The Genre and the Genre Expectations of Engineering Oral Presentations Related to Academic and Professional Contexts

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Abstract

This research was done to find out if engineering oral presentations (EOPs) are a genre, if there are systematic differences between EOPs delivered by native speakers (NSs) and non-native speakers (NNSs) of English, if there are systematic differences between EOPs delivered by novices and experts and, if the engineering discourse community (DC) members have beliefs concerning what constitute 'good' EOPs. One engineering seminar and four engineering conferences carried out in Malaysia and the UK between March and September 1994 were participated. From this participant observation exercise, 100 questionnaires were gathered and responses analysed; sixty-eight EOPs delivered by NSs and NNSs were transcribed and analysed using Genre Analysis frameworks. Results from the analysis of EOPs were counterchecked with the responses in the questionnaires. It was found that EOPs did have describable characteristics which qualify them as a genre; There were few differences between EOPs delivered by NSs and NNSs of English because the latter tend to follow the former; There were describable differences between EOPs delivered by experts and novices. The engineering DC members did have their genre expectations but not all of their beliefs concerning what constitute 'good' EOPs were possible to materialise in actual occasions because of certain unavoidable constraints. These constraints were found to be affecting the *variants* of the genre more than the *invariants*. These variant-invariant elements were found to be related to the characteristics of exemplars, prototypes, prestige markers and the patterns of imitations of NNSs and novices of the engineering DC members. 'Ecological validity' was pointed out to be one of the ways of achieving the reliability and the validity of the research. Potential teaching implications were also discussed. Unavoidable limitations of the research were pointed out and finally immediate and longer term research projects have been identified.

Contents

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Acronyms Used In This Thesis

The full terms for the acronyms used in this study are arranged in alphabetical order:

CARS	Create a Research Space
DC	Discourse Community
DCs	Discourse Communities
EAP	English for Academic Purposes
EFL	English as a foreign language
ELT	English Language Teaching
EOP	Engineering Oral Presentation
EOPr	Engineering Oral Presenter
EOPrs	Engineering Oral Presenters
EOPs	Engineering Oral Presentations
ESL	English as a Second Language
ESP	English for Specific Purposes
EST	English for Science and Technology
HRD	Human Resource Development
GA	Genre Analysis
IEM	The Institution of Engineers Malaysia
IEE	The Institution of Electrical Engineers
IEEE	The Institution of Electronics and Electrical Engineers
IMRAD	Introduction, Method, Results, Discussion
ITM	Institute Technologi MARA, Malaysia (MARA Institute of Technology)
Ir	Engineer
JA	Journal Article
JAs	Journal Articles
JKR	Jabatan Kerja Raya (Public Works Department)
L1	Language spoken as a native language
L2	Language spoken as a second or foreign language
LSP	Language for Specific Purposes
MARA	Majlis Amanah Rakyat
MARDI	Malaysian Research & Development Institute
MIMOS	Malaysian Institute of Microelectronic Systems
NN	Non-native
N	Native
NEL	National Engineering Laboratory
NS	Native speaker
NSs	Native speakers
NNS	Non-native speaker

NNSs	Non-native speakers
OP	Oral Presentation
OPs	Oral Presentations
PE	Professional Engineers
PEMAS	Penang Electronic Manufacturing And Supporting Industries Exhibition and Conference
PO	Participant Observation
Pr	Presenter
Prn	Presentation
Prns	Presentations
Prs	Presenters
PORIM	Palm Oil Research Institute Malaysia
Q&A	Question and Answer session
Q&As	Question and Answer sessions
RA	Research Article
RAs	Research Articles
RQ	Research Question
RQs	Research Questions
R&D	Research and Development
Sdn. Bhd.	Sendirian Berhad (Limited Company)
SI	Specialist Informant
SIs	Specialist Informants
SIRIM	The Standards and Industrial Research Institute of Malaysia
SPSS Win	Statistical Package for Social Science Windows
SURRC	The Scottish Research and Reactor Centre
TPM	Total Productive Maintenance
TQM	Total Quality Management
TT	Teacher Trainee
UM	University Malaya
UKM	Universiti Kebangsaan Malaysia (National University, Malaysia)
UPM	Universiti Pertanian Malaysia (Agricultural University, Malaysia)
UTM	University Technology Malaysia (University of Technology Malaysia)
UTN	Unit Tenaga Nukleur (Nuclear Energy Unit)

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Chapter 1

INTRODUCTION AND BACKGROUND OF THE RESEARCH

It is well known that persons in leadership positions - politicians, religious leaders, directors, managers, give speeches but it has been demonstrated that blue collar workers also give speeches (Kendall, 1974:233). Walter and Scott believe that "speech should be taught more as a liberal art than as a technical skill" (1973: vii) because "speaking is one way of learning about oneself" (p. 11) as well as one way of influencing the opinion and action of others (p. 8). Whether as a liberal art or as a technical subject, speaking skill should be taught to both professionals in art and technical disciplines. Professionals in technical disciplines need speaking skills with a technical flavour, because, either at leadership level or at the shop floor level these professionals do need to make speeches.

In this chapter the relationship between engineering, academic and professional contexts is first discussed, followed by the background of the research. This is then followed by the statement of the problem, the objectives of the research and the RQs. The theoretical framework, the possible benefits and the limitations of the study are discussed next, followed by the summary of the organisation of the remaining chapters of this thesis.

This study attempts to describe the genre and the genre expectations of EOPs related to academic and professional contexts. It might be worthwhile at this point to clarify two important factors

contained in the subject of this study - the word *engineering* and the relationship between *academics* and *professional* contexts.

First is the word *engineering* which carries an applied notion which gives the commercial inclination that is significant especially in developing countries. In order to explain the *applied* notion and the *commercial* interest it carries, first the notion of *science and technology*, has to be explained. Why is the word *science* always connected to *technology* to become the twin term *science and technology* and how are these terms connected to engineering?

In *Macropedia* this term is explained by looking at the words separately: *Science* is a systematic attempt to understand and interpret the world but *technology* is the systematic study of techniques for making and doing things (1993:469). According to Richards *science* is concerned with understanding, describing and explaining the nature of the universe including man; *technology* on the other hand is concerned with how to design, operate and control machine, devices and instruments (1976:x). While *science* is devoted to the more conceptual interpretation of the environments, *technology* is devoted to the application of these conceptual interpretations.

Thus the two terms *science* and *technology* prove to be complementary and not synonymous and the applied nature of *engineering* is a result of the marriage between the two. The marriage gives rise to the twin term *science and technology* and the applied nature gives engineering its commercial inclination.

The applied notion and the commercial inclination are clearly demonstrated in the expansion of the engineering disciplines which usually flourish in academic, research, business

and industrial institutions. The traditional disciplines of engineering soon developed into new engineering disciplines due to new developments and innovations made possible by the applied nature of engineering disciplines. Civil engineering gave rise to transportation engineering, mechanical engineering gave rise to production manufacturing and industrial engineering, electrical engineering gave rise to electronics and computer engineering and chemical engineering gave rise to petroleum engineering.

The commercial inclination and the applied nature are especially true in the new breed of engineering faculties. While the applied nature of engineering disciplines provides the professionals and the expertise who actually *industrialise* a country (Zainal Abidin Sulong 1993:109), the commerciality of engineering, along with the applied nature in manufacturing industries assist the engineering DC to enter the market world thus strengthen the economy of the country . These two elements - appliedness and the commerciality are collaboratively responsible for the expansion of those engineering disciplines.

Perhaps because of this applied nature and commercial inclination, it is possible for developing countries to have their own *vision* by giving priority to the engineering discipline, such as in the case of Malaysia, whose vision is to become a fully industralised country by the year 2020 (Kamaruddin Jaafar and Hazami Habib, 1993: 1-301). The main issues of Malaysia's vision 2020 are to emphasise industrial activities and economic development along with spiritual development (Zainal Abidin Sulong 1993:108) and the success of the industrial and economic activities rely on the field of engineering, in particular, with special reference to technology (p. 110). Thus the significance of the field of

engineering to NNSs of English is especially felt in the context of the third world countries such as Malaysia. We can witness engineering to be a very significant faculty in the technological university in Malaysia (UTM) and the engineering DC in this university has a very close rapport with other technological institutions in and outside the country. This makes engineering even more significant to NNSs. Outside the Malaysian context, engineering is still a core aspect of industrial and economic development and has been the catalyst of development in developed countries and is the backbone of industrial development in other third world countries, where EST flourishes.

The presence of NNS of English in EST is felt in universities in the developing countries themselves as well as those in English speaking countries such as the United States. Johns quoting Barber and Morgan (1988, in Johns) and Institute for International Education (1990, in Johns), reports that engineering is "one of the two disciplines most heavily enrolled by international and bilingual students both in the US and in EFL contexts" (1993b: 77). Engineering students are significant because, according to Huckin and Olsen, they are "the single largest subgroup of FSs (Foreign students) and NNS ... professionals in the US". They also describe engineering as 'The single most popular field of study for FSs in the US ... and always has been...' (1984a:275). Dick points out that "sixty percent of all foreign students are in Engineering" (1990:40).

Second let us consider the relationship between *academic* and *professional* contexts. The close relationship between these two contexts can be seen in the types of activities and public meetings the DC members from both contexts share and these DC members' mobility in both contexts. Two of the activities of the engineering

DC members observed in this research, were conducting research and carrying out projects which could be both academic and commercial in nature. Activities in academic contexts were usually on *research* and those in professional contexts were usually in the form of both *practical applications* and *research*. It was observed that the activities done in both the contexts were complementary. The term *practical applications* in this research refers to activities in the form of engineering projects carried out in a specific community such as the building of transportation systems which could be commercial in nature. Such activity was well expressed in the OPs presented at Urban Transportation Seminar, one of the engineering meetings included in the corpus. The commerciality was well expressed by one SI from this seminar who wrote: "I am not a researcher or member of any academic institution, but as a consultant have to make presentations to market particular expertise."

Since the DC members carry out complementary kinds of research they tend to organise and participate in seminars and conferences collaboratively. Amongst the meetings attended for this research, two conferences (Third Power Engineering Conference and 10th National Conference on Manufacturing Research) were jointly organised by educational institutions and engineers' Institution(s), one conference (PEMAS Conference) was organised by a research institution (MIMOS) and an exhibition company (Reeds Exhibitions) and the seminar (Seminar on Urban Transport) was organised by engineers' institutions (IEE, IEM). From the information on the EOPs being analysed, we knew that the presenters in the preceding meetings were either an academician or an R&D researcher or a consultant. From the questionnaires analysed, it was found that the members of the audience either

came from an academic institution or a research institution or a company or a factory. In other words, in one and the same engineering seminar or conference, academicians, researchers and project handlers could be participating in giving OPs.

The decision to describe the genre and the genre expectations of EOPs related to academic and professional contexts was mainly motivated by the importance of OPs and the understanding of the genre in these contexts. In addition, the motivation came from the discrepancies between this importance and the treatment given to EOPs as a subject of study.

The importance of an OP and its genre is centred around professional and pedagogical reasons. The SIs of this research, indicated that in carrying out research and projects, NNSs and NSs of English alike, need to talk about these activities in public at conferences and seminars as celebrations of success in their profession and most importantly as a means of continuing the chain of 'social action' - to be able to get more funding and to go on with their professional activities. In order to be professionally effective, the DC members need to gather primary, up-to-date and accurate information, to be able to catch up with the fast developing field of engineering. Pedagogically, the novices need to use knowledge of the genre of OPs for acculturation.

OPs are important because of the *primary* information they transmit. In a written discourse such as RAs, the information is substantial (Dubois, 1980a) but polished and engineered, and much of the authenticity of the data is usually lost. Nunan comments, that researchers often publish their research "in a neat unproblematic packages" (1992: xi). Swales worries that much of the information does not get transmitted through written

publication (1990:117-126). Based on Ziman's (1968 in Duboi) three stages of the production of knowledge in science, Dubois (1980a) contends that the biomedical slide talks are placed at the prospective rather than the retrospective level and this merits as a primary type of information. Using Campbell's (1975) concept of persona, Dubois comments that in RAs the persona looms larger than the person but in speeches, the person looms larger than the persona (1980a: 143). The persona represents the unproblematic all polished state (or the ideal scientific knowledge) but the person represents the actual happenings including the difficulties faced in carrying out the research. As Dubois indicates, a presenter usually confesses "problems, doubts and dead ends" (p. 183).

From such 'confessions' members of the audience might become interested to carry out similar projects or research thus an OP can stimulate more activity in the DC. Through such confessions, the problems faced by the speaker would be of some insight for the audience to solve their own. This is a type of an indirect insight. The solution comes slowly to the mind of the speakers as a result of having to think as they talk about the topic or the speakers might be triggered by the audience's reactions which lead to the solutions themselves. It might also be in the form of the actual solutions to the problems. Thus OPs give a richer, more complex account of research. The OPs according to Swales 'offer a preliminary trial of new ideas' (1990: 178). Without the OP stage, the maturity cycle of research or of a project is not complete. If only written materials are available, readers will only be able to evaluate the reliability of the research and the project outcomes. However, if the researchers or the project handlers themselves are willing to share their

problems and doubts with their audience, one of the most natural ways of sharing these is through the OP activities.

OPs are also important because of the up-to-date information they offer. Some linguists whom the researcher met at the conception of this research believe that OPs are not as significant as their written version (RA, proceedings etc.), especially when the latter are easily available. What they are saying is, the public can find the written version of the reports, thus an OP is just a ritualistic activity because the written form is still eventually sought for.

However, this is not agreed by Dubois (personal correspondence, December 1994) and the SIs who said that this might be so in slowly advancing fields such as literature and linguistics. In rapidly advancing fields such as biomedicine and engineering (especially electrical engineering), where large sums of grants are to be grabbed and more and more graduate students enter the field, OPs are more sought for than the written version because they have to compete. A researcher in this DC has to make sure that his or her research is not similar in any way to any other research, thus s/he has to know about similar research even before they are documented in any written publications. They can not compete if they wait for the written publications.

Presenters are more likely to reveal up-to-date information in the OPs than in written versions. RAs for instance are published months after they are written. The core information in a proceeding in the corpus of this research for instance, would have been written some time before it was read by the audience, but in the OP the speaker can ad-lib to make it a *fresh talk* (Goffman, 1981:171) and thus make the up-to-date information available

immediately. Ad-libbings in the OPs in our corpus usually contained more up-to-date information than those found in the written counterparts - those that the speaker did not plan to say but usually got into the mood of saying in real-time situations or, the speaker got to know about the information in the journey to the conference or just before the OP started and could not resist the temptation of saying it because it was still fresh in his mind. An example of such ad-libbing was found in Pr52:

Yesterday in our industrial dialogue + we had a very good meeting with a representative from industry in Penang and elsewhere and I believe they are beginning to see that electronic industry is going to this transactions wherein there is a role for everybody and if we were to exploit those opportunities, present before us, we can get to a new era of those and er yesterday + we claim that () claim that money is not a problem +/ If you need one billion ringgit + one billion + not million + billion () + b + I don't think is a problem +/ A few hundred million is also not a problem +/ ... So those of you who feel that er there's an entrepreneur waiting to get out in you + ... and see what arrangements can be made +/

Such up-to date information is important especially if it is spoken by an authoritative figure, and it concerns some opportunities involving money.

Because of the nature of oral transmission that is much affected by our sense of hearing and the ability to store information, oral transmission by itself does not ensure absolute accuracy. However, oral discourse often works well in collaboration with the written version. OPs allow the audience to check the accuracy of their understanding during the Q&A session and establish contacts with the presenters. In other words the oral medium reinforces the written medium to make communication more effective. According to the general communication principle, oral communication alone is not effective; written communication alone is not effective but written *and* oral communication, together, are most effective. The result of Johns' consultation with several

engineering faculties and administrators indicates that although "research articles are 'necessary evils' and are produced frequently, it is the grant proposal, or its equivalent professional genre, the bid, that is vital to the engineers' employment and security" (1993b:78). Johns also cited Myers (1985 in Johns) who discussed the importance of grant proposals in biology.

Although Johns and Myers did not indicate whether an OP of the grant proposal and the bid was important, this was proven to be so at least in the field of engineering. Informants from SIRIM reported that although the written version was to be produced, the oral version was still needed and was considered more important because only through oral discourse (usually OPs) could the researchers and the sponsors get the details that were not included in the written version. They indicated that such oral discourse i.e.,, OPs took place at the initial (before the research grant is awarded), medial (in the form of progress report) and final (when the research is complete) stages of the research. Huckin and Olsen who argued the need for professionally oriented ESL instruction in the United States indicate that although reports are usually done in writing, "it is often supplemented by an oral presentation of some kind" where they present "not only the results of their investigation but also their interpretation of these results... " (1984a:280).

The importance of OPs explained in the preceding paragraphs is relevant not only to the accultured but also to acculturing (McKenna, 1987) DC members and novices. Peng's (1994) report on the importance of oral English among the apprentices in an engineering workplace should not be interpreted only meaning the importance of the oral skill *per se* but should be interpreted as demonstrating the necessity of the acquisition of oral

skills in that particular setting. Peng reports that apprentices in engineering need oral English more than any other language skill. However, the type of oral English used in the engineering workplace would not be the same as that of, say, in the field of medicine. Thus, elements of genre have to be included. As Bakhtin indicates "The genres have high, strictly official, respectful forms as well as familar ones" (1986:79-80). The genre of everyday conversation in an engineering workplace would be the 'familiar ones' and that of the skill of giving OPs would be the 'high, strictly official, respectful ones' (p.80). The importance of genres in both 'familiar' and 'respectful' settings is well expressed by Bakhtin when he says :

> Many people who have an excellent command of a language often feel quite helpless in certain spheres of communication precisely because they do not have a practical command of the generic forms used in the given sphere (p. 80).

Ross and Karis concentrate on the genre of 'respectful' settings. They come up with the term 'non-congruent sites or forums' to describe the situation in which professionals in engineering have to face forums or sites of multiple disciplines where ethical as well as technical issues have to be addressed, especially when addressing public policy matters (1991: 247). In this situation, the novices will have to undergo three stages of acculturation (McKenna, 1987), where they first have to learn the discipline's discourse conventions in the process of being 'presocialized' (Ross and Karis, 1991:247). Ross and Karis did not explain what they specifically mean by the remaining two processes - 'socialized' and 'postsocialized' nor did they summarise the sources they cited for these three terms, but we may deduce that these processes take place as soon as the novices enter the

target DC. The process of being 'socialised' is the process the novices undergo in the DC -- interacting, observing the seniors in the said DC before they finally become experts in the genre, after which they could be considered as being in the third stage, where they are being 'postsocialized.'

A preliminary awareness of the genre of OPs is important to the listeners, especially to the novices, to be able to understand the gist of the OPs and it is important to the presenters to be able to know how to bridge the gap between themselves and the audience. If both parties (the listeners and the presenters) understand the genre of OPs, many of the preliminaries which might block the process of understanding both parties' communicative purpose(s) are already out of the way.

Although OPs and their genre are important to the engineering DC members, in actual circumstances this importance has until now been neglected. One might have expected technical persons to be articulate users of the OPs, or at least to be enthusiastic about improving the delivery of their OPs but this has not been the case. Instead, they have turned a cold shoulder to it. Researchers and writers should have paid more attention to the oral skills and the skill of making OPs, instead they have neglected them, thus ensuring the neglect of genre studies of oral discourse. In addition, there should have been published materials illustrating the importance of OPs, but there are only a few of them.

