on, and is restricted by, this social context, semantics, lexicogrammar and phonology-graphology. Language is viewed as a social
semiotic, a resource one uses to accomplish one's purposes by expressing meanings in context; in other words, 'language is interpreted within a sociocultural context in which the culture itself is interpreted in semiotic terms — as an information system, if that terminology is preferred' (Halliday, 1978 p.2). Furthermore, in connection with this, Halliday says, 'The value of a theory lies essentially in the use that can be made of it, and I have always considered a theory of language to be essentially consumer oriented' (1985 p.7). Using the work of Chapelle (1998), six characteristics of the various versions of SF theory (Halliday, 1985 pp.7-11) have been identified. Firstly, language is viewed as a systematic resource for expressing meaning in context and linguistics, which, according to Halliday, is the study of the use of language to exchange meanings. This implies that language is not a well-defined system and that it exists and therefore must be studied in contexts. Secondly, language is defined as a systematic resource, and system is the organizing principle in linguistic description. The description of language is a description of choice since language is viewed as semiotic potential. Choices can be charted on different levels, or strata, of language — semantic, lexico-grammatical and phonological, depending on the purpose of a given description. Thirdly, the linguistic structures occurring in texts are 'natural' in that they express the meanings required in a particular context. The 'linguistic structure' of systemic theory is the 'lexicogrammar', which combines syntax, lexicon, and morphology so that they are described as one. To Halliday, 'grammar cannot be modelled as new sentences made out of old words, a fixed stock of vocabulary in never to be repeated combinations' (1985,p.6). Fourthly, the main unit of analysis is an 'entire text' and it seeks to unpack how the various elements of coherence and cohesion are distributed across sentences and throughout texts in ways reflective of
particular genres. Halliday explains, 'For a linguist, to describe language without accounting for text is sterile; to describe text without relating it to language is vacuous' (1985 p.10). Fifthly, register is the primary construct for explaining linguistic variation. It is important as the linguistic consequences of three interacting aspects of context — 'field', meaning the topics and actions language is used to express; 'tenor', meaning the language users, their relationships to each other, and their purposes; and 'mode', meaning the channel through which communication is carried out. Each element of the context has a corresponding language function: ideational, interpersonal and textual as delineated earlier. These semiotic properties of a situation or the values for field, tenor and mode can help users to predict meanings and the language to be used. In SFL, the functional organization is 'projects' on to context, redounding, in turn with the context variables of field, tenor and mode. Sixthly, language acquisition is learning how to express meanings acquiring the functions one can perform with human language.

2.3 Critical Discourse Analysis (CDA)

Critical discourse analysis (CDA) refers to the use of an ensemble of techniques for the study of textual practice and language use as social and cultural practices (Fairclough, 1992). It builds from three broad theoretical orientations. First, it draws from poststructuralism the view that discourse operates laterally across local institutional sites, and that texts have a constructive function in forming up and shaping human identities and actions. Second, it draws from Bourdieu's (1991) sociology the assumption that actual textual practices and interactions with texts become 'embodied' forms of 'cultural
capital' with exchange value in particular social fields. Third, it draws from neomarxist cultural theory the assumption that these discourses are produced and used within political economies, and that they thus produce and articulate broader, ideological interests, social formations and movements within those fields (Hall, 1996). The practical techniques of CDA are derived from various disciplinary fields. Work in pragmatics, narratology and speech act theory argues that texts are forms of social action that occur in complex social contexts. Research and theory in systemic functional linguistics (Halliday, 1985) show how linguistic forms can be systematically related to social and ideological functions. CDA uses analytic tools from these fields to address persistent questions about larger, systemic relations of class, gender and culture. It provides an interdisciplinary analytic approach and a flexible metalanguage for the sociological analysis of texts and discourses.