One instance of neglect of OPs comes from the researchers. Shalom is only one of those who comments on the lack of researchers' treatment of the spoken English language. She says: "the whole research process, from initial conception of hypotheses through the experimental stage to final publication, can only wholly

be understood as an interweaving of talking, working and writing," but she continues, applied linguists have concentrated on the written form of academic communication and neglected the spoken form (1993: 37). As a result of this neglect discipline specific data, especially that of OPs delivered at actual conferences, are extremely sparse (Swales, 1990:182).

The second instance of neglect of OPs comes from the published materials. Published materials on OPs that are abundantly available have been written for an NS audience. They might have been directly relevant to the teaching and learning of OP skills but they are prescriptive and not descriptive. Unlike the descriptive materials which are normally based on research, the prescriptive ones are written based on experience and observation. Because of their prescriptive nature, these materials are often referred to as 'how-to' (Weissberg, 1993: 24) or 'hortatory' (Swales (1990:182).

Although these prescriptive/how-to books, according to Dubois are often used either as texts in communication classes in universities or as reference materials by prospective speakers and presenters, she observed that the treatment given to oral discourse is partial. Amongst the prescriptive/how-to books that she scanned through she found that "the proportion of pages devoted specifically to oral communication is small: 3% (Huckin & Olsen, 1983) and 11% (Barnes, 1982)" (1986: 74). In Beer although the preface states "to be a successful engineer, scientist, or manager it is inevitable that you will have to successfully communicate through the spoken and the written word" and "many people in engineering and the sciences find they have to communicate verbally as much as in writing" (1991: ix-x), only two of the eight

parts (25%) are devoted to oral discourse and only one part (12.5%) was devoted to OPs. Although the importance of oral skills is undeniable, their treatment is minimal.

In prescriptive/how-to materials it has been the practice that claims on issues related to OPs, professional speaking and public speaking are made through assumptions or based on personal experience and not on research. For instance agreeing with Calderbank (1988), Kenny *believed* that 'the majority of scientists and engineers consider the standard of public speaking within their professions to be low' (1982:141). This claim is just based on assumptions and his own *beliefs,* without his having undertaken a survey of those "majority scientists and engineers," as also has been observed by Dubois (1986:76).

What constitutes good or bad speaking skills also has been defined on assumptions based on personal experience, and not based on research. Examples of such assumptions are seen in Mambert (1968), Kenny (1982), and Saunders (1993). This agrees with Thompson's observation that most of the features of OPs described in the textbooks are based on individual writers' interpretations of rhetoric, not based on research (1989:22). By just reading prescriptive or how-to materials, we do not know what Bhatia (1994a) refers to as the *generic integrity* of the DC, or what constitutes 'good' or 'bad' OPs (Nesi & Skelton 1987:13) because we do not find researched data on these.

By only using prescriptive/how-to materials, we will not be able to use authentic materials in teaching. Since *authenticity* is defined as, the "text generated by the target speech community in the negotiation of its purpose" (Roe, 1993:4), prescriptive/how-to materials can not be used because they are worked out through

assumptions and they could be inaccurate. Williams's (1988 in Lynch and Anderson 1991) research results show no correspondence between the language taught for meetings and the actual language used in meetings. This could be the result of the lack of material in the discourse of meetings as a result of lack of research. Lack of research leads to teachers making guesses, as pointed out by Nesi and Skelton: it is "often the case in ESP work the teacher makes classroom prescriptions informed by a tiny research base" (p. 13). This practice of making assumptions or guesswork was highlighted again by Ainol (1993: 102) and Roe. Roe in defining what *guesswork* means, points out that there are ESP teachers who have "never been near the place where the target language is spoken" (1993:10). To overcome this 'guesswork', outcomes of research and not of assumptions are needed since we need the information to be as accurate as possible.

Since prescriptive or how-to materials are written for NS audience, they are not suitable for NNS audience. Dubois found that the how-to materials were too difficult or too incomprehensible or even offensive to NNSs (1986:75). Thus more ESP materials are needed to address the requirements of NNS DC members. Dubois's assertion that there is a great need for Public Communication skills in EST refers especially to the need by NNS DC members. Kenny's (1982) and Orr's (1993) prescriptive materials, written for engineering DC members also do not address the NNSs' problems. Thus the extent of benefit that NNSs can get from these hortatory or how-to materials is limited.

Better suited materials for NNSs are those written descriptively and will be dealt with in Chapter 3. EST is significant to NNSs who have to compete with NSs. While NSs have always

been the models for NNSs, the latter need to improve endlessly. One of the findings of this research was that these professionals were usually left on their own to acculture into the DC upon entering it. This makes the NNSs' job of acquiring the skills of giving OPs more demanding. Moreover, research and other community activities are handled by both NSs and NNSs of English. In fact, according to Swales (1984b: 89, 1990: 96) in agreement with Baldauf and Jernudd (1983 in Swales), more and more researchers and project undertakers in science and technology are among NNSs, especially in countries where English is not spoken as a mother tongue.

Swales points out that if we look at the developments in linguistics, Applied Linguistics and language teaching theory we would conclude that they have principally taken place in developed countries, particularly in Western Europe and North America (1984a:11). But he continues, in the case of ESP/EST, much of the important works have been done in the Third World, "often in places of considerable intellectual and geographical isolation" (p.11). This clearly illustrates the extensive participation of NNSs in ESP/EST. This is further seen in Candlin's comments in the preface of Bhatia: "it is easy to forget that it is non-native speaker/writer ... who produced by far the largest quantity of English language generic materials... " (1993: ix).

In addition, while *genre* seen from a NS's point of view may be chosen as the model by both NSs and NNSs, the *genre* of NNSs is not looked upon as a model even by NNSs themselves. However, both models have the right to exist. In this research, there were some characteristics of each model variety which will be described in Chapter 6 to show their own identities and it would be up to the

learners to choose which characteristic to follow. The approach taken is not to persuade NNSs to look up to the characteristics of the models shown by NSs but rather to show the characteristics of both identities and understand why they look different.

Neglect of OP is also seen from the poor articulacy and the negative attitude of technical persons. Although OPs are important to the engineering DC members, Kirkman (1978), Kenny (1982) and Booth (1984, 1993) have complaints concerning the technical persons' articulacy in OPs and their attitude towards them. Kirkman found that the engineering DC members' standard in communication is "not only ... low but also that standards are declining" (p. 17).

The standard of their oral communication should have been better than the written communication standards because a speaker has:

> the help of the oral and visual elements of communication - variations of pitch and tone, and gesture - in showing the grouping and emphasis he wants; he can also see his audience, and so he gets an immediate impression of whether or not his communication is being successful. It is usually possible to get away with being less explicit in speech than in writing ... Nevertheless, oral communication standards are not high ... there is little doubt ... that engineers and scientists are not as readily forthcoming and articulate as their arts counterparts, and this reduces their effectiveness in professional contexts ... the scientists who appreciate the differences between spoken English and written English are rare. Too many science lectures, for instance, rely on spoken writing in the place of effective speaking, with consistent increase in weight and monotony for their listeners. They are insensitive, too, to the 'unloading rate'; they present information at a density which can be accepted in writing but is overwhelming in speech. In addition, few have a natural understanding of the elementary techniques of oral presentation... (Kirkman, p. 20-21).

This is in harmony with Kenny's reason for writing, which is his "belief that the majority of scientists and engineers consider the standard of speaking within their professions to be low" (1982:2). In the epilogue of the book, Kenny added:

> the preceding chapters have been written in the belief that there is considerable room, and a desire, for improvement in the standard of public speaking among scientists and

> engineers. The advice given has been directed to those speakers who wish to contribute to a raising of the standard. ... Attending conferences is an expensive activity and we have a right to expect value for money. ... Perhaps we should be prepared to give voice to our criticisms. We could complain to conference organisers...In reviewing conferences for journals we could comment not just on the quality of the papers but on the quality of presentations. ... We could identify speakers who were particularly effective, so that conference organisers would start to plan in terms of 'who can speak well?' rather than simply 'who is the technical expert?' (p. 141).

While Kenny points out that his colleagues do not care to improve the delivery of their OPs and the audience do not wish to increase their expectation, Booth states: "Books on lecturing exist, but scientists are too busy to read them" (1984, 1993: 28).

Some of the weaknesses enumerated by Kirkman are monotonous delivery and failure to adjust volume to the size of the room. The roots of the weaknesses according to him "frequently lie in the attitude, not in inability to improve". Technical men either "cannot be bothered, or do not think it is part of their professional responsibilities to pay attention to elementary techniques of communication" (Kirkman, 1978: 21). Thus Kirkman, Kenny (1982) and Booth (1993) have one common argument that technical men should improve the delivery of their OPs and this could start by changing their attitude from turning a cold shoulder towards it to being enthusiastic about improving it. This should be the attitude of all the DC members - speakers and audience alike, as there is a continuous chain of change of roles.

Now, how do we change the circumstances to suit the importance of OPs as a genre? Instances pointed out by Peng (1994), Bakhtin (1986), Ross and Karis (1991), McKenna (1987), Kirkman (1978), Kenny (1982) and Booth (1984, 1993) together, express the importance of a study on the genre of OPs, which, in the context of this research, is a discipline specific study of EOPs. Through such a study, hopefully, the psychological factors that are

involved in the production of OPs by NNSs will be explained so that especially NS members of the DC are able to accept NNSs into the engineering DC more readily.

At the same time, it is important to change the attitude of the engineering DC members from only being concerned about the content of the OPs to both the content as well as the delivery, because they are the ones who need to impart their knowledge, findings, message, expertise, etc. to various levels of listeners -- insiders and outsiders including students being accultured into the field. Our research found that the attitude described by Kirkman, Kenny and Booth belonged to the great majority of the DC members. Some of the audience as well as the speakers however, have shown some interest in increasing the standard of the delivery of their OPs. Thus we could perhaps start with these minority group of DC members to become our 'educational' target. Researchers and educators in Communication Studies (for NSs) and ESP (for NNSs) should share the responsibilities of the engineering educationalists amongst the engineering DC members to do more research, to voice the discrepancies between the need and the actual situations, to provide materials and more importantly to carry out activities that could change the attitude of the DC members. Making the materials available is not enough. Activating these materials for instance by conducting technical presentation courses might be a welcome additional effort. To start with these novel intentions, an analysis of actual EOPs is necessary.

STATEMENT OF THE PROBLEM

Once the importance of analysing EOPs is realised, ways and means have to be found to carry it out. Based on observations of OPs

delivered at one engineering seminar and three conferences which took place in the United Kingdom and Malaysia, this research aims to establish the theoretical foundations on which practical improvement in the research and pedagogy of professional speaking can be built. As the present DC members do not have much time and would not feel it is necessary to improve their speaking skills and their audience, according to Kenny, would not dare to say a word about their poor speaking skills, this research would benefit especially future scientists and technologists, who could be accultured before they enter their professional world.

OBJECTIVES OF THIS RESEARCH

The objective of this study is to describe the genre and the genre expectations of EOPs delivered by both NSs and NNSs of English and simultaneously make comparisons of their OPs to be able to explore ways and means of improving the NNSs' performance in making OPs in the field of engineering.

RESEARCH QUESTIONS

This study attempts to answer the following questions:

1. Are OPs in engineering a genre?
2. Are there systematic differences (and similarities) between OPs delivered by NSs and those delivered by NNSs of English?
3. What are the DC's beliefs concerning what constitute 'good' OPs in Engineering?

THEORETICAL FRAMEWORK

Previous researchers have elaborated relevant theories which can provide an appropriate framework for our own enquiry. These

theories are in essence the more contextualised, flexible, open, multidisciplinary, robust and powerful side of Discourse Analysis, contained in GA. The latter, according to Bhatia has developed from pure linguistic description to language description as explanation, from a limited inclusion to more thorough inclusion of multidisciplinary coverage and its characteristic features of offering language in use rather than surface linguistic analysis (1993:1). Bhatia has clearly traced the development of Discourse Analysis into GA and we will summarise his explanation here very briefly. He states that 'Discourse Analysis started attracting multidisciplinary attention in the early seventies and it has developed into a variety of approaches motivated by a wide range of interests and orientations' (p.3). The approaches include the ethnography of communication in sociology; the speech act theory in philosophy; the schema theory and frame analysis in cognitive psychology; and the functional analysis in linguistics (p. 3-12).

Within linguistics, Bhatia distinguished the development of Discourse Analysis into GA according to four parameters: the theoretical orientation, the 'general-specific' scale, its application and the surface-deep analysis. Since this research uses GA as its framework, these four parameters could be used to describe the characteristics of this research.

From the point of view of the first parameter which is the theoretical orientation, then, this research belongs to what Bhatia describes as the "discourse analysis of institutionalised use of language in socio-cultural settings with a heavy emphasis on communication as social action" (p.4).

From the point of view of the second parameter which is the 'general-specific' scale, it belongs to the specific direction in that the research tries to examine the EOPs as a genre.

The third parameter is the application or the motivation of this present research, i.e., whether this research is motivated by an applied/ teaching concern or by a general theory of discourse. This research has both the motivations - to situate engineering OPs related to academics and professional activities with a view of finding ways to improve NNSs' skill in making OPs in this field. Thus this research tries both the applied and the general theoretical concerns.

The fourth and the last parameter discussed by Bhatia is the depth of the description. The multidisciplinary and the pragmatic characteristics of GA in themselves are signs of a deep descriptive approach. The functional (Hempel, 1994:349) and the 'thick' (Geertz, 1994) descriptive approaches which are in harmony with the characteristics of GA explain the depth of the description to be generated. 'Thick' description will be dealt with in Chapter 3. According to Hempel a functional approach investigation is not only the "what?" "when?" and "where?" but also the "why?" (p. 349). An example of a functional approach is language description as explanation which reflects also the aspirations found in 'thick' description. Description as explanation includes not merely what the features are but also why a certain linguistic feature has a certain characteristic. The related theories discussed above will be applied to GA used as the overall framework of the analysis of the data and in connection with the parameters used to analyse the EOPs.

POSSIBLE BENEFITS

Although those in related areas such as Communication Studies could benefit from this research, this study was done especially for the benefit of those in the fields of ESP/EST consisting of specialists, practitioners and students, especially those in the engineering discipline.

Whether a practitioner does or does not carry out research, whether a specialist assumes the responsibilities of "the needs analyst, curriculum/syllabus designer, materials writer, teacher, evaluator, as well as the researcher, all in one" (Bhatia, 1994b:27-28) or not, the findings from this present research will be useful. As a result of the engineering based data that emerge from this research, more sources on OPs that are globally engineering based instead of narrowly departmentalised ones are provided.

Unless global engineering data is available, research into similar data in each department of the engineering discipline will need to be carried out. This is not necessary since from the conceptualisation to the final stage of this research, there was no evidence which showed that there was any difference in the presentation strategies or the rhetoric between OPs in mechanical, civil, electrical or chemical engineering, apart from the content. If there are any differences that might emerge later, that would be the time to focus on the OPs of specific engineering departments. Until then, the genre of the EOPs does not differ according to the various engineering departments but as this research tries to prove, the genre differs according to discipline. This broad approach will enable more use by the general members of all the departments of the engineering DC.

SCOPE OF THE STUDY

There were five criteria used to limit the scope of this study. First was the context of the activities that were presented in the OPs. In this research, only OPs related to academic and professional contexts are dealt with, although the commerciality of these OPs was unavoidable.

Second was the type of occasions on which the OPs occurred. A technical man could be required to give a talk to his client at his own industry or he might be required to brief a group of visitors on the project that his team is handling or he might be required to explain how a machine works. To limit the types, this research only dealt with OPs delivered in formal meetings such as in seminars or conferences.

The third criterion was the discipline of the OPs being dealt with. Only OPs delivered in *engineering* seminars and conferences were dealt with in the corpus of this research. Although this is already obvious from the title of the thesis, to avoid ambiguity it nevertheless needs to be mentioned.

The fourth criterion was the length of the presentations being analysed. This study analysed only OPs of fifteen to forty-five minutes and excluded OPs which took a whole day, although these OPs were also presented in a seminar.

The fifth criterion was the analysed part of the presentations. The scope of the analysis covered the part of the OP taking place from the beginning (right after the chairman's biographical introduction) to the end of the talk. The Q&A session involved dialogue rather than monologue discourse, and it therefore was excluded.

LIMITATIONS OF THE STUDY

The limitations of the study were mainly due to poor auditory taping. Poor auditory taping was mainly due to the failure of the organisers of one conference to grant the permission to videotape the OPs. Audio taping had to be done in replacement. However, this was made difficult because at this one conference, the speakers spoke without any microphone. A pinned up mike was only available to the technical paper winner presenters during the opening ceremony and was not available to other presenters in other sessions. Most speakers spoke without any microphones because the goose-neck mikes provided to them limited their movements. This resulted in poor audio taping. Due to this poor taping, some presentations had to be abandoned because they were untranscribable even in the language laboratory.

ORGANISATION OF THE CHAPTERS

The thesis is organised into eight chapters. Chapter 2 deals with the characteristics of oral and written discourse and scripticism in EST. Chapter 3 deals with GA in previous studies on OPs. The research design and the methodology used in conducting the research is dealt with in Chapter 4. Chapter 5 describes a possible explanatory system for EOPs. The findings of the research are dealt with in three chapters: Chapters 6, 7 and 8. Chapter 6 deals with the conventions of the genre of EOPs, Chapter 7 deals with the functions of the conventions and Chapter 8 deals with the genre expectations of the DC members. This is followed by the conclusion section.

Chapter 2

THE CHARACTERISTICS OF SPOKEN AS OPPOSED TO WRITTEN DISCOURSE AND SCRIPTICISM

In research and pedagogical terms, English used in academic and professional settings is referred to as *ESP*, and that with a scientific and technical inclination called *EST*. As described by Dubois, EST is a "progenitor and now a sub field of English for Special Purposes (ESP)".

In EST, as reported by Dubois (1986) and Chamberlain (1974), a greater pedagogical emphasis is given to the written discourse. According to Dubois, although in actual and authentic communications, oral discourse is continuously being used and "the teaching of writing is beginning to incorporate new ideas from L1 ... rhetoric ... in ... EST ... literacy well nigh wiped out oracy" (p. 73).

Chamberlain, Dubois and Shalom (1993) claim that the belief in scripticism has been the main reason for the neglect of oral discourse in ESP/EST.

Quoting Harris, Dubois agrees that scripticism is the "assumption that writing is a more ideal form of linguistic representation than speech" (Harris, 1980:6 in Dubois, 1986:74).

A written discourse is considered as a more ideal form than speech because the general belief is that a written discourse is more permanent, more formal, precise, literary, more refined and more prestigious. An oral discourse is generally interpreted as lower in quality of argument, less dense, lower in complexity, more colloquial and trivial. This agrees with Chafe's and Danielewicz's comment that although oral discourse provides 'a more direct

window' to communication, the written language is thought to be 'a superior vehicle' because it provides more subtle and explicit thoughts as a result of the revisions that the writer can make (1987:91). Along the same lines, Bygate comments that: "Speaking is often thought of as a 'popular' form of expression which uses the unprestigious 'colloquial' register: literary skills are on the whole more prized" (1987: vii).

Such a belief in scripticism has formed an obstacle to a legitimate treatment of oral discourse in ESP/EST of which OPs are an important aspect.

Dubois (1986), Swales (1985a) and Chamberlain (1974) pointed out that the lack of treatment of oral discourse in ESP/EST is caused by the assumption that the students are in need of reading more than oral discourse. Such an assumption however, is largely due to the belief in scripticism.

Students do in fact need oral skills which include OP skills. Dubois (1986) pointed out that students attending universities in English-speaking countries need to understand lectures. Thus resources such as discourse analysis, conversational analysis and traditional rhetoric were utilised to design courses to meet this need. Later, she reported, these courses were 'turned around' into OP courses (p. 73-74). In this research it was found that students in a non-English speaking country like Malaysia, need the skill of making OPs. Thus, we see that oral skills, particularly OP skills are needed in both English and non-English speaking countries.

Dubois's endorsement of the need for reading in the case of ESP students in Chile and the Middle East may be relevant at the time she made the statement but may not be for long. As will be pointed out in Chapter 7, NS SIs were found to be more familiar

with the skills of making OPs than their NNS counterparts. From the respondents' personal background (Appendix C: Questions 1 to 9), it was found that NS SIs came from developed countries and NNS SIs mostly came from developing countries. This could mean that the more advanced a country becomes, the more its citizens need the skill of making OPs.

Bygate (1987) points out that speaking is undervalued because much of it is taken for granted. In ESP/EST, this is illustrated in the assumption that students coming to ESP/EST programmes at university levels are assumed to already have literacy (i.e. ability to read and write) since they have undergone education in their primary and secondary schools, and in some cases, colleges as well. However, upon entering ESP education in universities, this literacy still haunts the minds of the educators as well as researchers. Thus oral discourse, in particular OP skills, is neglected. Horowitz and Samuels (1987: 4) reaffirm that "... For the most part, oral language has been neglected in accounts of school literacy."

The belief in scripticism has thus led to the confusion of either treating oral as written discourse or using written discourse as a model for an oral one.

In the field of biomedicine, according to Dubois the article (written) serves as a pattern for speech not only because it is perceived as the 'correct' way to present scientific findings but also because there is no other pattern readily available for consultation. She adds, 'neither audio nor video tapes of speeches are widely available' (1980a: 141).

In addition, public speaking is often considered as an oral *written* discourse (Norris, 1991). Dubois (1986) reports instances of

recommending prewriting a talk which was also found to be common advice amongst the SIs of this research. Many how-to authors such as Kenny (1982), Dunkel (1984), Little (1965) and Woodal (1989) and even the chosen speaker SIs (NSJ, NSRB) advise others to prepare OPs by first writing the script before rehearsing it.

Dubois does not agree with such a treatment, neither do other oral discourse specialists such as Bygate (1987) and Horowitz and Samuels (1987) because spoken and written discourse, particularly as seen in OPs and RAs, have important independent qualities as previous writers (Bygate, Brown) have shown.

Independent qualities occur in the language organisation (Bygate, 1987: 14), in style (Gibson et. al. 1954 in DeVito), in the way the discourse is produced and the way it functions (Brown, 1978:1).

Let us first discuss independent qualities in the way the discourse is produced. There are three main features to be considered - here-and-now situations (Brown, 1978:273; Horowitz and Samuels, 1987:7), the pressure of having to keep talking and the presence of audience (Chafe and Danielewicz, 1987:85-105) which are referred to as 'psychological factors' (Johnson 1946 in DeVito 1966:73).

The here-and-now situation (Brown, 1978:273; Horowitz and Samuels, 1987:7) is affected by time the factor which, probably because of its dominance, has been expressed by using different terms - 'processing conditions' (Bygate, 1987), the 'speed of processing' (Chafe and Danielewicz, 1987:86; Horowitz and Samuels 1987:7), the 'time' (Chafe and Danielewicz, 1987:87), and the 'pressure of time' (Brown, 1978:272). In essence, this phenomenon

does not allow the speaker much time, so s/he has to come up with the words, phrases, sentences or ideas there and then. S/he does not have much time to think rationally whether or not a new information should or should not be revealed, as in the ad-libbing (Goffman, 1981) pointed out in the previous chapter.

As a result of the time constraints, speakers (i.e. presenters) make adjustments e.g. in syntactic features, speakers repeat, and make formulaic expressions (Bygate, 1987:20). These adjustments, according to previous authors, do not exist in written discourse (e.g. in RAs).

The effect of time pressure is intensified by the effects of the other two psychological factors, i.e., the pressure of having to keep talking and the effect of the presence of a real audience.

Let us first deal with the effect of the presence of a real audience. The effect of interactions in an oral discourse for example, is seen more clearly as the effect of the presence of audience. In an OP, interaction between the audience and the presenter is obvious in the latter's use of interactive devices, i.e., monitoring devices such as the use of *of course, as we know* (Brown, 1978:275) and the involved styles speakers engage in, as a result of the reality of audience in oral discourse (Chafe and Danielewicz, 1987: 85-105).

Bygate interprets such interaction in oral discourse as 'negotiation of meaning' when he compares it with the case in writing. In a written discourse, according to him, the reader can take a rest and read again the part he has not understood, whereas, in a spoken discourse, unless with the help of electronic devices, the listener can not listen again to what is being said, and so the speaker feels obliged to ensure understanding through interactive

devices (Bygate 1987: 29). Through this face-to-face interaction the audience's demands are more usually fulfilled than in writing - the audience of an oral discourse resembles customers (they always win) more than the audience of a written discourse. Thus there is a real interactiveness of oral discourse as a result of the presence of a real audience that does not exist in a written discourse.

In addition to these factors the pressure of a real audience constraints what Bygate calls 'motor-perceptive skills' of the speaker, which "involve perceiving, recalling, and articulating in the correct order" (1987:7).

This, Bygate continues, forms the stored skills as knowledge of the presenters. In a written discourse where an author could create a "maximum suppression of one's own identity" (Chafe and Danielewicz, 1987: 107) he has more time to utilise these 'motor-perceptive skills.' In the 'involved' style of spoken discourse however, the speaker is put in a situation which calls for audience adaptation and thus limits his ability to utilise his 'motor'-perceptive skills.' Thus when the speaker thinks of a new piece of information, one which he did not mention in his paper because he only knew it minutes before his OP, he has no time to wait to use the 'motor-perceptive skills' properly. At the most he would think briefly and decide there and then to tell or not to tell the audience and in most cases, because of his own possible excitement, he would decide to tell the audience anyway.

The decision to tell the audience such new piece of information is intensified by the pressure to keep talking. In a conversation (a dialogue), for example, a speaker is under the pressure of having to keep on talking before another speaker breaks in i.e., to keep the turn (Bygate, 1987:27). In an OP (a

monologue), as will be discussed in Chapter 8, a speaker is under the pressure to keep on talking because the DC members expect him or her to complete delivering the message within the limited time. S/he also needs to keep on talking or s/he loses the audience.

Brown asserts that unlike writers who can take a break and continue later, a speaker has to "fill the time allotted to him with words" (Brown, 1978:273) to hold the line by uttering non-verbal fillers like '*er*' or '*mm*' or verbal ones like '*well*' or '*I suppose*'. This is also called facilitation strategies (Bygate, 1987) and *time-creating devices* which are used to "give speakers more time to formulate what they intend to say next" (Bygate 1987:18). Examples from Bygate include phrases like *well, erm, you see, kind of,* and *sort of.* These fillers, as will be discussed in the findings of our research in Chapters 6 and 7 are in fact indicators of the speaker's personal background (his nationality, his regional dialect, etc.). Such qualities can not be found in a written discourse. Although the process might have been rehearsed to conform to the intended effect, there will be slips of the tongue or other incidental happenings which unveil the speakers' identity. Moreover since speakers also tend to recycle the messages (Brown, 1978:272-273) given similar constraints, the speakers' identity is often reinforced.

In short, different language organisations and different styles are the effects of the three 'psychological factors' (having to keep talking, presence of audience, time/here-and-now) that presenters have to overcome when delivering their OPs.

Different language organisations and different styles are also the effects of the different functions of each language mode (i.e., oral or written). This has to do with the complementary functions

or roles of each mode that result in the most effective communication when combined.

According to Brown, the function of spoken discourse is to deliver the "overall semantic impression" or the "generalised meaning" or the "attitudes which may be focused on some central point that the lecturer keeps on returning to" whereas the function of written discourse is to record details (1978: 276). Since speech is not for transmitting detailed information, details are presented by the written version of the conference proceedings in the case of our research. That is why a speech with details will exhaust the audience who will simply shun it. To reinforce this 'overall semantic impression' (Brown, p. 276) the speakers use special structures which allow the main points to be made several times - as in a news broadcast - "first we have headlines, then the announcement in short sentences, then a comment which repeats the content of the announcement and then, at the end, a reiteration of the headlines" (Brown, p. 276). As will be discussed in Chapter 6, similar structuring occurred in the corpus of the EOPs analysed in this research.

All these factors make us realise the relevance of the OP, a spoken discourse designed to accompany the proceedings of a conference because both have different functions. The overall semantic impression presented in spoken form reinforces the details (Brown, 1978: 275) delivered by the written version. Thus to be able to function effectively, oral and written discourse need one another. Horowitz and Samuels remind us that "In the next century it will be virtually impossible to pursue the study of written language and literacy without attention to oral language" (1987:1). They also contend that "...oral and written language need

to be understood in relation to one another" (p. 4). An example given to illustrate the interdependency between oral and writing is this: "We better understand what we have heard in a lecture after we read a chapter, and conversely, the chapter reading becomes dependent on the lecture processing" (p. 4). There is a close relationship, and even interdependency between oral and written media of instruction, but first we have to recognise these independent qualities.

Once we recognise such important independent qualities, we are able to find the explanation of the misconceptions concerning the 'good' or 'bad' qualities of different uses of language and we can measure the legitimacy of the claim that written forms are 'better' than oral forms. The qualities of a written discourse that users consider as 'superior' to those of oral discourse in fact reflect the separate functions of written discourse. Thus what is considered as desirable and prestigious in RAs may not necessarily be so in OPs. In a parallel manner, what is considered as a colloquial style in RAs is not necessarily undesirable or uncultured in OPs.

One general assumption about 'good' or 'bad' usage is related to the colloquial versus the literary style. A colloquial or casual style (e.g. the imprecise numerical expressions), is associated with 'unrefined' usage and is considered as inferior or unprestigious. On the other hand, a literary style (e.g. precise expressions) is associated with 'cultured' usage, and is considered as more desirable and more prestigious. As a result, the literary style is often associated with literacy and the colloquial style with illiteracy.

The 'lower quality' of argument in OPs is due to the texture of the discourse which is lower in density as a result of the

unavoidable psychological constraints of its production which cause recycling of messages or repetitions. Imprecise expressions, repetitions and expressions of lower density are all forms of simplification that are needed in OPs.

In fact Bygate's definition of simplification in oral discourse as a form of avoiding "complex noun groups with many adjectives preceding them" (1987:15-16), is seen as a gesture of 'readability' (i.e., comprehensibility) by DeVito and Gibson et. al. DeVito (1966) found that a speaker's utterances are easier to comprehend than a writer's. DeVito's findings are backed up by Gibson et. al.'s (1966) research which uses quantitative means. Based on the findings of shorter sentences and fewer syllables found in spoken discourse, they conclude that "Spoken language is significantly more readable ... and interesting ... than is written language" (Gibson et. al. p. 448). What is referred to as 'readable' here is comprehensible. This is in harmony with one of the SI's statements in an interview that OPs are more interesting, more easily understood than proceedings or RAs. This, the SI continued, makes OPs a necessity, although the written form is also made available.

In terms of the length of sentence, Chafe and Danielewicz, did find that speakers tend to use briefer and more casual clause construction in spoken discourse but longer ones in written discourse (1987:97). However, short sentences are also used in written forms as a rhetorical device - to signal to the readers that the point is important.

DeVito's (1966) finding on the general tendency in a spoken discourse to use more imprecise quantifying terms than in a written discourse has been proven true by Dubois (1987) in biomedical slide talks. However, imprecise quantifying terms that

emerge in Dubois's biomedical slide talks are in fact found to be desirable because they have their own rhetorical effects (for 'fore grounding other, more precise quantities which the experimenter considers important', and as a 'simultaneous popularisation and peer communication') (p. 527).

A colloquial style, if used in proper situations, is prestigious and desirable. For example, in delivering OPs, speakers are better off adopting colloquial styles than written styles. Especially in the trend of NNSs following NS styles, as will be proven in Chapters 6 and 7, colloquial styles are most difficult to be acquired by NNSs. What might be less desirable is perhaps a colloquial style which injects regional dialectal elements which are not focused to the more general NS styles. Since the audience of any conference or seminar is expected to be of a multiple nature, those not familiar with certain regional markers do find it difficult to follow. However, the more international NS oral styles are still considered as more widely recognised and more desirable in OPs than the 'written' or the 'literary' ones especially in EOPs where the main concern is to communicate knowledge.

The neglect of oral discourse then, is in the form of scripticism whereas Horowitz and Samuels have reminded us: "... our knowledge of written language will be significantly influenced by our knowledge of oral language ... work on reading and writing cannot advance without serious attention to oral language " (1987:1).

Since we have proved that oral and written discourse have independent qualities, these qualities should form the basis of our utilisation for each type (i.e. written or oral). There are differences between a written and an oral discourse thus these differences

should be reflected in our utilisation. As such, our approach for an oral discourse should be uniquely oral and not be mixed up with the written counterpart.

Bygate concludes that speaking is "a skill which deserves attention every bit as much as literary skills, in both first and second languages" (1987: vii)." As we saw in the previous chapter, in actual fact, there is a need to pay more attention especially to professional speaking such as OPs in academics and professional contexts. OP skills are not facile. They are not easily achieved and they are valuable in that they involve overcoming public speaking apprehension. The SIs of this research reported that there were researchers and project handlers who had much to contribute but were too nervous to deliver OPs. OPs in the academic and engineering contexts are valuable both to the world of knowledge and as a means of living. OPs in these contexts are neither superficial nor glib. They are real, informative and legitimate since they present real projects, supported by evidence presented in visual aids.

Chapter 3

OPs IN PREVIOUS WORKS AND IN THIS RESEARCH

In this chapter, previous works on OPs are reviewed and the terms *oral presentation* and *thick description* are defined in relation to these previous works and as they are used in this research.

Two parameters, descriptive-prescriptive and genre-non-genre, may be used to describe previous works on OPs.

Let us begin with the first parameter. Whether a study is descriptive or prescriptive can be seen in the method used to accumulate its data. Normally, prescriptive sources (e.g. Kenny, 1982; Rosenburg, 1991) present data gathered through experience and descriptive sources (e.g. Dubois, 1980a; Weissberg, 1993) through research. While some descriptive sources (e.g. Hyland, 1991; Zawadski and Saunders, 1990; Souillard and Kerr, 1987) presented data accumulated through experience, none of the prescriptive sources presented data gathered through research.

The second way of determining whether a study is descriptive or prescriptive is from the manner in which the data are presented. As said earlier, both the *prescriptive* and, to a certain extent, *descriptive* sources, present data accumulated through experience. However, the data which are presented by *descriptive* sources are different from that of the *prescriptive* ones in that the former are like a report of the authors' experience expressed in terms of linguistics and pedagogical perspectives, whereas the latter are not presented in connection with any linguistic principles or pedagogical guidelines since the sources

themselves assume the role of teachers. In other words, the data found in prescriptive sources are presented in a hortatory manner (e.g. Stettner, 1991) but those in the latter type are presented descriptively (e.g., Weissberg, 1993) as seen from the following examples:

Stettner (1991:225): Whether you are an accomplished speaker or a novice, the following tools will help you enhance your presentation skills...The key to a successful presentation is selectivity, or knowing what facts are most important for your listeners to remember...

Weissberg (1993: 34): By requiring students to speak from notes in each task, the instructor can gradually put them at ease with the demands of extemporaneous style over an increasingly demanding range of topics.

The 'hortatory' sources are more to 'tell' the readers 'how' to deliver OPs but the descriptive ones offer the readers a linguistic or non-linguistic description and explanation of a particular oral discourse in a certain context and it would then be up to the readers to decide how they are going to make use of the data for their own teaching and learning related to OP skills.

Whether the authors address both NS-NNS problems can also indicate if a work is descriptive or prescriptive. Prescriptive sources which address the problems of NNSs of English such as Barnes (1982) are very rare. With such exceptions, usually prescriptive sources assume only NSs as their audience. However, a great majority of the descriptive sources, either based on experience or on research, address the problems of NNSs and usually compare them with those of NSs. Within descriptive studies based on research, NNSs' problems are addressed either in the form of the motivation of the study or through the inclusion of an NNS corpus compared with that of their NS counterparts or as the question addressed in the discussion of the implications of the data.

Within descriptive studies based on experience, NNSs' problems are explained in relation to those of NSs'.

Among the descriptive studies based on research that made NNSs' problems the motivation of the study are Cook (1975), Murphy and Candlin (1979) and Furneaux et. al. (1991). Cook for instance identifies NNSs' inability to grasp the lecture as a whole (although they could follow most of the individual parts) as the motivation of his study. Murphy's and Candlin's work was motivated by engineering NNS students' problems in listening comprehension and Furneaux et. al. were "looking to find out whether NNS students really have a problem, and whether it is different in kind from that which faces NS students" (1991:75). In materialising this research area, Furneaux et. al. also include an NNS corpus and compare it with those of the NS counterparts. Weissberg who also includes NNS samples in his corpus, notes and discusses "discrepancies between (the) professors' expressed genre expectations and non-native-speaking students' actual seminar presentations..." (1993:23).

Two descriptive studies based on research that address NNSs' problems in the discussion of the implications of their data are Lynch and Anderson (1991) and Thompson (1989). Lynch and Anderson question the need for NNSs to conform to the world of 'Mr Smith and Miss White' (1991:99) in terms of the notions of social and linguistic appropriacy related to the degree of politeness in the Anglo European style. Thompson's (1989) study reports the occurrence of different qualities in the assessed OPs delivered by NS and NNS students.

Among the descriptive studies based on experience that address NNSs' problems in relation to those of NSs' are Zawadski

and Saunders (1990) and Schofield (1988). Zawadski and Saunders state that NNSs' concerns in giving OPs is to become a confident user of English. This agrees with Schofield's observation that NNSs' preparation of OPs is dominated by language problems whereas NSs' preparation could concentrate solely on the message to be put over. Thus NNSs have two concerns - the message to be put across and language problems. However, if we agree with Tay (1988) and Yin (1988) that we should aim for intelligibility and not correctness, such different treatments are not necessary. By concentrating on the message to be put over, NNSs will also improve their linguistic proficiency. Besides, there will be no end to NNSs' language perfection.