2.4 Critique of SFL and Discourse Analysis

Sullivan (1995) points out that while systemic linguistics complicates the organization of text features in terms of their function in contexts of use, critical theory complicates the organization of contexts in which those features are used. He argues that the two perspectives can be combined to illuminate how Jakobson's (1960) notion of 'hierarchy of functions' reifies text-context relations in systemic linguistics. Halliday remarks that it is entirely possible to recover from discourse meaning that it is complex and indeterminate by talking about grammar ('Linguistics' 145). Sullivan further explains that there is an indirect interaction between the three elements of the situation (field,
tenor and mode) and the three language functions (ideational, interpersonal and textual). The lexico-grammatical system becomes the site for mediating these interactions, producing a text. This systematic, yet indirect, connection between language functions and situational context makes situated meanings recoverable. Thus, two activities take place simultaneously: the construction of a context, that constrains the choices of linguistic form, and the ongoing organization of linguistic forms, that constructs and enacts a context. This, then, gives an interactive view of relations between text and context, and texts are viewed as the products of complex interactions between linguistic functions and social contexts. Additionally, this model of systemic linguistics considers the immediate context as well as generic and cultural contexts, so this results in an intertextuality that facilitates the recovery of prolific meanings. This proliferation is regulated by a hierarchy of functions (Jakobson, 1960) that are reflected in the configuration of language functions. Both the situational and the functional hierarchies are realized by the lexico-grammatical system. The hierarchy of functions becomes a mechanism for regulating both the production and reception of texts; in terms of production, hierarchy manages the deployment of linguistic features and in terms of reception, the hierarchy of functions regulates text interpretation and evaluation. As Couture (1986) puts it, systemic models posit a parallel between organization of text features and context of situation to explain the ways in which ‘meaning in language arises out of speakers and listeners’ recognition of conventional social situations which are associated with linguistic choice’.
For further discussion of SFL, it is worthwhile to consider Bronson’s (2001) articulation of 3 challenges to SFL under reification, thinness and criticalist programme. Firstly, he echoes Toolan’s (2001) and Sullivan’s (1995) opinion that SFL faces a symptomatic problem in that it seems to ‘privilege the semiotic at the expense of the social and the text at the expense of the system’; and that this critique may perhaps be a reflection of the reification problem latent to any formal system which seeks to explain an interpretive process ‘after the fact’. Secondly, he asserts that ethnographic studies show up the impracticalities in the application of the sentence-centred approach of SFL and its assigned sentential functions to multiple speech acts which can occur simultaneously in a single utterance. This focus on texts qua texts shuts off all points of view for that of the expert analyst about the situation in question, resulting in an empirically ‘thin’ record owing to a lack of triangulation among multiple points of view. The thinness of the record typically provided in SFL accounts makes it necessary to ‘fill in’ a great deal about the nature of context from sources outside the research itself. For example, Chouliaraki and Fairclough (1999), Sullivan (1995) and Hyon (1996) have noted that SFL is limited by its insufficient emphasis on the social in general vis-à-vis the semiotic, on the instance (the text) as opposed to the system, and by its lack of recognition of a system corresponding to the ‘order of discourse’ (Bourdieu, 1991). However, Sullivan (1995) shows how ‘through reuniting the theorizing power of critical theory and the methodological power of systemic linguistics, we can analyze the discursive tactics and strategies of those whose encounters constitute and remake the contact zone’ (p.28); by ‘contact zone’, it is meant the area where non-converging difference comes into contact.
Resuming the thread of discussion of ESP, it can be seen that discourse analysis work done in the 1980s and 1990s has figured in the development of ESP though not without methodological and pragmatic weaknesses. For instance, Bhatia (1993 p.7) criticizes grammatical-rhetorical analysis for its restrictive outcomes concerning discourse structuring in scientific discourse resulting in inaccurate generalizations. He is also dissatisfied with the inadequacies of interactional analysis in dealing with the sociocultural, institutional and organizational aspects of genres particularly in specific and professional settings (1993 p.10). Such critique is augmented by those of Dudley-Evans and St. Johns (1998, p.89) who are in disfavour of discourse analysis relating to separating texts from contexts, focusing exclusively on written texts in English for Science and Technology (EST) and unsystematic naming and analysis of steps and moves. Nevertheless, the discourse analysis approach gave prominence to the following: purposes of the use of language, learners' needs and their situations and the kind of language needed.