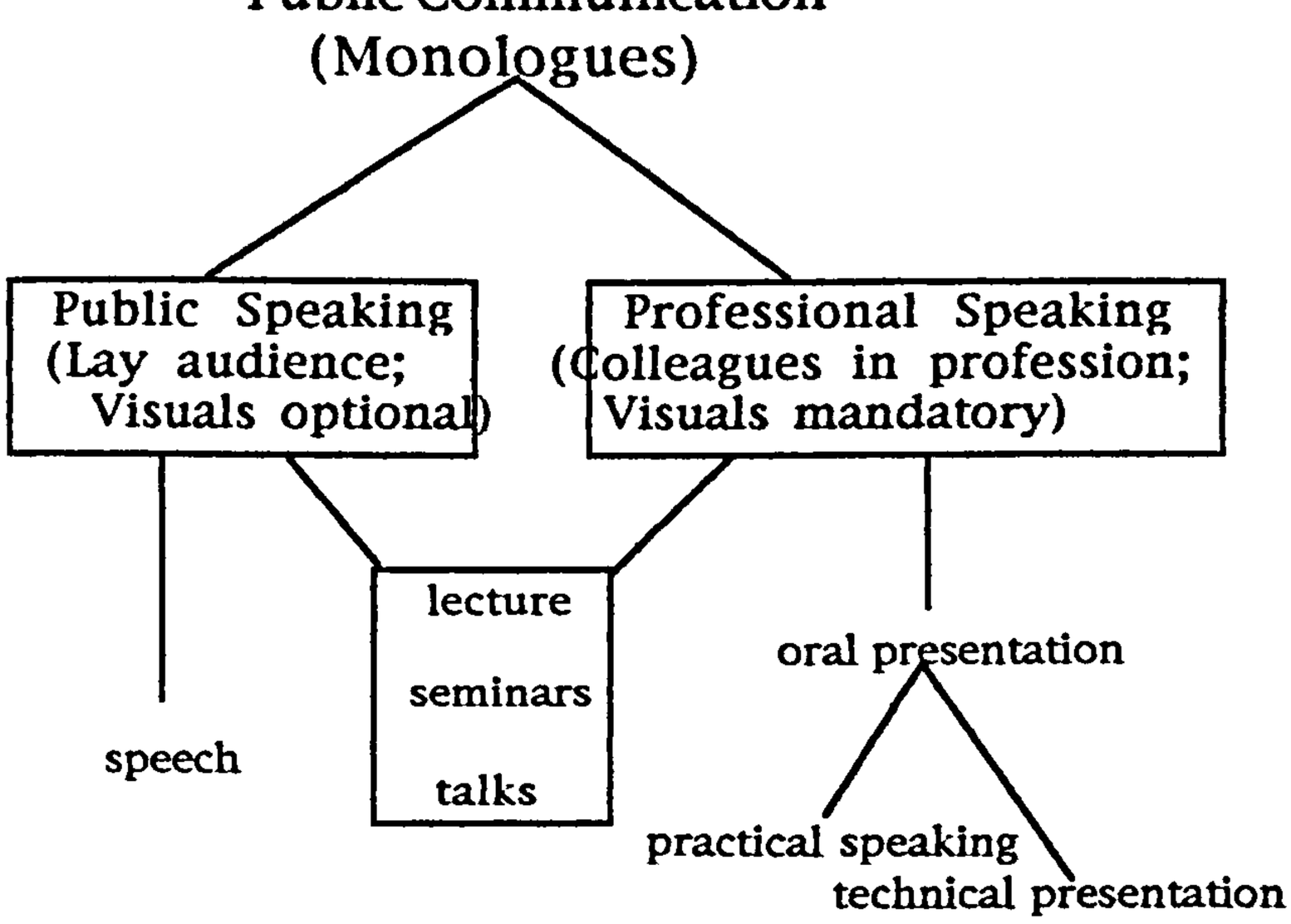
How NNS presenters' problems are addressed in this research will be dealt with in the following chapter.

Let us now turn to the second parameter -- the genre-non-genre categories. This parameter has a richer set of data. While the preceding parameter leads to only three classifications, this parameter leads to nine.

The first classification principle is the implications of the terms used to refer to the monologues being dealt with. The term used to embrace all forms of OP is the *monologue.* Monologues take several different forms which have each been studied by researchers. One of the forms of a monologue, a *lecture*, has been defined by Cook (1975) and agreed by Murphy and Candlin (1979) as a monologue situation in which one protagonist is responsible for virtually all contribution to the discourse. This definition is also true for all the other types of speeches which can be categorised as monologues, presented in Figure 1:

Figure 1

Monologues



However, these terms differ in terms of the audience and the use of visuals, which form the indicators to whether a work is genre or non-genre. The audience of the monologue in a genre study tends to be the speaker's own colleagues in the same profession but the audience of the monologue in a non-genre study tends to be laymen. The monologue in a genre study emphasises the importance of visual aids but the monologue in a non-genre study does not. The terms used to refer to the monologues (Figure 1), can be classified into three groups. On the extreme left are those which have definite attributes of non-genre studies (i.e., lay audience and visuals not important); On the extreme right are those which have definite attributes of genre studies (i.e., colleagues as audience and visuals are important); In between are those which have 'blurred'

characteristics (i.e., the type of audience and the mandatory use of audience are not very clear).

Let us now discuss the first indicator, i.e., the audience, starting with the 'blurred' category (Figure 1), which consists of the terms *lecture, seminars* and *talks.* These terms, as they are used by previous authors dealing with OPs, do not have a clear cut classification of the type of audience into which we could place them. Montgomery (1977), Murphy and Candlin (1979) and Thompson (1994) use the term *lecture* to describe the monologues they deal with and these lectures were those performed in universities intended to be heard by students who were not the speakers' colleagues but their academic inferiors.

Weissberg (1993), Furneaux et. al., (1991), Lynch and Anderson (1991) and Lynes and Woods (1984) use the term *seminar* to describe their monologues. The word *seminar* is often used along with another word as in *academic seminars* (Furneaux et. at.), or *seminar presentations* (Lynes and Woods). Lynes and Woods use *seminar presentations* interchangeably with *conference presentations.* *Seminars* and its variants are also performed in academic situations like *lectures* but the audience of these *seminars* consist of both the speakers' colleagues (fellow students) and superiors (the faculty members) and can not be categorised as the speakers' *colleagues in the same profession.*

In the case of *talks* where the type of audience is specifiable as the speakers' *colleagues in the same profession,* such as in Dubois's work (1980a), the term also carries the more general connotation of speech such as in the usage of *give a talk* or *political talk.* As such, additional nominals are used to establish the notion needed. For example, Dubois (1980a) use the nominals *biomedical*

and *slide* to signal that the *talks* are delivered by professionals to be heard by the speakers' colleagues in the same DC. Without these nominals, the term *talk* does not carry the notion that it is presented to the colleagues in the speakers' profession. In this category, we see that the term *lecture* does not have *colleagues in the same profession* as audience, but the other two terms (*seminars* and *talks*) do, as a result of the presence of relevant nominals. Thus the indication of the type of audience is not clear-cut on the terms *talks, seminars,* and *lecture.*

On the other hand, the category indicated on the extreme left of Figure 1, the term *speech* as it is used by previous authors dealing with OPs, instantly indicates that the audience is laymen. Lapakko (1988) and Henrikson are amongst those who use this term. Henrikson (1944) deals with the characteristics of "good" and "bad" speakers from the students' point of view and Lapakko deals with the same subject by comparing the laymen's and the speech professionals' points of view. These speech professionals are not described as belonging to any DC, nor of certain specific disciplines, because of which, they are not the same professionals as associated with, for instance, engineering, law, medicine, etc.

However, the term *oral presentation* (found on the extreme right of Figure 1), is described by previous authors in relation to a certain DC, a certain specified institution and discipline, and to technicality. For instance, the term *practical speaking* is used to mean 'all practical speaking instances a technical man encounters' (Dietrich and Brooks, 1958:2-5). Such technicality is also apparent in Hyland's (1991) use of the term *oral presentations* in that he deals with OPs of technological students. The same term is also used in Seliman's (1995a) research which reports on the genre of

engineering research presentations. This term is also commonly used by authors whose articles are published in an engineering journal, *IEEE Transactions on Professional Communication,* including those selected to be reprinted in Beer's anthology (1991). Walrum, Pritchard, Wismer, Decker and Rosenburg are amongst these authors. Walrum for example uses the term *oral presentation* and Rosenburg uses *presentation.* Pritchard, Wismer and Decker use both *technical presentation* and *presentation.* The term *presentation* is presumably a shorter term for *technical presentation* and *oral presentation.* Thus either in the form of *practical speaking* or *technical presentation* the term *oral presentation* constantly show that the audience is the speakers' colleagues in the same profession. In addition these terms seem to be the specific term used to refer to monologues that are presented to the speakers' colleagues in the same *technical* profession.

The type of audience being addressed by persons giving *oral presentations* and *speech* can be seen more clearly in relation to the terms *public speaking* and *professional speaking.* However, the confusion in the use of these two terms will have to be clarified first. Samuer who deals with the field of business and industry oddly defines *public speaking* as referring to "all forms of speaking to groups, regardless of the setting or of the presence of mechanical aids ... whether the speaking was to a small group in the living room of a private home, over television or radio with a potential audience of a million... (1960:4)." Although the setting is business and industry which is closely linked with science and technology, Samuer's definition clearly shows the absence of specified discipline in what he considers as *public speaking.* Along the same line, Kenny who writes for scientists and engineers defines what he calls

public speaking, as "one-way verbal communication from a speaker to a number of other people, in a situation that demands a degree of formality" (1982:5-6). Kenny's definition still shows the absence of specified discipline.

Dubois (1986) commented that Kenny's definition of the term *public speaking* allows him to treat all genres of public speaking as one genre. Indeed not only Kenny (1982) but also Redding and Sanborn (1964), Samuer (1960) and even in a recent publication such as Baird (1991), the term *public speaking* is still used to refer to speaking in public in the field of science and technology in particular, engineering. Dubois feels that public speaking has sub-genres and they should be categorised further into subgenres and she contends that the term *public speaking* should be reserved to mean "one way communication to varied, chiefly lay audience" (1986: 75) which should be distinguished from *professional speaking* which refers to "one-way communication to work place associates or to peers in relatively formal situations" (p. 75). With Dubois's clarification on the difference between *public speaking* and *professional speaking* we can claim that the term *public speaking* in Kenny (1982), Redding and Sanborn (1964), Samuer (1960) and Baird (1991) technically should have been *professional speaking* since it should have been the most general term for public communication for discipline specific areas, since the audience is 'work place associates or peers' (Dubois 1986: 75).

The necessity of the use of visuals is also an indicator. Authors who use the term *oral presentation* show a clear concern for the necessity of the use of visual aids. Hyland, an OP trainer, for example, defines *oral presentation* as "typically a partly spoken,

partly visual form of communication which is designed to inform or persuade..." (1991:35-36). The authors of the *IEEE* journal articles, discuss visual aids as something mandatory. Decker for instance advises his readers to "use visuals (and) be visuals" (p. 211):

> Since 85 percent of what we know has come through our eyes, it's obvious that we learn more from what we see than from what we hear or touch; people remember images far longer than facts. They will remember the image of you, too -- animated or flat, energized or rigid, enthusiastic or dull (1991:211).

Here Decker advises presenters to 'be visuals' by delivering lively OPs.

The importance of visuals in technical communications is confirmed further by article titles like *Visual Literacy in Corporate Communication* (Gribbons, 1991) and *Eideteker: The Professional Communicator in the New Visual Culture* (Olsen, 1991).

The mandatory use of visuals amongst the researchers who use the terms *lecture, seminar* and *talks* is more clearly established than in those authors like Samuer and Kenny who use the term *public speaking* when it should have been *professional speaking* with an exception of Redding and Sanborn who use the term *public speaking* but define it as an 'oral message' which is "often supplemented by visual and audio-visual media" (1964: 16). Of those authors who use terms which do not show a certainty in lay or professional audience, however, the use of visual aids is most clearly shown as a necessity in the case of Dubois (1980a) and Weissberg (1993).

Thus we see quite clearly, as presented in Figure 1, that in monologues that are termed as *public speaking* and intended for laymen, the use of visuals is not mandatory and they are related to non-genre studies. These characteristics can be seen in non-genre studies such as those done by Lapakko (1988) and Henrikson

(1944). On the other hand in those that are termed as *professional speaking* and intended for the speakers' colleagues of the same profession, the use of visuals is more mandatory and they are related to technical content. These characteristics can be seen in genre studies (Selinan, 1995a; Weissberg, 1993 etc.).

Content is also a criterion in our genre-non-genre categorisation. Whatever the term used to refer to the monologues being studied, it is important that we look at the content of the study to determine if it is a genre study. For example, although Dubois, Shalom, Weissberg, and Thompson did not use the term *oral presentation* presumably because they are not dealing with *technical* genre studies, they are nevertheless genre studies. Dubois (1980a, 1980c, 1980d, 1982a, 1982b, 1983, 1985a, 1985b) reports on the genre and the structure of biomedical slide talks in which she essentially concentrates on the genre of the biomedical research presentations. Shalom (1993) reports on plenary lecture as an established conference genre and poster sessions as an embryonic, evolving research process genre. Weissberg (1993) reports on the graduate seminar as another research-process genre. Thompson (1994) reports on a genre-based approach to analysing lecture introductions, and these are the types of genre studies that this present research resembles most.

Other genre works are identifiable through the purpose of the study, our third genre-non-genre classification principle. Non-genre studies such as Thompson (1989), Lynch and Anderson (1991, Lynes and Woods (1984), Furneaux et. al. (1991) have pedagogical rather than theoretical objectives. Thompson reports on the nature, teaching and assessment of post graduate student OPs in an academic context and Lynch and Anderson make a

comparison of EAP seminar/discussion materials and the characteristics of real academic interaction. Lynes and Woods describe a series of courses dealing with *seminar and conference presentations.* Furneaux, Locke, Robinson and Tonkyn describe the ethnography of *academic seminars.*

Unlike non-genre studies, genre studies which are normally based on research, give rise to both pedagogical as well as theoretical insights. For instance some aspects of theoretical insights generated by Dubois (1980a) are the characteristics of biomedical speeches compared with RA, the typology of the modes of exposition, and the structure of the biomedical speeches. Some pedagogical insights from her study are the teaching of the structure and the genre of biomedical speeches.

The setting of the studies is the next criterion of our genre-non-genre classification principle. Genre studies tend to take place in professional settings but non-genre studies tend to take place in academic settings. Dubois's (1980a) setting was the 63rd Annual Meeting of the Federation of American Societies for Experimental Biology; Shalom's (1993) setting was the 5th International Symposium on Environmental Pollution and its Impact on Life in the Mediterranean Region, held at Centre d'Estudis Advancecats de Blanes, Catalonia and Weissberg's setting was a seminar as a graduate requirement at a "midsized research university in the American Southwest" (1993: 24-25). Although Weissberg's setting was a university and not a clear-cut other professional setting as Dubois's and Shalom's, his setting is actually preparing students to enter the professional field (McKenna, 1987).

The settings of non genre studies such as those done by Thompson (1989), Furneaux et. al. (1991), and Lynch and Anderson

(1991) on the other hand are clear-cut academic ones, at student level, prior to the acculturation level. The settings chosen are Reading University in the case of Thompson's (1989: 25,75) and Edinburgh University in the case of Lynch and Anderson's (1991:95). Lynes and Woods (1984) describe courses offered at Oxford University Language Teaching Centre.

Thus in line with the settings chosen, the fifth classification principle of genre-non-genre classification principle is the presenters being analysed. While those being analysed in non-genre studies are students, those presenters being analysed in genre studies are experts and novices (Dubois, 1980a; Shalom, 1993), or novices being accultured into the DC (Weissberg, 1993). In Weissberg's corpus, novices seem to refer to beginners. Those in academic contexts are mostly students as those in studies done by Hyland (1991), Thompson (1989) and others.

The preceding classifications such as the term *professional speaking*, the professional settings, professional audience and professional presenters, all are indications for the sixth classification principle i.e., the discipline specific nature of genre studies. Genre studies (Dubois, Shalom, Seliman, Weissberg, etc.), tend to be discipline specific but non-genre studies (Schofield, Thompson, Lynes and Woods), not. Dubois's study deals with professionals in the field of biomedicine and Shalom's professionals in the fields of ecology, chemistry and biology. Seliman's study addresses professionals in manufacturing engineering and Weissberg's deals with students who are being accultured (McKenna 1987) into the DC of applied sciences, i.e., animal science and agronomy (1993: 23). Shalom's observation involves "an interdisciplinary event involving ecologists, chemists, and

biologists" (1993:39 f3), but we can still identify the disciplines involved as ecology, chemistry and biology. Finally, Cook's (1975) study involves a lecture on a survey of world's major soil groups. On the other hand, non-genre studies like those by Schofield (1988), Thompson (1989), Lynes and Woods (1984) and others tend to cater for OP learners from general unidentified disciplines.

In addition, genre studies tend to be multidisciplinary in the coverage of the analysis but non-genre studies do not. The disciplinary coverage includes linguistics, sociology, philosophy and psychology. The use of rhetorical devices which, according to Bhatia (1993) belongs to the realms of linguistics, is seen in Dubois's analysis of biomedical slide talks using Longacre's text typology of *modes* such as hortatory, procedural, expository and narrative (1980a). An example of a sociological coverage is also found in Dubois's (1980a) study in which she compares the biomedical talks with RAs by bringing forward Ziman's (1968, in Dubois) three stages of the production of knowledge in science.

Examples of philosophical coverage are seen in Shalom's (1993) analysis which pays attention to *exchange, turn, move* and *speech act* adopted from Hymes (1974, in Shalom) and in Dubois's (1980a) interpretation of *personae* in scientific discourse adopting from Campbell (1975). Finally psychological coverage is seen for instance in Shalom's categories of topic and Weissberg's analysis which made use of the "purpose, message form, and message content of the seminars" (1993:24). The multidisciplinary coverage of this research is explained in Chapter 6. Such a multidisciplinary approach in analysis does not occur in non-genre studies by authors like Nesi and Skelton (1976), Furneaux et. al. (1991:75), Lynch and Anderson (1991), Hyland (1991) and others.

Moreover, these non-genre studies do not make *genre expectations*, the aim of the study, because *genre* is not their concern in the first place. Nesi and Skelton (1976) merely hint that we do not know what constitutes good or bad OPs. Hyland (1991) expresses the criteria of good OPs in the form of pedagogical suggestions, giving advice to new presenters; Others such as Furneaux et. al. (1991) and Lynch and Anderson (1991) do not mention the criteria of good OPs in their research results, although they mention them in their review of the literature.

On the other hand, a genre study can focus on *genre expectations* if the researcher chooses to. The characteristics of a genre are the 'stable types' (Bakhtin, 1986) observed in actual instances of a genre setting. There are always interesting discrepancies to be described if we compare what takes place in an actual context and what the DC members expect to take place. This comparison adds to the dimension of the description because then we have a continuum to work with. In other words we can describe *genre* by comparing it with *the genre expectation.*

However, in previous studies on the genre of OPs, *genre expectations* are seldom highlighted as a subject of interest. As far as the writer is able to tell, in ESP, only Weissberg (1993) chooses to concern himself with it. Weissberg discusses and compares the genre taking place in actual seminars with the expectations of the members of the faculty and found discrepancies especially caused by the linguistic handicap of NNS student presenters.