2.5 Social Constructionist Approach

Contrary to these criticisms of SFL and discourse analysis, Hyland (2000) argues that the theory developed by Halliday (1978,1994) does emphasize the mutually constituting relationship of language and context, that is, language constitutes context and context constitutes language, and illuminates the social conception of academic writing. To concretize his stance, Hyland adopts a social constructionist perspective to further explain
concepts like academic texts, context or disciplinary cultures and ideologies like the social construction of knowledge. To him, texts (i) are the social products of particular communities, (ii) give form to the social negotiations of disciplinary investigation that shed light on the process of knowledge-making, (iii) are subject to social practical influences of particular social groups, and (iv) reveal generic activity as they add to the accumulation of previous textual works, and evidences repeated rhetorical responses to similar situations resulting in typification. Context may be explained in terms of disciplinary cultures whose meaning is conveyed through a string of ideas like discipline, tribes, cultures, discourse communities or communities of practice. 'Discourse communities', for example, implies interdisciplinary diversity and intradisciplinary homogeneity, disciplinary constraints and differences. As for 'communities of practice', there is an emphasis on situated activity. Moreover, the ideology of the social construction of knowledge, as can be seen in the interactions of academic writers suggests community conventions, connects texts with disciplinary cultures and reveal how writers negotiate knowledge. Thus, in stipulating a context for the text this way, Hyland has bridged a gap that has been subject to criticism in discourse analysis, and provided the background to genre analysis.

2.7 Development of Genre

Genre analysis has developed out of discourse analysis and it is important in that it places discourse into its communicative context as well as looks at culture and situation - aspects neglected by discourse analysis. In this way, the institutional structure is
‘demystified’ (Bizzell, 1982) through the study of discourse conventions or ‘culture’ and the interrelatedness between discourse and community as suggested by ‘communicative context’ and ‘situation’, of which is exemplified in the work of Swales and Feak (1994, Berkenkotter and Huckin (1995) and MacDonald (1994). Dudley-Evans (1987) was in favour of genre analysis as a system of analysis in ESP as it (i) brings together texts sharing similar rhetorical purpose, form and audience, (ii) demonstrates variations between texts of same or different types, and (iv) informs us of the rhetorical structure and form. Indeed, this socially oriented approach to academic discourse has been viewed as a development of great significance in ESP (Dudley-Evans and St. John, 1998 p.31). Later, concepts of rhetoric are incorporated to provide a rhetorical framework in the analysis of academic and professional discourse patterns. Evolving mainly along Swales’ lines of organization of genres, especially in his CARS Model in the analysis of article introductions, genre analysis has become an important system in ESP the last ten years.

2.8 Bakhtin’s Definition of Genre

Formulated more than fifty years ago, Bakhtin’s concept of genre is fundamentally based on the communicative function of language. He called the relatively stable types of utterances in which language is realized, genres. To him, it is the specific communicative goals and circumstances that gave birth to the social phenomenon of genre, ‘A particular function and the particular conditions of speech communication specific for each sphere give rise to particular genres’ (p.64). He further stated important characteristics of speech
genres as can be seen in their repeated interaction, mutual influence and perpetual
dialogue within common functional fields: 'any concrete utterance is a link in the chain
of speech communication of a particular sphere....Each utterance is filled with echoes
and reverberations of other utterances to which it is related by the communality of the
sphere of speech communication' (p.91). Bakhtin further said that genres are both
'mandatory' and creative utterances, 'Speech genres are much more changeable, flexible
and plastic than language forms are....to learn to speak means to learn to construct
utterances... the better our command of genres , the more freely we employ them,... the
more perfectly we implement our free speech plan' (pp.78,80). Thus the nature of genre
is simultaneously static and dynamic; it is a schematic model that is used for constructing
similarly new utterances which in turn modify the model and retain essential features at
the same time. In this way, genre is predictable and probabilistic, canonical and
renewable, productive and procedural.

Bakhtin's concept of genre as a social, goal-directed, contextualized phenomenon
is in harmony with contemporary concepts. There has been a reconceptualization of genre
within socio-rhetorical, socio-cognitive and socio-cultural contexts. These
reinterpretations of genre have arisen in the face of the 'classical' idea of genre as formal
and textual regularity and a subsequent from 'effects' (formal features, text
classifications) to 'sources' of those effects (Devitt, p.573). Following the social lines of
Hyland, Oliver (1970) reconceptualizes genre as social action in six ways. Genre is
viewed as dynamic, participatory, situated social action, and its application is an
engagement with established discourse communities, acculturation into conventions, and negotiations with, and transformations of, the communities, in practice. Thus, genre is seen as a form of ‘situated cognition’ (Berkenkotter and Huckin, 1995) and our knowledge of genre is constantly upgraded by experience. Moreover, genre is a social institution that is capable of being changed and renewed; it shapes and is shaped by communicative actions (Yates and Orlikowski, 1992 p. 300) and ‘every situated text is a negotiated revision modified by the social forces in its particular context’ (Johns, 1997 p.41).

2.8 Miller’s Definition of Genre

The ‘New Rhetoric’ as found in the work of Burke (1977) and Searle (1978) and Austin (1975) with its emphasis on the contextual framework of society, has shaped Miller’s notion of genre as a social action embedded in a wide socio-rhetorical context. Genre as typified rhetorical actions or responses must consider the situational context in a discourse community since a situation functions as a social construct with a well defined meaning. Besides, there is a merging of form and substance in rhetoric, ‘a genre becomes a complex of formal and substantive features that create a particular effect in a given situation’ (Miller, 1984 p. 25). Miller proposes a ‘hierarchy of meaning’ of nine levels: (i) human nature – (ii) culture-(iii) form of life –(iv) genre- (v) episode or strategy – (vi) speech act-(vii) locution – (viii) language-and (xi) experience. It can be seen that genre is positioned between the context of form of life and the constituting elements of episode
and strategy. This theme is further elaborated in view of genre being reciprocally related to the social context and accordingly, genre is re-positioned between the macro-level of culture and the micro-level of language. Following along Giddens' (1984) instructionist lines, Miller sees genres as situated communication, capable of reproduction owing to its recurrent nature. Moreover, genres serve 'as keys to understanding how to participate in the actions of a community' (1994 p 39). In this way, genres are related to social structures and related discourse communities. When viewed this way, Miller's genre is reflective of Bazerman's and Swales'.

2.9 Bazerman's Definition of Genre.

Further, Bazerman sees genre as social action where writers and readers jointly construct genres with shared purposes. In addition, genres develop on the basis of conventions over time and through recurring situations subject to social, cultural and institutional influences. He says, 'Genres are forms of life, ways of being. They are frames for social action. They are environments for learning. They are locations within which meaning is considered. Genres shape the thoughts we form and the communications by which we interact. Genres are the familiar places we go to create intelligible communicative action with each other and the guideposts we use to explore the unfamiliar' (1977 p.19). Bazerman is known for his study of the development of single types of texts through repeated use in similar situations. His book 'Shaping Written Communication' (Bazerman, 1988) is a collection of diverse accounts: evolutionary
historical account of the scientific article from 1665 to 1800, unopposed report and events, discord over results, claims reports and experimental proofs. It is in his study of patents where he traced the web of interrelated documents issued in the application procedures the term 'systems of genre' is used. From the viewpoint of the participant in society, he explains how that genres in which we participate are 'the levers which we must recognize, use and construct close to type (but with focused variation) in order to create consequential social action' (1994 p.79). He goes on to explain how this 'machine' imagery operates only with our participation because its implied genres allows the creation of 'highly consequential meanings in highly articulated and developed systems' (ibid).

2.11 Swales' Definition of Genre

Swales supports this concept of genres as mediators between individual and society and provides us with a theoretical framework that encapsulates a potent, principled yet open-ended notion within a socio-cultural context of academic writing. In Swales' working definition of genre, a genre comprises a class of communicative events, the members of which share the same set of communicative purposes. These purposes are recognized by the expert members of the parent discourse community, and thereby constitute the rationale for the genre. This rationale shapes the schematic structure of the discourse and influences and constrains choice of content and style. Communicative purpose is both a privileged criterion and one that operates to keep the scope of a genre
as narrowly focused on comparable rhetorical action. In addition, exemplars of a genre exhibit various similar patterns in terms of structure, style, content and intended audience. The parent discourse community will view the exemplar as prototypical on realization of all high probability expectations. Subject to further validation, a valuable ethnographic communication is constituted by the genre names inherited and produced by discourse communities (Swales, 1990 p. 58). Thus, in this way, Swales integrates genre as a communicative event, with communicative purpose as a privileged criterion recognized by the parent discourse community., the two most important aspects of a socio-rhetorical vision of genre. This definition also establishes the link between the rationale of a genre, which is constituted by communicative purposes, and its formal features. This rationale shapes the schematic structure of the discourse, influences and constrains choice of content and style (ibid). The notion of discourse community as a socio-rhetorical entity with shared interests, bridges socio-logical and linguistic views of discourse analysis, and is important for understanding contextual influences on different types of discourse. Swales' concern with genre is aimed at offering an approach to the teaching of academic and research English. His work demonstrates the general value of genre analysis as a means for studying spoken and written discourse for applied ends. In this context he relates genre to task, which is seen as a set of goal directed activities relatable to the acquisition of genre skills. Elaborating this theme further for pedagogical purposes, he formulates the characteristic generic expectations and actions in terms of cognitive schemata with associated procedures, referring to similar notions in other theories. Swales also develops a rhetorical and content-based approach to teaching academic writing as in his CARS (Create a Research Space) Model – a set of rhetorical
moves in research article introductions whereby the writer’s intentions are presented in accordance with the laws of a genre.