Ironically, 'how-to,' (prescriptive) sources make as the main concern what could have been equivalent to *genre expectations* if they had tried to identify the characteristics of the genre of their studies. Lapakko's (1988) study also treats such a concern very

thoroughly. Unlike the prescriptive sources, Lapakko's research is descriptive although it belongs to the study of Communications which means his study did not use respondents of science and technology origin, either in the samples or in the discussions since he was concerned with the beliefs of the speech professionals and those of the laymen. However, based on the spirit of 'Common Ground and Shared Interest,' the title of an anthology edited by Williams, Swales and Kirkman (1984), Lapakko's findings deserve to be pointed out. Williams and his colleagues believe that ESP and Communication Studies are "two halves of a single profession" (1984:1) because both professions share the same pedagogical concerns (i.e., to teach communication) - except for the target population and therefore the emphasis that differs (Coupland, 1984).

Lapakko' (1988) study tries to explore whether the speech professionals and the laymen have any substantial difference in their beliefs on what constitutes good or bad speech. He found that people with varying academic backgrounds seem to define *speech* similarly and agree on what constitutes 'good' speech (p. 174). He groups his results into three categories: factors which were in consistent agreement, factors in consistent variation and factors with contradictory results.

Lapakko's results are the most directly related to the criteria of good or bad speech. There is a slight problem, however, which lies in his general context and may not be suitable for ESP/EST situations, as pointed earlier in relation to the term used for the monologues being dealt with. Based on his findings, people of various academic background show very little difference in beliefs of what constitutes a 'good' speech, and he was confident

that the curricula which colleges offer in public speaking are suitable for most audience regardless of their background in the academic principles of public speaking. But this may not be the case in all fields especially in the fields of ESP/EST.

Dubois (1987) has found at least one significant item in the characteristics of good speech in biomedical science that is not evident in Lapakko's context. This is on the permissible and the desirable use of imprecise numerical expressions in biomedical slide talks. As discussed in Chapter 2 Dubois (1987) found that the use of imprecise expressions is at the least permissible and in fact desirable in the context of ESP (i.e., biomedical talks). However, it is not so in the general context studied by Lapakko (1988).

Another difference between findings that emerge in a general context and those in an ESP/EST context is related to the use of visual aids. The use of visuals in Lapakko's setting, as discussed earlier in relation to Figure 1 was not a clear-cut necessity but in engineering OPs, it is, as already been discussed earlier and as has been pointed out by Olsen and Huckin (1990).

Keeping in mind the possibilities of getting more of such differences in the findings, Lapakko's (1988) findings were used as the framework for the pool of ideas in preparing questions to elicit the engineering DC members' genre expectations (Appendix C). They were however, supplemented by other related sources which will be described more in the following chapter. However, since there are various materials and the contents are similar, there is no necessity to include all of them.

The multidiciplinary approach in analysing the data, which could embrace the additional dimension of *genre expectations* in a genre study, leads us to the ninth and the last classification

principle of genre-non-genre categories -- the thin-thick descriptive approach. While non-genre studies such as those by Thompson (1989), Lynch and Anderson (1991) take the 'thin' descriptive approach, genre studies especially those by Dubois (1980a), Weissberg (1993) and others prefer the 'thick' descriptive approach.

Perhaps at this point it would be helpful to first define what is meant by 'thin' and 'thick' descriptions, and then use the characteristics of thick i.e., ethnographic descriptive approach to describe the previous works on OPs cited earlier.

The term 'thick description' (Geertz, 1994) has to be explained in relation to 'ethnography' and 'anthropology'. This is because 'thick description' is a result of an ethnographic study which is in the realms of social anthropology. According to Geertz, in social anthropology, 'establishing rapport' with the 'practitioners', 'selecting informants' amongst them, and 'transcribing texts' collected from them, are forms of 'intellectual efforts' which generate data which can be described as 'thick description' (1994:21).

Ryle (in Geertz, 1994:114) compares "thick" description and "thin" description by using the action of twitching the eye as an example. If this action is interpreted as "rapidly contracting his right eyelid" it would belong to "thin description" but if it were "practising a burlesque of a friend faking a wink to deceive an innocent into thinking a conspiracy is in motion" then it would belong to "thick description" (Geertz, p. 215).

The notion of thick description is more clearly conveyed in Geertz's summary:

> ... ethnography is thick description... What the ethnographer is in fact faced with - except when ... he is pursuing the more automatized routines of data collection - is a multiplicity of complex conceptual structures, many of them superimposed upon or knotted into one another, which are at once strange, irregular, and inexplicit, and which he must contrive somehow first to grasp and then to render. And this is true at the most down-to-earth, jungle field work levels of his activity: interviewing informants ... writing his journal. Doing ethnography is like trying to read ... a manuscript - foreign, faded, full of ellipses, incoherencies, suspicious emendations, and tendentious commentaries, but written not in conventionalized groups of sound but in transient examples of shaped behavior (1994:217).

According to Geertz an ethnographic description has four characteristics: its 'flow of social discourse' is interpretative; its interpretation is an attempt 'to rescue' the 'said' from its 'perishing occasions'; its data is fixed 'in perusable terms' and its description is 'microscopic' (p. 226).

We will find that descriptive genre studies are describable in terms of these four characteristics, thus we can say they use 'thick' description. Conversely, although non-genre studies may be able to be described in terms of some of the preceding characteristics, they are not microscopic. In explaining what microscopic description means, Geertz explains:

> ...the anthropologist characteristically approaches ... broader interpretations and more abstract analyses from the direction of exceedingly extended acquintances with extremely small matters (p. 225).

In relation to this research, such descriptions can only be generated using GA framework. Since, as mentioned earlier, the non-genre researchers did not use GA, we can safely say that non-genre studies tend to use the 'thin' descriptive approach. The characteristics of genre studies dealt with in the preceding paragraphs (in purpose, setting, presenters, discipline specific focus, multidisciplinary coverage, genre expectations, etc.,) were all conducive to the 'thick' rather than 'thin' descriptive approach. The dual purpose (to get theoretical perspectives and to work out pedagogical insights) of genre studies in oral discourse is a sign of

the study being an ethnographic one. This is the case especially of the theoretical thrust which works in a similar way to an anthropologist who finds things that have not been found before. This satisfies one of the characteristics of ethnographic study outlined by Geertz - the interpretation of data to 'rescue' the 'said' from perishing occasions. Thus the OPs being analysed in genre studies are rescued through mechanical or electronic recordings, without which they would have perished unnoticed.

The settings of genre studies that have been indicated to be those in professional circumstances, is another sign that shows the study to be ethnographic since that is the DC members' 'territory'. Settings that are limited to schools for a study on the genre of engineering oral discourse for instance, would not be accurate since authentic engineering activities do not take place in schools. Ethnographic studies need authentic settings and regard simulated settings invalid. Real and valid SIs for the genre studies are found in authentic settings and not in simulated ones. In the case of genre studies on OPs, real and valid SIs are specialist and novice presenters and they are only found in authentic professional settings. This authenticity also enables the genre to be compared with the genre expectation to add to the dimension of the analysis. The 'territory' is where expectations from legitimate DC members can be compared with the actual genre being practised. Only by collecting samples from real and authentic speakers are transcribing works worth doing because the data generated can also be accurate and valid results in genre studies.

The discipline specific focus is to ensure 'microscopic' data being generated, yet another characteristic of an ethnographic study outlined by Geertz (1994). To be able to generate detailed,

specific and accurate descriptions, discipline specific data collection is a necessity. A study of the genre of *engineering* oral discourse needs oral discourse samples from *engineering* and not, for instance, *literature*, be collected and analysed. That is why differences in Lapakko's (1988) with Dubois's (1987) results in terms of imprecise expressions, and with Olsen and Huckin's (1990) findings in terms of visuals, can be pointed out because they are of different disciplines. There are descriptive and prescriptive materials that are engineering based, but still do not assist in the comparison between genre and genre expectation because they only offer the expectations of the writers and not those of the DC members' and there are no actual genre characteristics to be compared with. In other words the thick descriptive approach produces more genuine data than a thin descriptive approach.

Multidisciplinary coverage in the analysis also results in data that are microscopic. This is the intellectual focus, where the data, which Geertz (1994) describes as 'complex, strange, and foreign' are given shape and meaning through the process of thinking and reflecting. In the context of this research, 'intellectual efforts' in 'thick description' require the ethnographer to observe, participate and experience what the practitioners do in their 'territory'.

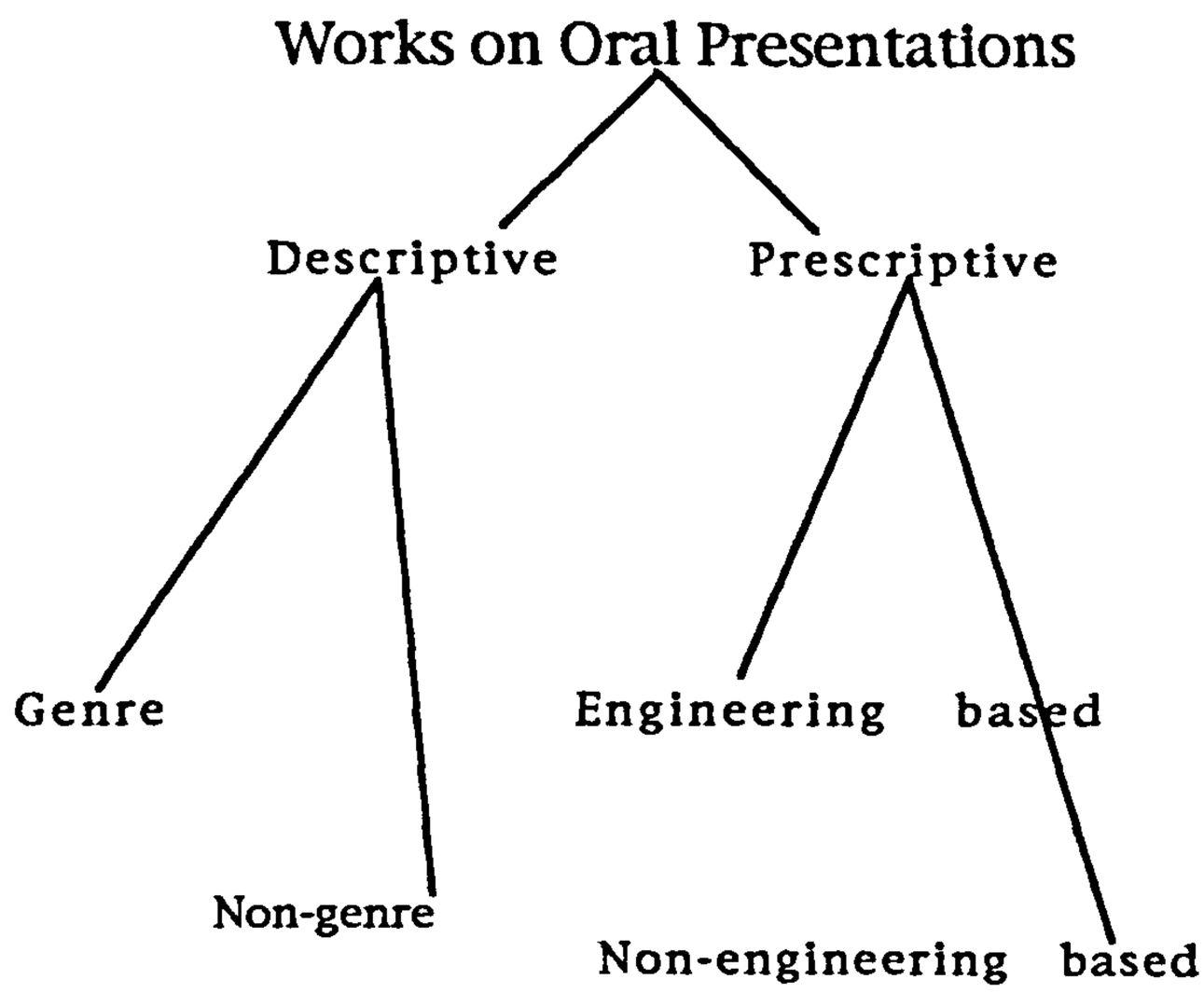
The different disciplines (psychology, sociology, linguistics) are involved mainly in providing explanations of certain instances that occur in the genre. For instance the psychological explanation to the fairly predictable sequence of the communicative elements that occur in the EOPs being analysed in this research was for communicative purposes; the sociological reason for the NNSs'

imitation of the NS styles was social acceptability. The preceding two factors are dealt with in Chapters 6 and 7 respectively.

Four types of works on OP have been discussed - engineering based prescriptive works, non-engineering based prescriptive works, descriptive non-genre studies and descriptive genre studies. Diagramatically they are illustrated in Figure 2:

Figure 2

Works on Oral Presentation



These works have treated OPs differently and each has its own way of contributing to our understanding of OPs. In the light of the preceding discussions, our study which was meant to explore the genre and the genre expectations of EOPs, has the characteristics of a genre study -- Its content is genre; As mentioned in Chapter 1 it is discipline specific, the approach is thick description and it is broadly multidisciplinary. The presenters

whose OPs were analysed were professionals, the term used to describe the monologue being analysed was *oral presentation.* Based on the preceding discussions, then, the relevant general term being dealt with in this thesis is *professional speaking* - thus the term *oral presentation* in our research refers to the oral delivery of an announcement of a project in hand, be it on research or on projects or practical activities, usually for the first time. Based on the OPs being analysed in this research, those who make OPs either work in academic settings such as universities, research institutes, R&D units, or those handling big engineering projects such as transportation systems, for the government or private companies, or simply those offering consultancy works. Many of the terms used by previous authors to refer to their monologues had been presented to the SIs of this research and how this was done is described in the following chapter.

Chapter 4

THE DESIGN AND METHODOLOGY OF THE RESEARCH

This chapter is on the design, the method and the procedures used to conduct the study. The methodology to be adopted by a discourse analyst in relation to the SIs is discussed and some of the problems faced in contacting them are summarised. In addition, steps taken to ensure the validity of the research is discussed.

Let us first begin with the design and the methodology. The design and the methodology of the research involved decisions on which method to take, what instruments to use, which population and sample to choose and, what sampling approach to take.

Although other supplementary methods such as questionnaire and interview were used, the principal methodology used for this research was PO, popularised by Jorgensen (1989). Four actual engineering meetings held in Malaysia and in the United Kingdom were attended between March to September 1994. The meetings ranged from one to four-day occasions, organised by the government (through the higher learning institutions) and private bodies (such as the private companies and industries). According to Jorgensen PO is suitable if little is known about the RQ and there is a need to view the phenomenon from the insider's point of view (1989: 12). These characteristics did match the needs of this research. PO, Jorgensen continues, "is especially appropriate for exploratory studies, descriptive studies and studies aimed at generating theoretical interpretations" (p. 13) and this research precisely aimed at these objectives.

Little was known about the genre and the genre expectations of the EOPs and, as stated in Chapter 1, the third RQ answered the question *What.* According to Yin (1989) a *what* RQ is a sign of an exploratory research. Thus we can say that this research is exploratory in nature. Once the data were analysed, the genre and the genre expectations of the EOPs needed to be described and this gave it its descriptive nature. At the same time this research was aimed at generating theoretical interpretations - the features that describe the genre and the genre expectations of EOPs - their structure, prestigious markers, generic features, variant and invariant features, and the model followed by NNS presenters. In addition this research attempts to contrast the EOPs of novices versus experts and of NSs versus NNSs. However, without explanations that take the 'thick' descriptive approach (Geertz, 1994), these phenomena would be unproductive. In order to come up with 'thick descriptions', these features have to be viewed from an insider's point of view. The need to view them from the insiders' point of view (and not from the discourse analyst's point of view) formed the key reason why this research required PO.

The insiders' point of view was sought for because the results of this research are meant to be consumed by practitioners who acculture students who are future or even contemporary engineering DC members thus future and contemporary insiders. A discourse analyst's point of view is not enough in extracting rich data using the 'thick' description (Geertz, 1994) that goes along with PO. Moreover, Johns (1994) points out that the social action attached to the DC being studied can only be studied from the insiders' point of view. In her case, although as a discourse analyst

she was interested in the structure of the discourse being used, the DC members were interested in the social aspect that she calls 'social action' which has to do with the acceptance of their proposal. Discourse analysts would not be made aware of the occurrence of such 'social action' unless through the insiders' point of view.

PO, when adopted, rewards researchers with a number of conveniences and good points. In relation to this research, apart from the practical convenience of some of its procedures (the questionnaires can be handed over to and collected from the respondents personally and more than enough respondents are gathered in the meetings), PO has two main advantages to offer to the researchers:

- Large samples were possible. Many meetings could be attended; As many OPs could be analysed, questionnaires distributed, interviews carried out as the researcher could afford the time to;
- The face-to face communications during the fieldwork were authentic - the occasions were real and so the researcher did not have to initiate a simulation in order to get the respondents' response as did Lapakko (1988) who had to get respondents to view and respond to videotaped speeches.

The instruments used were researcher constructed questionnaires and interview schedule, and the (audio and video) recording kits.

The questionnaires, a type of written instrument, were of three types: An 'Audience Questionnaire', a 'General Speaker questionnaire' and a 'Chosen Speaker Questionnaire'. They were distributed at three different stages of the research: conceptualisation, fieldwork and follow-up. In all the three stages, the content of the questionnaires was all the time directed towards

answering the RQs. The only difference was in terms of the scope which got more narrow as the research progressed.

The researcher constructed interview schedule, another type of written instrument, was of two types used by the researcher to interview respondents at the conceptualisation and at the fieldwork stages. Formal and informal interviews, carried out during the conceptualisation stage as well as during these two stages, made use of the interview schedule (Appendix B). These interview schedules were not visible to the respondents as they simply responded to the researchers' questions which had to be memorised, when actual asking was done.

Two types of recording instruments were used - audio and video recording kits. An audio recorder was used to record the formal interview conducted at the conception stage of the research and to record the actual engineering presentations at one conference in Malaysia where permission to video record the presentations was not granted. OPs delivered at all other actual engineering meetings including the conference observed at Loughborough, United Kingdom were video recorded because permission to do so was granted by the organisers.

Videotaping was the preferred mechanical recording since it is the best possible way to safeguard against 'threats in internal reliability' (Nunan 1992:61). Videotaped material for this research was more reliable than audio taped one because the focus of the analysis was on the OPs which consisted of not only the speech itself but also other related 'thick' description, for example, the occurrence of the visuals. In the audio taped OPs there was no record of the occurrence of the visuals which were used to paragraph the transcribed OPs.

Rogers agreed that videotape is the best medium for analysing seminar discourse with students (1977 in Lynch and Anderson, 1991). It was also the best for analysing professionals' OPs in this research because no other means could keep the authenticity of the occasion, although of course the audience's reactions could not be included. Fortunately, the audience's reactions did not need to be recorded since it had been captured through questionnaires and interview during the fieldwork. Although for this research students were not directly involved as in Rogers' investigations (1977 in Lynch and Anderson), videotaping was still the most useful means of keeping a permanent record of the OPs which were the focus of the analysis of this research. As Nunan points out, video recordings "do not preserve all of the data, but only those data selected by the researcher for preservation" (1992: 61) and these selected ones would be preserved well through this (video) mechanical recording. In the context of this research, only the speeches needed to be preserved. Even though only the OPs needed to be analysed in this research, all speeches (chairman's introductory remarks, Q&A etc.,) were recorded because this added the depth of the 'thick' description (Geertz, 1994) that this research strives for, in line with the PO methodology.