2.11 Studies on Genre Analysis

In the analysis of texts by many ESP scholars, there appears to be an emphasis on the formal characteristics of genres. For example, a number of researchers have used structural move analysis to describe global organizational patterns in genres. This is evident in the genre analysis of science dissertations (Hopkins and Dudley-Evans, 1988), medical abstracts (Salager-Meyer, 1990), popularized medical research reports (Nwogu, 1991) business letters (Bhatia, 1995) and university lectures (Thompson, 1994). At the local level, the stock of contributions on genre analysis has been steadily building up over the years: promotional texts (Kathpalia, 1992), research articles on particle physics (Chin, 1993), letters of complaint and adjustment (Nur, 1996), Cambridge 'O' level mathematics examination paper (Tan, 1997), medical reports (Kaur, 1998) and legal texts on constitutional and administrative law (Krishnasamy, 1990). Of all these local studies, the work of Kathpalia (1992) appears to be most comprehensive in terms of her textual analysis of the form - meaning function relationship among the different planes: rhetorical, lexico-grammatical and discoursal. It is noted that her leanings are towards Bhatia's (1983) conceptualizing of genres. At the global level, some researchers have concentrated on sentence-level grammatical features such as verb tense, hedges and passive voice in these text types (Hanania and Akhbar; 1985; Salager-Meyer, 1994;
Swales, 1990; Dwyer, Gillette and Icke, 1981). In general, descriptions of genre, such as that of Hopkins and Dudley-Evans (1988) have been used as discourse models for ESP writing instructors but there is inadequate work on the use of such models as instructional methodologies in teaching. On the other hand, the work of Swales (1990) and Bhatia (1993) have been more explicit about teaching applications.

2.12 Controversial Issues over Genre Theories

It has been pointed out that genre theories have not escaped expressions of dissatisfaction in some quarters. For instance, Lakoff (1984) asserts that a critical theoretical or feminist viewpoint does not agree with the right of 'experts' to 'own' the genre and determine what the valid rationales are. Additionally, the socially contested nature of genres is minimized on the strength of the assumption that the discourse community could agree on the prototypicality of any given set of exemplars. Moreover, 'inter-subjective' reality is inherent in social relationships and is subsequently, dynamic, subject to constant change and re-interpretation. It is a site of constant, dialogic negotiation between and among subjects rather than an essential similarity of opinions about the 'fact' of the situation. Further, there is the risk of minimizing the inter-subjective nature of genre.

In matters related to English for Academic Purposes (EAP), a socio-cultural approach, by tacit agreement, requires that genres of academic discourse be viewed as socio-rhetorical, historically situated constructions when objectified for research and
standardized for teaching or practice (Swales, 1990). For instance, the historical background of the modern research report as described by Swales, serves to illustrate the social and historical processes blended into the report, and genres, lacking this, are mere decontextualized formulas. In addition, there seems to be an emphasis on the grammatical and lexical levels rather than the rhetorical level (Swales, 1990) with regards to studies on written genres. However, such work seeks to explicate textual features that expresses the conventionalized purposes of the discourse community as well as the author's purposes in relation to a particular audience, and in this way, the text is viewed as a nexus of socio-literate activity. Thus, there is meticulous observation of variations among textual features based on the associated purposes and contexts. This is to achieve a sufficiently thick description of context for explanatory, and not just descriptive, adequacy.

2.13 Academic and Professional Writing as a Process

Moving away from this focus of texts as products of writing, Hyland (1999) offers three interlinked perspectives on the process of academic and professional writing: the cognitive, the social and the cultural. First, a cognitive perspective involves appreciating the purposes for using the text, Besides, aspects such as the degree of reciprocity holding between writer and reader, how writers come to construct their audience, and the effect this has on the text are equally important. Additionally, it is essential to locate the writer within a given social context of writing practices to account
for the interpersonal and social decisions that he makes. Second, a social perspective focuses on the writer's awareness of the social context which defines the purpose and meaning of the writing. Writing processes occur within a complex of understandings, meanings and knowledge as part of broader social and cultural structures. Texts and the writing processes are seen as reflective and constitutive of the interactions between members of social groups. The social perspective clarifies the ways in which discursive forms and genres are institutionally valued, evaluated and validated. All discourse are constructed, interpreted and acted upon in social sites of engagement and according to social norms. Meanings are socially mediated, or are specific to social groups, and discourse is essentially field-independent. There is need to incorporate one's audience into one's writing to secure professional and personal goals as well as reinforce authoritative structures and professional practice. Third, a cultural perspective involves an understanding of values and practices in relating to language choice and language use. Culture has been seen as a critical influence on the practices of writers through their institutional allegiances, when viewed from academic, workplace and professional writing perspective. It provides an intellectual and communicative structure for the construction of community-based meanings and knowledge, a framework of conventions and understandings for effective communication.

2.14 The Introduction Section of the Research Article

There has been a notable steady proliferation of prescriptive and therefore descriptively inadequate work on the introduction section of the research article from the
forties to the eighties (Nelson, 1940; Rathbone and Stone, 1962; Day, 1979; Rathbone, 1985). Formulaic structures such as those that are presented, do not necessarily mean they are actually employed in technical writing in practice. In contrast to this, the genre-based approach is a critical and evaluative exercise in creation of effective structures. For instance, Gosden (1993) emphasizes the clearly defined macrostructure of the research article that 'facilitates analysis of the many linguistic features i.e. components of the microstructure, which realize the character of the distinct components. Thereby, the two levels of linguistic information, top-down-macro and bottom-up micro-level description may be integrated and potentially mapped on to each other' (p. 57). The article introduction is also seen as an interaction between the individual writers and the arbitrary academic community, emphasizing what Tarantino (1991) describes as 'the dialogic nature of scientific discourse' (p. 51). The purpose of this, according to Brandt (1986), is to 'uncover) the links between the structure and processes of a text and the structure and processes of the larger social system in which that text participates' (p. 93).

2.15 Other Introduction Types and the Abstract

The differences of other types of introductions, such as those of the laboratory report, from the research article, have been identified by Bhatia (1993, pp. 93-97). This is because laboratory reports are written accounts of standard laboratory procedures to demonstrate an understanding between theory and practice. Further, the content of such reports is established knowledge in contrast to the originality of contributions in research
articles. While the author of a research article seeks to create a research space to justify publication of his report, the laboratory report writer has only to show an understanding of conventional research procedures and explain a theory. There appears to be three moves in a laboratory report introduction; the aim of the experiment, establishing the field and explaining the theory.

With respect to introductions in dissertations, Dudley-Evans (1988), in his investigation of introductions in dissertations for a Master of Science, discovered a six-move structure in his corpus. It is also found that there are differences between his six moves and Swales' four moves particularly in relation to Move One (p. 117). Moreover, it has been pointed out by Bhatia (1993) that Swales' Move One of 'Establishing the Field' in the article introduction can be realized in three distinct moves in Dudley-Evans' Move One, which is more appropriately recognized as 'Introducing the Field' in the dissertation introduction (p. 98). This is because of the fact that dissertation introductions are much lengthier and more elaborate than article introductions with the inclusion of literature review in line with conventional practice. Besides, in the case of the dissertation introduction, there is no necessity to establish the field to attract a larger readership since there is minimal competition from other members of the academic community.

Similar to the introduction, the abstract is considered to be an important professional scientific text that is particularly suited to genre investigation. It is, to Porush (1995), 'a study in miniature of the (research) article' (p. 79). The American
National Standards Institute (ANSI) defines it as 'an abbreviated, accurate representation of the contents of a document, preferably prepared by its author(s) for publication with it'. The abstract functions as an informative 'screening device' (Huckin and Olsen, 1991, p. 366) or 'advance indicator' (Swales, 1985, p. 179) in providing a preview of an article for both specialist and non-specialist readers. Just as important as this, it also serves as what Lane (1960) calls a 'timeless reference tool' (cited by Mills and Walter, 1986, p. 67) owing to it being a discoursal type, complete by itself apart from the rest of the text. Moreover, Swales (1985), in particular, is impressed by the fact that an abstract is distilled from what it is basically a part of (p. 179). In terms of its rhetorical structuring, the abstract utilizes four distinct moves, and emphasizes all the important aspects of the four sections: purpose/background, methodology, results or findings and conclusion.