Let us now discuss aspects of the population and the sample of the research. Taking the definition of *population* given by Frey et. al. (1991) as all the people who possess the characteristics of interest, the population of this research consisted of N and NN English speaking members of the engineering DC who attend engineering seminars and conferences. Since this population is very wide, sampling was needed.

Sample is defined as a subgroup of a population or universe, representative to some degree (Frey et. al. p. 130). Based on this definition, random sampling would be almost impossible. It would not be operationally possible because, according to Frey et. al., it entails equal opportunity to everyone in the population to be chosen to participate in the research. It would be too expensive and too time consuming to be carried out, in the context of this research. Thus non-random sampling was used. According to Frey et. al. this type of sampling is perfectly acceptable. Three of the non-random sampling types listed by Frey et. al. were suitable to be used to collect data for this research: convenience, purposive and network sampling.

Convenience sampling means choosing respondents who are available; the network sampling [also called *snowball* (Oppenheim 1992)] means choosing respondents to whom the researcher is introduced to by colleagues or insiders and purposive sampling means choosing respondents who possess particular necessary characteristics. Purposive sampling, in a way, is similar to practical sampling design which is also non probability (non-random), which Henry defines as selection "based on the judgement of the researchers to achieve particular objectives of the research at hand" (Henry, 1990:23). Since the three approaches had complementary attributes in the context of this research, they were used in a combination.

Let us first discuss how the practical or purposive sampling approach was used in this research. There was no list that matched the population of this research. Thus in order to describe the genre and the genre expectations of the EOPs going to the site where OPs were delivered (Jorgensen 1989) was the best choice. Henry

(1990) indicates that sampling the population requires fewer resources for the initial contacts and allows more resources to be invested in follow-up activities designed to increase responses. This was done in this research.

Initially the Urban Transport Seminar (Petaling Jaya, Selangor Malaysia) was attended to pilot the questionnaires and the taping of OPs. The Third Power Engineering Conference (Lembah Pantai, Selangor Malaysia) was the third being attended but was the next suitable one. However, after attending The Third Power Engineering Conference, the sample was still not representative enough since the presenters at this conference represented only academic institutions. The presenters in the Urban Transport Seminar did include presenters representing non-academic institutions but at this stage the questionnaires were still being piloted. PEMAS (Bukit Jambul, Penang, Malaysia) was participated in and observed next. However, the number of NNS OPs recorded thus far outnumbered that of NS OPs. Thus the 10th National Conference on Manufacturing Research (Loughborough, Leicestershire, UK) was attended to add more NS samples.

Since the resources for this research were available only at certain times, it was necessary to record all the OPs and collect all the questionnaires handed back by the respondents. Those OPs not chosen for this research for various limitation reasons, were still kept for possible follow-up research later. The purposive sampling approach was adopted in that the samples had to meet certain characteristics - Firstly the meetings to be observed had to be engineering ones; Secondly these meetings had to host multiple presentations (single presenter seminar presentations such as those attended on the 30 of April and 6 May 1994 were not included in

the OPs being analysed). Thirdly these OPs had to be either on research or projects. Finally, the presenters and the audience must either be NSs or NNSs of English.

How was convenience approach used in this research? Convenience was exercised in choosing the meeting dates and venues - those attended were chosen when available and were convenient for the researcher to attend and observe. For instance there were two conferences taking place in Scotland between April and June 1994 but they could not be attended because the researcher was attending those in Malaysia. The decision to choose those in Malaysia was based on the fact that there were at least seven meetings scheduled to take place although due to last minute cancellations or change of date, in the end only three seminars and two conferences were attended, of which data from one seminar and two conferences were relevant and included in the final analysis.

The network or the snowballing approach had to be used because the researcher needed the insiders to help her with various factors at different stages. At the conceptualisation stage, it was used to identify the RQs. At data collection stage it was used to introduce the researcher to key informants, addresses, dates and venue of meetings and at data analysis stage it was used to countercheck presentation text and the researcher's insights.

Thus the sample was narrowed down to N and NN English speaking members of the engineering DC who attended engineering seminars and conferences which hosted audience and speakers in any of the engineering faculties (mechanical, electrical, civil, chemical, etc.) related to academic and private sectors, that took place in Malaysia and the UK between March and September 1994.

The engineering seminar carried out at Petaling Jaya (Malaysia), engineering conferences carried out at Lembah Pantai (Malaysia), Bukit Jambul (Malaysia) and Loughborough (UK) were found suitable within the stated duration.

In terms of the number of meetings, those participated in and observed in Malaysia outnumbered those in the UK. However, in terms of the number of OPs delivered in meetings held in Malaysia and the UK, the latter outnumbered the former. The number of OPs delivered was seven at Petaling Jaya, twenty-five at Lembah Pantai, twenty-seven at Bukit Jambul but 131 at Loughborough. This means the single meeting held at Loughborough hosted seventy-two OPs more than the three meetings held in Malaysia.

The numbers of OPs recorded at meetings held in Malaysia and the UK were almost the same. While from three meetings held in Malaysia, all the OPs could be recorded by the researcher, from the single meeting in the UK, forty-one could be video recorded by the researcher and fourteen more audio-recorded by someone else, because they were delivered in concurrent streams. As a result, fifty-nine OPs were recorded in all the meetings held in Malaysia and fifty-five in the single meeting at Loughborough, in which case, only four OPs less than those recorded in Malaysia.

However, only sixty-eight of these 114 recorded EOPs were eventually analysed due to three main reasons or limitations. One limitation was due to the unavailability of pinned-up mikes. The presenters either refused to use goose-neck mikes or used them improperly (e.g., by speaking too far from the mikes). This type of technical problem occurred especially in the conference observed in Bukit Jambul (Penang, Malaysia). The second limitation was due to

the presenters' mild and slurred articulation that forced the researcher to abandon transcribing such speeches even in the language laboratory. OPs with such characteristics were mostly delivered at Loughborough. The third reason was the researcher's limited time. Unless transcriptions could be done by means of a mechanical device, attempting to transcribe all the 114 EOPs would be almost impossible given the limited time scale. Thus only the first transcribable sixty-eight EOPs were analysed.

Let us now turn to the procedure of the research. This research was done in six stages: conceptualisation, preparing for the fieldwork, piloting, fieldwork, analysis of data and follow-up contacts.

The first stage of the research was the conceptualisation of the research. This is the earliest stage of the research, it was exploratory in nature, in the form of the conceptualisation of the research problem (Oppenheim 1992). Following Oppenheim, this stage involved unstructured interview, talks with key informants and the accumulation of essays written around the subject being inquired into. In this research the researcher's experience as an EST teacher and information from accumulated essays around the subject were used to form the initial RQs which then were used to form the conceptualisation interview questions which included in depth interviews of key informants.

Snowballing technique (Oppenheim 1992), also called network technique (Frey et. al., 1991), was used in the conceptualisation of the research in identifying the informants to be interviewed and to answer questionnaires. The snowballing or network technique was most suitable because the informants were not known to the researcher. Nine SIs in the engineering line were

interviewed and were requested to introduce more relevant SIs to be given questionnaires. Information gathered from the interview was used as a basis to form the questions in the piloting questionnaires.

At a later date, each of the SIs being interviewed was given four questionnaires to be passed on to his/her engineering colleagues. Since the actual informants would be NSs as well as NNSs who were especially Malaysians, similar groups were looked for at this conceptualisation stage. Although no NS SIs were interviewed, the instruction given to those who distributed the questionnaires (i.e. those who were interviewed), was that two of the questionnaires were to be given to NNSs and the other two to NSs. The SIs who were interviewed did not answer the questionnaires. The questionnaires were returned to the researcher by mail. The questionnaire was used to supplement the formal and informal interviews to reach informants who were not known to the researcher.

Oppenheim (1992) suggests thirty to forty informants to be consulted in the conceptualisation stage. A total of nine SIs were interviewed. A total of thirty-six questionnaires were distributed but only five were returned- (two from NS). Thus, assuming that all the questionnaires reached the appropriate SIs, a total of forty-five SIs were contacted, but information was only gathered from fourteen informants - nine through interviews and five through questionnaires.

Following Oppenheim, the questions asked during the interview were of three types - free style then, open ended and finally spearheaded. At the interview stage the questioning was free style. This then were turned into open ended questions, and as

more and more people were interviewed, the questions eventually became spearhead.

As advised by Oppenheim the informants chosen to participate in the conceptualisation interview consisted of those coming from a good spread of the engineering faculties (Mechanical, Civil, Electrical and Chemical engineering). After each interview, the questions were revised and improved. Most of the interviews were taped with the interviewees' permission and the results of the interview, which according to Oppenheim there is no need to quantify, were used as a basis to form the mail questionnaire. The responses from the piloting questionnaires were used as a basis in designing the questionnaires and the interview schedule to be used in actual data collection.

The second stage of the research was the preparation for the fieldwork. Fieldwork preparations included selecting institutions to be observed and establishing contacts and getting the necessary instruments ready for use for the fieldwork.

Initially different universities in Malaysia and the UK which offered all four engineering faculties - Faculties of Mechanical, Electrical, Civil, and Chemical engineering, had been identified. However, if only universities were to be chosen and research institutes were excluded, there would be an imbalance in the number of institutions being contacted for fieldwork in both countries since there are more universities in the UK than there are in Malaysia. Moreover, the results of the conceptualisation interview showed that OPs on research situations were more significant than those on non-research ones.

Thus research institutes listed in Piccirelli's (ed.) *Research Directory* (1993) were noted. The *Directory* covered every other

place in the world except the United States since the latter was covered by the US edition by the same publisher, under different titles (*Research Centers Directory*, *Research Services Directory* and *Government Research Directory*). For this research however, only those found in Scotland and Malaysia were contacted. In the preliminaries, it was stated that Piccirelli covers research institutions of three types - University related (independent and non-profit), Private Sectors (firms and individuals for profit) and Government funded ones. *The World of Learning* (1993:1513) provided additional centres not covered by Piccirelli. At the same time, some institutes were listed in both the directories. SIRIM and SURRC for instance were found in both the directories. The contacts made were to get the permission from the gatekeepers to participate in their engineering meetings (seminars, conferences).

Contacts with the prospective places for fieldwork were made about six months ahead of the data collection date, even though at that stage, the preparations for the actual fieldwork had not been finalised - they were just beginning to be prepared or purchased. A total of fifteen research institutions based in Malaysia were contacted by post in December 1993. In addition, UTM and UM were also contacted as these two universities had engineering faculties. A total of twenty-two institutions for Scotland were contacted in November 1993.

A questionnaire was sent to each institution contacted in Malaysia and the UK. The degree of the researcher's involvement in PO was spelt out in the initial letters to the prospective institutions and again on the cover page of the questionnaires. In addition, the cover pages of all the three types of questionnaire stated the aim of the research (for doctoral thesis), the nature of

the study (to uncover the problems of NNS presenters), where the data collection was to be made (in Malaysia and the UK.), and who would benefit from the research (engineering DC members) and most importantly, confidentiality (e.g. the identity of the presenters) was promised.

The interview schedule and the questionnaires were prepared at this stage. Questions that were difficult to ask in questionnaires or those that needed double checking, were kept in the interview schedule. The interview schedule was the 'hidden agenda' defined as a written proof of agenda that 'should not be too obvious to the respondents' (Oppenheim 1992: 70). In other words the respondents should not see the piece of paper where the researcher wrote what to do in the fieldwork and what to ask the informants. Sample interview questions are in Appendix B.

The questionnaires were written immediately after the letters to the research institutes in Malaysia and Scotland were sent out. They were written especially based on the result of the conceptualisation exercise, gathered through both interview and questionnaire. Following Oppenheim (1992), the researcher's experience in teaching EST, related literature on genre expectations and the genre analysis frameworks also had impact on the questionnaires. As described in Chapter 3 the related literature consisted of descriptive works such as the one by Lapakko (1988), the how-to or the hortatory sources on making OPs (Woodal, 1989; Kenny, 1982; Booth 1993) including those of science and technology sources (Hyland, 1991; Pritchard, 1991, Rosemary, 1991) and other research of similar concerns (Dubois, 1980a, Weissberg, 1993). The genre analysis frameworks were those by Bakhtin (1986), Bhatia

(1993), Johns (1994) and Swales (1990) and will be discussed in the following chapter.

First the preceding sources were pooled into a list of ideas separately, then reduced to the number of items judged to be significant, mostly still open-ended, following Oppenheim's advice (1992), then merged and later subsumed into the headings that emerged from the sources on genre frameworks. The merged result was then turned into questionnaires. It was decided that the audience and the speakers should answer separate questionnaires. The audience answered questions on the DC members' genre expectations on the presenters whereas the presenters answered questions on what they had gone through to prepare themselves for the OPs.

Even though the responses might turn out to be similar, care was taken not to overlap the questions. Once the questionnaires were ready, the next thing to do was to pilot them.

Thus the third stage of the research was the piloting stage. The piloting stage involved the piloting of the questionnaire, the interview schedule and the taping of OPs.

Piloting the questionnaire needed the greatest amount of paperwork. Following Oppenheim (1992) they were piloted especially after the completion of the content analysis of related literature both on the hortatory and the theoretical works. The first engineering meeting attended in Malaysia was the Urban Transport Seminar held at Petaling Jaya, Malaysia on the 22nd of April 1994. The questionnaires were piloted here. At the end of this seminar most of the open-ended questions were collapsed into the multiple choice ones. Although the responses gathered here

were valid and were noted down, the questions were reshaped after being tried at this seminar.

After this seminar two more seminars were attended ('Successful Technical Presentation Seminar' and 'Surface Interfacial Tension Measurement of Solids and Liquids'). The responses from these two seminars were excluded from the data of this research because they were each of a single presenter and would not be similar with the rest of the OPs being analysed.

The piloting done at the Urban Transport Seminar was useful and relevant to other subsequent occasions but less useful and relevant for the two seminars that were excluded. This was another reason why they were excluded from the data. By the time fieldwork took place at the Power Engineering Conference (Lembah Pantai), the questionnaires did not need any more changes. This means that the same version of the questionnaires was used in the Power (Lembah Pantai), PEMAS (Bukit Jambul) and the Manufacturing Engineering (Loughborough) conferences. A comprehensive common version of the three types of questionnaire is found in Appendix C.

Since the respondents preferred multiple choice questions which save their time, most of the questions in the final version were multiple choice except for some which had to remain as open-ended. An example of such a question from the audience version was "What do you think are the speakers' strengths and weaknesses (or difficulties)?" (Appendix C: Question 39). Such a question was time bound in nature and could not be easily changed to multiple choice.

There were initially only two sets of questionnaire, one for the audience and the other for the general presenters. After

piloting all the questions at the Urban Transport Seminar, the questionnaire for the chosen speakers was designed because, there was a need to get more specialised information from the speakers whom the audience considered most successful. Thus the questionnaire for the chosen (or 'good') speakers was designed. This questionnaire was passed on to the speakers whom the audience had rated as the best speaker of the session or of the day. Thus in the final version, there were three types of questionnaires - for the audience, the general presenters and for the chosen presenters.

The fourth stage of the research was the fieldwork. The fieldwork was the stage where the actual collection of data took place. The most important thing to be observed during the fieldwork was related to the acceptability of the DC members. It was found that the DC members disagree with certain approaches such as formal interview and videotaping to safeguard confidentiality. This can be discussed in relation to formal and informal data collection.

Data collected through videotaping and questionnaire were the formal methods and that through conversation was the informal one. Although one may comment that informal data collection is less reliable, these methods were carried out according to whether or not they were acceptable to the organisers of the meetings. In other words formal interview could not always be carried out because it was not acceptable to the engineering DC members. In actual meetings videotaping, questionnaire distribution and conversation had to be carried out simultaneously. To save time, the audience was briefed about the research by giving them a research resume to read.

Some conference organisers safeguarded their conferencees' confidentiality and were often worried about the activities of the researcher, especially videotaping. The researcher had to be very sure that the permission to videotape was granted before coming to the meeting. Permission to videotape was not granted at one meeting; permission was granted but the organisers wanted a copy of what was recorded at another meeting. While no general conclusion can be drawn without further inspection, the meeting organisers who happened to deny permission to observe and/or to videotape were those with commercial interests.

Questionnaires were acceptable to the SIs and there was no problem in getting them to answer, and return them although of course the number of those given out (120) was greater than those returned (100). At both piloting and fieldwork exercises, the questionnaires were distributed and collected personally by the researcher. Some of the points that needed careful organisation in relation to handling questionnaires were related to whether it was a single or multiple day occasion and whether the questionnaire was to be handed over to the audience, general presenters, or 'good' presenters.

Questionnaires for the audience were normally passed over before the start of the session. Questionnaires for the presenters however were passed over after his presentation to ensure him basing his responses on the presentation he delivered on that day. Presenters whom the audience might rate as 'good' or the best were given after asking as many members of the audience as possible which presenter was considered as 'good' or the best of the session or the day.

Some presenters were not available to answer the questionnaire, but some presenters (and some audience) took the effort to return the questionnaires to the researcher if they could not hand them over at the meeting.

Especially in a multiple day conference, there was an overlap of audience, speaker and chairman/person as the audience. Members of the audience, could either be a non-presenting delegate, a presenter in another session or even a chairman/person for another session. If we happened to pass him/her over an audience questionnaire, that was all s/he would answer for us, even though at another instance s/he could be a presenter instead. This decreased the chance to get more responses from presenters but it was unavoidable since it was not up to the researcher, but up to the respondents.

The fifth stage of the research was the analysis of the data. Four types of data had to be analysed at the end of the fieldwork -- the taped OPs, the questionnaire, the fieldwork notes and the interview results. Of these the OPs and the questionnaires were the main sources of information.

The EOPs were first transcribed. The transcription symbols used are found in Appendix D and sample transcribed and analysed EOPs are found in Appendices E, F and G. The transcriptions were analysed in detail keeping in mind the common aspects being analysed in publications on OPs in related areas as described in Chapter 3. The functional approach of written discourse done by Cook (1975), Cooper (1985), Dudley-Evans (1986), Hopkins and Dudley-Evans (1988), Peng (1987), Swales (1981, 1987) and others was applied to the EOPs. The fairly stable features of the structure of the EOPs were determined by tracing the recurrence of the

communicative elements. The recurrence of the elements were counted using SPSS Win. Some characteristics of EOPs and some characteristics of NNS delivery were traced from this analysis. These data were used to countercheck the data gathered directly from the SIs through questionnaires without undermining the latter's importance.

The analysis of the EOPs was not based on a distinction between 'good' or bad' OPs *per se* because much of this has been published in 'how-to' sources, even in the engineering context itself (published in *IEEE Transactions Journal*). Instead, the criteria of good/bad OPs were only involved in connection with the DC members' genre expectations, which could be done by comparing the 'ideal' (from questionnaire, interview, conversation) with the 'actual' (from analysis of actual OPs, field notes) situations.

The sixth and the last stage of the research was the follow-up contacts with the SIs. Bhatia, in agreement with Selinker and Huckin and Olsen (1984b) reminds us, a discourse analyst's findings need to be double checked with the SIs who 'confirm his findings, bring validity to his insights and add psychological reality to his analysis' (1993:34).

For the same reasons SIs were consulted in this research after the fieldwork to verify the analyst's findings and insights. Verification was needed soon after the data of this research began to be analysed.