2.16 Studies of the Introduction Section

In a general sense, genre-based analyses of the research article have focused mostly on the introduction section. The importance attached to this particular section is further enhanced in the light of an assertion by Gupta (1995) that 'the introduction represents the link between the audience and the writer's work; introductions are successful insofar as they are able to bridge the gap between the intended reader's knowledge base and the research paper' (p. 59). The overall structure of the introduction with the most general information at the top and gradually narrowing in level of generality towards the base has been proposed by Hill, Soppelsa and West (1982, pp.
334-335) using a trapezium (the top part of the hour-glass figure), and Rathbone (1985), an inverted pyramid (p. 88) respectively. However, Wilkinson (1991) considers the choice of end-points in Hill's trapezium not practical for developing the introduction since information may be too general at the top or too specific at the base. More recently, a number of researchers have found that Swales' basic four move model must be adapted to cater for many different subject areas. Accordingly, Swales' CARS model has to be adapted to reflect the corpus of engineering texts in this study. In a textual analysis of Swales and Najjar (1987), it is found that introduction sections in physical science often conclude with the presentation of principal results; this study seeks to find out whether this is also the practice in electrical and electronics engineering. Further, the work of Cooper (1985) on fifteen IEEE introductions on computer technology, reveals the absence of Move 3 in one-fifth of the introductions and that there is a difference in sequencing of moves in almost half of the introduction (cited by Swales, 1985, p. 148). This difference in sequencing is one of the concerns of this study. In yet another study, Crookes (1984) finds that there is a tendency to for the application of Swales' four-move schema in some shorter article introductions while in more complex texts, a variety of alternative arrangements is possible, involving repeated use of mainly Moves 2 and 3 (p. 65). In connection with this, one of the goals of this study is to find out the parameters that exert seminal influence over the length of the introductions. In addition, Peng (1966), in her analysis of ten chemical engineering research articles, observes that the introduction section invariably includes Swales' moves that are modified and in the order - 1 (Handling Present Research) - 2 (Preparing for Present Research) - 3 (Introducing
Present Research) (p. 85). Similarly, there may arise a need for relabelling of the moves on adaptation in the present study.

2.17 Studies of Article Introductions in Genre Analysis

A number of writers like Swales (1981), Adams (1987), Tarantino (1991), Salager Meyer (1992) and Gosden (1993) have advocated for a combination of both the macrostructure and the microstructure in their approach. Of these studies, the work of Swales (1981) and Salager-Meyer are of particular relevance to this study. In what he considers as a 'quick and dirty' analysis of journal introductions (1981, preface), Swales presents several ways of analyzing generic features in terms of regularities of form that are realized within a socially structured situation. For instance, Swales leads the way in the use of the following certain lexemes in the different ways of asserting centrality in the choice of research area (pp. 26-29); the three types of orientations-strong and weak author, and subject orientations - used in summarizing previous research and the preferred tense used in each case (pp. 41-42); negative elements - nominal, verbal and lexical - in establishing a gap (p. 63); the two types of purpose statement - purposive and descriptive (pp. 63-68); and the two ways of conveying the organizational structure - use of locative phrase and collapsed structure (pp. 69-70). In explicating his approach of textual analysis, Swales corroborates his assertion that 'it is only within genres that viable correlations between cognitive, rhetorical and linguistic features can be established' (p. 10). In addition, the work of Salager-Meyer (1992) is seminal to the present study in two
respects; first, that there is a close relationship between the rhetorical function of each (abstract) move and the use of verb tenses and modality, second, that the communicative function of each (medical) English text type also determines the use of verb tenses (p. 106). This establishes the meaningful relationship between form and function when the formal features are related to their communicative purposes. Besides, Salager-Meyer's use of frequency as a criterion for selection of verb tenses and modals in their active and passive forms (pp. 96-97) substantiates the quantitative aspect of her work. Thus, the present study seeks to draw from the 'knowledge of regularities and varieties of textualization associated with particular moves and move cycles within identifiable groups of texts' (Hopkins and Dudley-Evans, 1988, p. 120) as delineated by the two researchers and further the cause of genre investigation.