Which SIs were contacted? Using the context of written texts, Huckin and Olsen advise discourse analysts that "perhaps the most useful specialist informant one can find for an LSP text is the actual author of that text" (1984b: 129). Selinker (1979) lists down

nine characteristics of good SIs, of which the most relevant ones for the context of this research are:

- Number Two: Informants are 'trained and fully competent' in their technical discipline;
- Number Five: They should have 'a feel for the technical language of their discipline and be open to linguistically-oriented questions about texts in their discipline';
- Number Six: They should have 'the ability to explain clearly what they believe scientists in his discipline do when they do science' (1979: 213).

The SIs contacted had these characteristics listed down by Selinker and Huckin and Olsen. Following Huckin's and Olsen's advice to get verification of insights with the "author", in this research, as much as possible, the presenters themselves were contacted. They consisted of those SIs who participated during the fieldwork – the speakers who delivered the EOPs which were recorded and analysed; others answered either the questionnaires or the interview questions, or both. The SIs were contacted by post and they replied through the mail. There were also occasions where e-mail, telephone and fax were used.

Post-fieldwork feedback from the SIs was derived in two batches. The first batch consisted of two types -- approving the transcribed presentations and clarifying some issues (e.g., topic classification).

First of all, the main problem related to contacting the SIs needs to be addressed. In Bhatia (1982) there is only one SI, the writer of the housing act being analysed. In the case of this present research however, there were sixty-eight EOPs selected from each of the conferences and seminar attended. The number of EOPs

being analysed determined the number of presenters to be consulted. This means since sixty-eight OPs were analysed, sixty-eight presenters would have to be consulted. To avoid having to consult so many presenters, only a sample of them were chosen to be verified. The decision was based on OPs which contain technical information that the analyst found most difficult to understand, therefore most difficult to transcribe. In this research the most difficult problems were those related to the SIs as described. However, if such problems could be handled appropriately, the design and methodology worked out for this research, as described earlier, proved a reliable and a robust one.

This takes us to the discussion on the validity and the reliability of the research that can be determined in the design and the methodology. As will be pointed out in Chapter 5, the findings on the genre and genre expectation of EOPs are broadly representative given the quantity of the corpus (sixty-eight EOPs and 100 questionnaires) and the coverage of the geographical locations (four engineering meetings in two countries).

A variety of approaches (i.e., focussed text analysis and questionnaire responses) and methodologies (i.e. survey and interview) were used in this research. According to Brinberg and McGrath such "multiple paths" (1985: 14) do increase validity in the research process.

A variety of instruments were also used (questionnaires, recording instruments, etc.). The use of mechanical recording in an ethnographic research such as this one, according to Nunan (1992) increases the internal validity and reliability of the research. In this research both video and audio mechanical recording were used to preserve primary information.

While observation was used, questionnaires were also used. Dubois (1980a, 1982a, 1982b) for example, made focused observations of the text but did not use questionnaires. Although considered as a secondary type of data, data gathered through questionnaires are still important, for research on GA such as this, since they involve the insiders' points of view. If we can claim that data which are gathered from textual observations *and* interview are more reliable when counterchecked by using questionnaires, then we can claim that the data of this present research are satisfactorily reliable.

A standardised statistical package was also used. By adopting standardised statistical procedures consistent patterns of structure of the EOPs were established. The reliability of the scores was sought through formal observations such as the standardised questions forwarded to all the SIs through the questionnaires and the reduction of scores to percentages made it easier to establish the frequencies of scores and to determine their consistency. Figures and statistics were also used to count the frequencies of all the variables (cases, sub-moves, sub-floats, NS-NNS status, place etc.) in the analysis of actual EOPs.

Validity can also be achieved by taking the insiders' point of view or what Marshall (1984) and Brinberg and McGrath (1985) call 'ecological validity'. Although they have different interpretations of 'ecological validity, both interpretations can be used to measure our own validity.

Brinberg and McGrath define *ecological validity* as "the extent to which a researcher can specify the scope limits of a set of empirical findings with respect to the elements and relations from the substantive domain" (p.138). Here what is meant by

substantive domain is "what is 'there' prior to and independent of the intellectual enterprise we call research" (Brinberg and McGrath, p. 33). Based on this definition then, the substantive domain refers to the EOPs. The elements are the 'individuals, groups, organisations, cultures' being studied; the relations are the 'patterns' (p. 34). Thus ecological validity here refers to the extent to which limits can be set on the findings of the patterns that emerge. In other words it refers to the interpretations of the findings which are discussed in Chapters 6, 7 and 8.

Marshall (1984) looks at *ecological validity* in relation to the formal and informal assessment of reading. She describes formal assessments as standardised tests "designed to measure the students' recognition of answers of specific questions" (p. 79) whereas informal assessment is 'student-generated responses'. Such a response, according to Marshall, consists of:

> a set of guidelines or procedures that enable the teacher to make decisions about student performance based upon informed observation of student behaviour in the classroom ... (which) relies much less upon paper-and-pencil tests, although the terms can be used to include teacher-made tests, and more upon verbal interaction, both among students and between students and teacher (p. 80).

Marshall also contends that an objective way of measuring natural language has not been found yet, "and probably never will" (p. 80). Thus according to Marshall, although:

> informal assessment is necessarily a less reliable source of information about student performance than is formal assessment ... (t)he loss of reliability in informal measures is compensated for by a gain in the range of behaviours being observed (1984: 80).

Thus Marshall suggests, in order to "get a complete picture of student performance" both the continuums - "one representing reliability (the consistency of scores) and the other representing ecological validity (the naturalness of the task)" - should necessarily be high (1984: 80).

A high level of these two continuums did exist in this research. What Marshall refers to as reliability which includes the consistency of scores has been dealt with earlier.

The naturalness of the results of this research, i.e., to use Marshall's term, the 'ecological validity', can be claimed from the attempt to maintain the insiders' points of view. As will be pointed out in Chapter 6, the insiders' points of view was the main issue that establishes the naturalness or the 'ecological validity' of the results of this research. The insiders' points of view were achieved through two means. One was by choosing PO and the other was by consulting as many SIs as possible.

Now, how does PO assist us in achieving the insiders' points of view? In the first place, PO was used because of the 'ethnographic' nature of this research, as in Ramani, et. al. (1988). PO was also used because, as mentioned earlier in this chapter, this research needs the 'thick' description described in Chapter 3. The attention given to the social action (Johns, 1994) of the DC members is one way of producing a 'thick' description (Geertz, 1994). Johns reminds us that if we do not analyse a discourse in relation to its 'social action' "we haven't gotten very far past the discourse analysis of isolated texts that is still common in our profession" (Johns 1994: 18). In PO "Direct observation is the primary method of gathering information" (Jorgensen, 1980: 22).

In order to gain access to such information as the connection between social action of the DC members and EOPs, direct observations in PO are a necessity. By observing and by being present at the site where the EOPs were delivered, not only interpretations surrounding social action, but other insiders' interpretations are also materialised. Being physically present at

the site is so important in PO that validity in PO, according to Jorgensen, is measured by whether the researcher is able to gain direct access to the insiders' meanings and actions (1989:36).

The next question is how contacting the SIs assists us in achieving the insiders' point of view? Bhatia stated that contacting SIs is an important aspect of GA 'to double check' the analyst's findings (1993:34). In this research however, SIs were consulted from the conception to the end of the research, not only to double check the analyst's findings, but also to get direct insights from them, to represent the DC's own interpretations. The SIs were consulted before, during and after the fieldwork.

Before the fieldwork, i.e., during the conceptualisation stage, the SIs were consulted through the snowballing technique (Oppenheim, 1992) as described earlier in this chapter, to gauge what was to be observed during the fieldwork. The insiders were asked questions which were elaborated, improved or spearheaded during the fieldwork stage.

Data resulting from SI contacts made during the fieldwork constituted the greatest bulk. At this stage, the SIs were consulted at the piloting as well as at the actual data collection. As explained earlier in this chapter, piloting was done at an actual engineering meeting. During the actual data collection, some of the SIs were interviewed and others given questionnaires to provide data to answer the RQs. Especially on genre expectations, questions which generated open-ended responses were used to preserve the insiders' points of view.

When the data were analysed after the fieldwork, all the 'good' presenters dealt with in Chapters 6, 7 and 8 were chosen to be analysed because they had been rated as 'good' by the audience

and not because the researcher thought they were 'good'. The SIs were contacted to double check some of the analyst's findings on the analysis of the transcribed actual OPs. The SIs contacted were the presenters themselves so that they could give explanations of their own OPs.

In short, every attempt was made to describe the genre and the genre expectations from the insiders' points of view although Geertz indicates that the difference between an insider's and an outsider's points of view is "one of degree, not polar opposition" (Geertz, 1993b:57). In our attempt to know about their genre and genre expectations, keeping the ecological validity through the use of insiders' viewpoints, we can get the insiders' experience although we are not one of them.

The validity and reliability of ESP research, according to Johns (1994), is most importantly indicated by whether the study takes into consideration the communicative purpose of the DC members. Johns indicates that studies that do not take into consideration the 'communicative purpose' (Swales 1990; Bhatia 1993) and/or the 'sociolinguistic implications', which is the determining factor in the choice of features being discussed in the genre, will not be able to unveil "the whole story" (1994: 15). Since our study took into consideration the communicative purpose, the "implications for (the) genre and discourse community research and teaching" (Johns 1994: 15) should be acceptable.

Reliability and validity can also be claimed because of the theoretical frameworks used. This research makes extensive use of fairly established theoretical frameworks for genre from at least four authors (Bhatia 1993; Swales 1990; Johns 1994; Bakhtin 1986) and all the major concepts (Johns, Swales, Bakhtin, Bhatia) and

relevant steps for conducting a GA (Bhatia, 1993) were taken into consideration. Use of such theoretical frameworks ensures what Brinberg and McGrath call 'validity as robustness'. According to Brinberg and McGrath:

> The outcome of a single study, by itself, contributes little to our body of knowledge. Only when the results of a single study have been compared with other studies that examine the same focal problem do we increase our knowledge about that problem (1985:120).

GA, as will be mentioned in Chapter 5, has been used widely in genre studies of written discourse. Although it has not been widely used in oral discourse, the extensive use of sources related to GA ensures, for instance, the convergence and the replication of this study by others interested in GA. The foregoing means of achieving validity and reliability could easily be imitated by other researchers dealing with the genre of an oral discourse. In addition, the transcription symbols (Appendix D) used for this research can also be adopted by others with the same research interest. As a result of taking previous works on GA into consideration, the outcome of this research was found to conform with theirs. The cyclic nature (i.e., the floating nature) of the communicative elements discussed in Chapter 6 is one example.

Most genre analysts concentrate on the analysis of the monologue, (i.e., the *oral presentations*). The robustness of the design and the methodology of this research can also be seen clearly in the framework used to analyse the monologue, thus describe the genre and the genre expectations of EOPs which is dealt with in the following chapter.

Chapter 5

A POSSIBLE FRAMEWORK FOR DESCRIBING THE GENRE AND THE GENRE EXPECTATIONS OF EOPs

In this chapter, the trends of approaches in analysing genre studies are first reviewed. Then, a possible framework for describing the genre of EOPs in academic and professional contexts is described.

Previous works related to the genre of monologues described in Chapter 3 exhibit three trends of analysis -- the *traditional* approach, the *interactive* or the *ranking* approach and the *thick descriptive* approach. As mentioned in Chapter 4, the focus of a genre analysis is on the text, which, in the context of this research, are the monologues (i.e., the OPs). In all these approaches the monologue is analysed in two ways -- by describing the *modes* of exposition in the traditional approach and by describing the *moves* in the interactive and the 'thick' descriptive approaches.

Let us first deal with the *traditional* approach to find out whether it is recommended for use to describe EOPs. First of all, the traditional approach has been described in many different terms. While Dubois calls it the *traditional approach* (personal correspondence, 1994), and *typology* (1980a), Sinclair and Coulthard call it *literary stylistics* (1975:8). Bhatia, quoting from other sources calls it *rhetorical-grammatical* analysis (1993: 4), *stylistic* analysis and *rhetorical* approach (p. 7).

These terms reflect how the authors deal with this approach. For instance, according to Bhatia, who quoted Selinker, Lackstrom and Trimble (1973:1 in Bhatia) the traditional approach "aims to investigate the relationship between grammatical choice and

rhetorical function in written English for Science and Technology (EST)" (1993: 7). In fact, 'investigating the relationship between the grammatical choice and the rhetorical function' has been the aim of all the authors adopting the traditional approach, whatever the term used to call it. However, since 'investigating the relationship between the grammatical choice and the rhetorical function' is not the aim of this research, this approach is not suitable for use.

The traditional approach can also be discussed in relation to the sources of its framework. Two possible frameworks for this approach are those by Longacre (1974) and Trimble (1985). Dubois (1980a) used Longacre's typology in analysing her biomedical talks. Longacre's typology provides a suitable framework for analysing an oral discourse in this approach since it was worked out based on oral prose folk monologues. However, there are a number of drawbacks in terms of the present research.

First it is not suitable for the ESP/EST context. Drama, one of the modes that he gives attention to, is less likely to occur in EST. Second, there is an unbalanced treatment of the few modes that he had chosen to concentrate on. Narration is given special attention but other modes (drama, expository, procedural and hortatory) get little attention. Because of this, Sinclair and Coulthard comment that this approach "attempts to show structure in terms of narrative, not linguistic, units" (1975: 8). Although we can argue that what motivates Sinclair and Coulthard to comment this could be because they are in favour of the ranking approach which is linguistic in nature, there is truth in their comment, at least in relation to the unbalanced treatment of the *modes*. The third drawback in Longacre's typology approach is that it does not have all the *modes* that can occur in EST discourse. An analyst who

chooses this approach would need other sources. Trimble is one good choice so that we are able to describe at least most of the rhetorical *modes* that occur in an EST discourse. Trimble's (1985) rhetorical description of the modes are detailed and sufficient. She found that at least description, definition, classification, instructions, and visual-verbal relationships between a visual aid and its accompanying text are the most common *modes* in EST (1985: 11).

However, since Trimble's framework is meant to analyse written EST/ESP discourse and it has not been used to analyse an oral discourse before, perhaps, as Sinclair and Coulthard (1975) claim, it is true that this approach is more suitable for a written rather than an oral discourse.

Several other commentators such as Bhatia and Swales, have highlighted other weaknesses of this traditional approach along with Sinclair and Coulthard. While Bhatia commented that this approach concentrates on the text or the register of the discourse and not the discourse as a unit (1993:7), Sinclair and Coulthard pointed out that by looking at the effectiveness of the authors' grammatical choices, this approach only concentrates on the clause (1975:8). These two instances, Bhatia and Sinclair and Coulthard comment, generate limited and inadequate data. Limited and inadequate data, according to Swales, can lead to misleading generalisations (1981). This shows that Sinclair and Coulthard, like Swales and Bhatia, show concern for the necessity of analysing the discourse as a whole (1975: 8). One way to do this, is to study the discourse as a genre as in the case of the present research. However, as Bhatia points out most of those who take the traditional approach, study the text or the register, without

distinguishing it from the genre of the text, thus the result is a rather thin description (1993: 17).

This is not to claim that the traditional approach is necessarily in conflict with the thick descriptive approach. The modes could be one of the units included in the text analysis if they recur and have communicative purpose. As will be stated in Chapter 6, not every recurring feature will qualify as a characteristic of a genre. In the light of this pre-requisite then, a researcher who wishes to include the modes as one of the units of analysis in the GA framework would first of all need to establish that the modes do in fact have communicative purpose. Unfortunately establishing the modes as having communicative purpose is outside the scope of this research.

Moreover, as Dubois (personal correspondence, 1994) points out, the typology (i.e., the modes analysis) and GA (i.e., the thick descriptive approach) are two separate types of analyses. She clarifies that using both the analytical schemes would mean doing two pure, entirely discrete analyses. She reminds us that data could be treated in different ways and there would be some overlap. However, according to her, if we do not do a complete analysis of one kind or another, we can not draw any conclusions about our corpus. Due to these complications, the traditional or the modes analysis was saved for future research.

Next, let us find out if the *interactive approach* or the *ranking approach* is a suitable candidate as a framework for analysing EOPs. Because Sinclair and Coulthard develop it as a result of not finding the traditional approach productive (1975:8), one would expect it to be a better alternative for use in this present

research. However, there are at least two reasons why this approach is not suitable to be adopted.

First is its unsuitability for institutionalised discourse. The unsuitability originates with the interactive nature highlighted in the approach. According to Bhatia (1993), the meaning of the discourse in the ranking approach or what he terms as *interactional analysis*, is "not present in a piece of text ready to be consumed by the reader" or listener, but is negotiated in the interaction between the speaker/ writer and the listener/ reader (1993:8). In other words the discourse is "being created as a result of the reader's interpretation of the text" (p. 8). In other words this approach considers the listeners' or the readers' interpretations to facilitate the communication. In doing so, according to Bhatia, Grice's co-operative principle (1975:45) is followed. For the best results of Grice's co-operative principle, both the listener and the speaker should be socially equals. Although there can be socially equals in every day communications, Bhatia argues that in a vast majority of the discourses at institutionalised settings, this equality is not a norm (1993:9) and this is so too in the case of EOPs.

Presenters and members of the audience at engineering meetings consist of both novices and experts, and usually the experts are those of the higher social status and the novices, those of the lower. Members of the audience could also be evaluators in whose hands decisions about the future of the presenters lie. To cite one example, since presenters have the 'confidentiality' rule to follow, they at times have to be ambiguous, although Grice's fourth maxim, (maxim of manner), is to avoid ambiguity (1975:46). They cannot reveal confidential information, not in front of their

evaluators and superiors -- it is ethically wrong and it will be detrimental to them to break this rule.

The unsuitability of the approach due to the ranking idea is the second reason. The influence of Sinclair's and Coulthard's (1975) work is obvious in three studies by Straker Cook (1975), Montgomery (1977) and Murphy and Candlin (1979), who all deal with extended monologues, carried out during the pre 1980s. The influence is obvious especially in the ranking aspect, which is the controlling factor and the most important feature of the analysis. The descriptive elements are ranked in a hierarchical structure using the analogy of the hierarchical structure of *word* and *morphemes* (Sinclair and Coulthard, 1975: 20). According to Bhatia this approach has made a significant contribution in terms of the 'notion of structuring' it highlights (1993: 10). However the rank structuring in relation to the preceding works, reflects the influence of the structural school of linguistics in which language is studied according to phonology, morphology and syntax and has long been criticised as unproductive since it studies language devoid of its context, devoid of explanatory depths that explain 'why' they occur as they do. The studies concentrate on listing down the elements in each of the ranks, leaving sociological or psychological explanations and the communicativeness of these elements undiscussed. Cook's detailed treatment on the subdivisions of acts (1975:33-36), is an example of giving a lot of treatment to the structural aspects of the corpus.

To overcome the lack of communicativeness of the framework, Montgomery provides a separate treatment on the prosodic features of his corpus (1977:128) and Murphy and Candlin devoted a section to the interactive elements found in their corpus

(1979). While Montgomery's prosodic features per se are outside the scope of this thesis, Murphy and Candlin realise that lectures are interactive in nature and the use of ranking scale *per se* would mean "that we seem to have analysed classroom interaction in which the teacher is talking to himself" (1979:12). Some of the proofs of interactive nature of monologues according to them are:

- the use of second person pronoun and the first person plural pronoun (If you're ...; Do you...; So far we've ...)
- the existence of dummy responses and feedback (well how do you ... er well the simple rule is...)
- the existence of 'didactic discourse' (now let me sound reveille. I want to...)
- the necessity of eye-contact and other gestures (After Murphy and Candlin, 1979:13-15 ,32).

However, these attempts seem to separate structure and communicative attributes since, in both instances, the two elements in each pair have to be discussed separately.

This is further highlighted in Montgomery's (1977) belief that interactive properties, predictable order and structure occasionally "come into conflict" (p. 35). As a result, he says " the interactive property of talk is displayed with little sense of its structure; or, conversely, its structure is clearly delineated without illuminating our sense of what constitutes interaction" (p. 10).

The need for separate treatments of interactive elements in the case of Murphy and Candlin (1979) and the seemingly 'conflicting' situations between the interactive properties and predictable order pointed out by Montgomery are signs of a natural need for 'thick' descriptive approach. Thus although labels of communicative elements such as *moves* and *metastatement* are identified, although the rank model gives us an idea of the elements in the main and subsidiary discourses, the elements that show communicative *moves* are not present in the ranking approach as a

framework. Thus this approach is unproductive if used in analysing the genre of EOPs.

The solution to the inadequacies experienced by Montgomery and Murphy and Candlin lies in a thick descriptive approach since it preserves, in Marshall's term (1984), the ecological elements in their corpus by which, the stereotyped nature of the framework of their analysis is overcomed.

In a thick descriptive approach the interactive nature of an oral discourse such as the one encountered by Murphy and Candlin will naturally be preserved.

With a thick descriptive approach it is not possible to show the interactive properties of a talk without describing the predictable structure or, describing the latter without taking the former into consideration as experienced by Montgomery, because the structuring itself is a form of interactive and communicative element. The thick descriptive approach takes communicative purpose as the overriding factor and structure is one of the elements that depicts the speaker's style.

The natural need for 'thick' description can also be seen to be answering inconsistencies encountered by Cook and Dubois.

Straker Cook makes sure that the authentic nature of the actual discourse is not lost by avoiding stereotyped characterisation of his data. He explains that stereotyping in lectures can be avoided by taking into consideration the circumstances of the discourse:

> It concerns the particular lecturer involved, his familiarity with the students, the numbers involved and the size of the lecture room, the stage of the course which the lecture represents, the content of the lecture, the expectations which all those factors suggest to both lecturer and students, and above all the limits which the lecturer sets himself in exploring interpersonal relationships (1975:35).

Cook also pointed out the necessity to explain why certain features occur in a lecture.

Such circumstances are well preserved in a thick descriptive approach in a GA framework which relates to the intended audience and the comparison between the genre and the genre expectations. As will be discussed in Chapter 6, by identifying the intended audience of the discourse, factors like the speaker's familiarity with the audience described by Cook in the preceding excerpt, are detectable from the text. A comparison between genre and genre expectations, as will be dealt with in Chapter 8, unveils the effect of circumstantial elements such as 'the number of audience involved' and 'the size of the lecture room' pointed out by Cook in the foregoing quotation.

Another natural need for a thick description is demonstrated in Dubois's research (1980a). The *modes* approach alone does not allow a thorough and complete analysis of Dubois's corpus. Even though she did not mention a 'thick' descriptive approach in her analysis, her research adopts a multidisciplinary approach which is one of the attributes of 'thick' description. She compares the talks with RAs by bringing forward Ziman's (1968 in Dubois) three stages in the production of science and she interprets them from Campbell's (1975) interpretation of *personae* of scientific discourse.

In fact, Dubois's (1980a) research could easily be translated into the Swalean *moves*, the conventional textual analysis unit used in the 'thick' descriptive approach. For instance the explanation of what is found in the *Introduction*, *Body* and *Conclusion* could be considered as similar to *Swalean moves*. She reported the biomedical speeches to be maximally described as:

Figure 3

The Structure of Dubois's Biomedical Speeches

I. Introduction
   A. Listener orientation
   B. Content orientation
II. Body (one or more episodes)
   A. Situation
   B. Event
   C. Commentary
III. Termination
   A. Content orientation
   B. Listener orientation

(After Dubois, 1980a: 151)

Under *Introduction*, the moves are *orientating the listener* and *orientating the content*. The rest of the contents of the structure can be transformed in the same way. Thus although the *communicative elements* are not expressed as *moves* they are in actuality *moves*, and they are not the ranking scale *moves* but the *Swalean moves*. The ranking scale moves are only one of the structural elements identified, but the *Swalean moves* are essentially the meat of the discussions in most if not all studies taking thick description as their approach and GA as their framework.

This takes us to the discussion of the *thick descriptive* approach in which attempts to try to keep the ecological elements in the corpus come naturally since the framework of the analysis is built in to resist descriptions of stereotyped nature. The characteristics of a thick description and GA dealt with in Chapter 3 (multidisciplinary, discipline-specific etc.,) normally exist along with *Swalean moves* and GA. When thick description is the

approach, GA is the framework, and *Swalean moves* are the main units of analysis of the texts.

Thus our task now is to explain why *Swalean moves* is a suitable candidate for analysing EOPs. The first reason is that *Swalean moves* put heavy emphasis on communicative elements -- the defining feature of thick descriptive approach contained in GA framework, as against the other two approaches (i.e., traditional and ranking approaches). Edmondson defines an interactional move as "the smallest significant element by means of which a conversation is developed" (1981:6). From this definition, we can clearly see that the concept of *moves* puts emphasis on the communicative element. While the communicative moves are not found in the traditional and the ranking approaches, they are found in the thick descriptive approach. Bhatia's contention that a move "serves a typical communicative intention which is always subservient to the overall communicative purpose of the genre" (1993:30) emphasises the communicative element even more.

The second reason why *Swalean moves* can be a suitable candidate for analysing EOPs is that, as pointed out by Johns, these *moves* are invariable (i.e., stable) (1993a:93). Let us review how these moves acquire their invariability. It was found that these moves have been used to analyse introductions, whole discourses, certain aspects of the text (i.e., result, methodology, discussion) and texts of various miscellaneous nature (i.e., in oral/ written discourse, engineering discipline, etc.)

Let us first trace *Swalean moves* that are used to analyse introductions. This category began with Swales (1981) who worked with article introductions. Cooper (1985) adopted Swales's moves and came up with some comments. So did Crookes (1986), Dudley-

Evans (1986) and Peng (1987). Swales (1990) then revises the first version into the CARS model. Bhatia (1993) adopted the CARS model in the introduction of lab reports and Thompson (1994) on lecture introductions. The great number of researchers who are interested in adopting *Swalean moves* in introductions, contributes to the invariability of this move in this particular macro section.

Aside from the introductions, no researcher is found adopting Swalean moves for other macro sections of a discourse such as for the body and the termination. However, some researchers did adopt these moves to analyse certain aspects of the text i.e., the *methodology section,* the *result section,* and the *discussion section* of the discourse. The locations of these sections are most probably in the body (methodology, result) and in the termination (discussion). Discussion sections in which Swalean moves are adopted, are those by Hopkins & Dudley-Evans (1988) and Peng (1987); the results section in which similar moves are adopted are those by Weissberg & Buker (1990) and Brett (1994). Finally the method section in which Swalean moves are adopted, is the one by Peng (1987).

Swalean moves have also been applied onto whole discourses. Nwogu (1991), applied Swalean moves onto the journalistic report version (JRV) of medical texts and Bhatia onto abstracts, typical sales promotion letters and typical job application letters.

Swalean moves have also been applied onto certain aspects of the body of the discourse i.e., methods, results and discussions. This actually forms the missing jigsaw for their adoption to analyse the body and the termination of a discourse. With more researchers adopting *Swalean moves* in these aspects, along with

them being adopted to analyse whole discourses, the invariability of Swalean moves is almost confirmed. It is however further confirmed if we realise that these moves have actually been used to analyse discourses of miscellaneous attributes, including different disciplines, different levels and different mediums.

When Swales started working out the moves of article introductions in 1981, he worked with introductions of articles of various disciplines -- 'hard' sciences, social science and health science. Other researchers who have tried this concept of *moves* tried them in similar texts of other disciplines. For example, in the field of engineering, Cooper (1985) studied aspects of article introductions of IEEE publications and Peng (1987) studied the organisational features of chemical engineering RAs. The moves are also used to explore texts of different contexts. Dudley-Evans (1986) and Crookes (1986) for example dealt with similar texts of student contexts – M.Sc. Dissertations.

In terms of different mediums, it is well documented that Swalean moves are more popular with written discourse. Aside from the present research and as far as the researcher is able to tell, so far, there is only one work which uses Swalean moves in oral discourse. This work is Thompson's (1994), in which lecture introductions are analysed. Thus, at least she has proved that Swalean moves can be used to analyse an oral discourse.

Since Swalean moves have been used successfully in discourses of different environments, they are the best choice for use in analysing the EOPs in this research. In order to adopt them however, we need to first of all learn from the experiences of previous researchers who have adopted these moves. We can perhaps study what macro structure their moves take and what

attributes we can expect the moves to have. We can also study the strengths and weaknesses of these studies in order to work out what is best for the present research.

Let us first of all look at the macro structure. While none of the researchers in the 1970s who adopted the ranking approach adopted this as the overall macro structure of their data, researchers who adopted *Swalean moves* prefer the term *Introduction-Body-Conclusion* although Nwogu (1991) used *initial-medial-final* instead. Nwogu's research is the only study of whole discourse using *Swalean moves* which most resembles other research which deals with certain sections using the same type of *moves.* Thus his work is the best to use to discuss how the results of other research on sections, fit in to the emergence of the *Introduction-Body-Conclusion* pattern.

The emergence of the pattern for the *Introduction* section can be very clearly established as there is more than enough research devoted to this section. However, since different terms are used in previous research, the establishment of the sections needs to be discussed. We will find that Nwogu's Move 1 (Presenting background information) is similar to Swales's (1990) first two moves (Establishing territory and Establishing a niche) , to Peng's first two moves (Handling previous research and Preparing for the present research), to Dudley-Evan's (1986) first five moves (Introducing the field, Introducing the general topic, Introducing the particular topic, Defining the scope and Preparing for present research) and to both Thompson's rhetorical functions (Set up lecture framework and Putting topic in Context). Nwogu's Move two (Highlighting the overall research outcome) is similar to Swales's third move (Occupying the niche), to Peng's move 3

(Introducing the present research), and to Dudley-Evan's (1986) move 6 (Introducing the present research).

Nwogu however, indicates that the 'broad divisions' of his discourse are *initial* (Moves 1, 2, 3, 4), *medial* (Moves 5, 6, 7) and *final* (8, 9) moves (1991:119), in which the *initial* moves (Moves 1, 2, 3, 4) do not agree with the *Introductory* moves (Moves 1, 2) in other research. Dubois's *Introductory* 'moves' end at *content orientation* which essentially begins with the review of the literature, which Dubois describes as similar to a folk narrative introduction which typically "presents the characters and puts them in their setting" (1980a: 154). In the case of such scholarly setting as the biomedical slide talks, the review of the literature puts the event in its setting. Nwogu's review of the literature is Move 3 (Reviewing related research). Based on the previous researchers' moves on *introduction* (with the exception of Nwogu), and based on Dubois's 'moves' included in her Introduction, only Nwogu's moves 1 (Presenting background Information) and 2 (Highlighting overall research outcome) are considered part of the Introduction in the version to be adopted to analyse EOPs. In addition, in this version, Nwogu's Moves 3 and 4 (Presenting new research) together with the rest of the *medial* moves are considered as the *Body* of the discourse which includes the Methods section.

Because the *Methods* section is a fairly straight forward one (a checklist of the procedure followed in the experiment, presented in chronological order), although only Peng provides information on the *Swalean moves* of the method section, it was fairly easy to see that Nwogu's Moves 6 (Describing data collection procedure) and 7 (Describing experimental procedure) are similar to the *Methods* section. Moreover, this agrees with his description of *medial* move.

Thus in the framework to be adopted for use in EOPs, the *Body* of the discourse consists of Nwogu's Moves 3, 4, 5 (Indicating consistent observations), 6, 7, leaving Moves 8 and 9 for the *Conclusion.*

Perhaps the *Results* and the *Discussions* sections would be the prospective individual sections that have some similarities or overlap with the *Conclusion* because these two show overlap in themselves and they normally occur at the end of the RA in the usual IMRAD structure. According to Brett who deals with the results section, the models for Results and Discussions "show a degree of overlap" (1994:51-52). For instance Hopkins's and Dudley-Evans' (1988) discussion sections expressed in moves 2 (Statement of results), 4 (Reference to previous research -- comparison), 7 (Deduction) and 9 (Reference to previous research -- support) have equivalents in Weissberg and Buker's model of results sections.

According to Dubois (1980a), Swales (1990) and Brett (1994), the macro divisions of RAs are usually arranged using the IMRAD format, in which the Results and the Discussions sections are placed at the end of the RA. Thus, Nwogu's Moves 8 (Explaining research outcome) and 9 could be considered as the *Conclusions,* especially Move 9 which is "Stating Research Conclusions". Moreover they are Nwogu's last two moves and are found in the *final* move. Dubois however, did not use the term *Conclusion* for the *final* macro structure of her corpus. Since *Content orientation* which is subsumed under *Termination* "can contain both summary and conclusion" (Dubois, 1980a: 151), she has to use *Termination* instead of *Conclusion.* Thus the *Introduction-Body-Conclusion/ Termination,* has emerged as the most common macro structure

being used by researchers adopting *Swalean moves* in the thick descriptive approach and the *Introduction-Body-Termination* is adopted for use in EOPs.

Since Swalean moves have been found to be the best candidate for use in this research, let us now describe some of their attributes as they appear in previous studies. The *moves* in the previous studies prove to appear in unpredictable sequence and in recurrent and cyclical pattern. Unpredictable sequence is most clearly seen in Thompson's corpus of lecture introductions. Thompson (1994) identifies the unpredictable order of the communicative elements as one of the generic features of lecture introductions. She indicates that the communicative elements do not show any "robust preferred orders" (Swales 1990:145). The communicative elements exist but the order varies. Her conclusion is "there is no typical sequencing pattern, but rather a largely unpredictable mix of a small set of Functions and Sub-Functions" (p. 181). She also concludes that the order of the communicative moves in her corpus appear to be more unpredictable than that found in Dubois's although both are oral discourse. The unpredictable order also occurred in written discourse being studied. Cooper (1985) for instance reports *moves* appearing at different sequence even within the introduction. One of the reasons of this unpredictable sequence is the recurrent or the cyclical nature of the elements.

Recurrent or cyclical patterning of the communicative elements are found in studies carried out by Crookes (1986), Peng (1987), Hopkins and Dudley-Evans (1988), Brett (1994) and Thompson (1994). Peng's *Information* move in the Discussion section for example was numbered *0* because it occurred

"frequently" (p. 92). Crookes notes that communicative elements do appear more than once. Hopkins and Dudley-Evans "found a cyclical patterning of moves with only one mandatory move, the Statement of Result, which occurred at the start of a cycle" (p. 118). Brett's findings on the cyclical patterning of moves in longer prose (p. 55) supports findings by Hopkins and Dudley-Evans who note "the most frequent pattern created by combinations of the categories was: Pointer -> Statement of Finding -> Substantiation of Finding, found in all articles" (1988:118). This confirms Crookes's comment that shorter introductions are different from long introductions.

Recurrent and cyclical pattern is in fact a generic feature traced by Thompson in relation to lecture introductions and this, she indicates, has caused multifunctionalism to occur. Multifunctionalism in the context of her lecture introductions means "one stretch of talk displays elements from two or more Sub-Functions" (Thompson, p. 182). In other words, her 'sub-functions' appear at different places for different functions. Multifunctionalism, recurrence or cyclical pattern and unpredictable sequence thus show the variability that has been identified in previous research dealing with both oral and written discourses. Thus similar attributes could perhaps occur in EOPs when communicative *moves* are analysed.

Two of the causes of such variability clarified by previous researchers dealing with *Swalean moves* are accessibility of information on the conventions to be used and different medium of transmission. Accessibility to information on conventions, according to Thompson (1994), contributes to the cause of variability. In preparing RAs, according to Thompson, there is a lot

of "intertextuality" going on. Published RAs are easily available for an RA writer to study and follow the conventions when writing one himself. Lectures are not normally recorded and not normally used for reference. Moreover lecturers are not normally trained to observe the generic conventions of lectures. Thompson concludes, the lack of preferred sequence could be a result of the fact that lecturers "do not perceive a need for following any particular sequencing pattern or do not have access to any conventionalised model" (Thompson, p. 182). Thompson's conclusion also explains that since samples of RAs (or any other written discourse) are easily available and those for lectures (or any oral discourse for that matter) are not, variability is more apparent in oral than in written discourse.

In fact there are other causes of variability that are the effects of the medium of transmission, i.e. whether the discourse being analysed is oral or written. However, researchers adopting *Swalean moves* in written discourse, for instance Nwogu (1991) and Hopkins and Dudley-Evans (1988), do not discuss their results from the transmission point of view. For instance they could explore possibilities of the fact that the discourse that they deal with being written rather than oral being one of the causes of some elements that need to be clarified, but they did not. On the other hand, researchers dealing with oral discourse (Thompson, 1994; Dubois, 1980a), explore such possibilities.

Causes of variability as a result of different mediums of transmission, as discussed in Chapter 2, include factors like the time available and the presence of real audience. For instance, whereas the author of an RA which is written, has ample time to revise and produce "a highly conventionalised rhetorical structure" that

demonstrates a great control of the genre, a lecturer performing orally, has greater freedom "to design the lecture introduction in response to a range of processing problems for the audience created by the real-time, once-only nature of a typical lecture" (Thompson., 1994:181). By bringing medium of transmission into the discussion, more dimensions could be brought in thus resulting in richer data and this present research could also adopt such comparisons.

The strengths of previous studies adopting *Swalean moves* were due to the characteristics of the 'thick' descriptive approach that these moves adopt, such as their emphasis on communicative purpose and the fact that they are text specific which therefore give them greater pedagogical value. Their weaknesses include the need to redefine them, to increase their generality and to introduce validation in their use of these moves.

Hopkins and Dudley-Evans compared the Swalean moves approach with the traditional approach. They commented that "the 'moves' ... are a much more accurate reflection of the writer's purpose than the very general (not text type or specific) categories such as 'definition/classification' that have so long formed the basis of EAP course specifications..." (1988: 115). Like Brett, they thus conclude that Swales' system of analysis "takes into account the communicative purpose of a text within a communicative setting" (p. 116). As an example they argue that "we might find ... a 'serious' scientific paper ... differ from a 'popular' scientific article by virtue only of its interactional features" (p. 116). In other words similar texts may differ only because they have different communicative purpose. On the other hand, if they share a similar communicative purpose, they may still differ because of other factors. For example, although 'a serious scientific and a serious

*non*scientific article share interactional characteristics', they say, they may differ in other aspects, thus 'our description should be capable of differentiating even at this *sub*genera level (p. 116).

According to Hopkins and Dudley-Evans since the discourse being analysed by Swales (1981) is genre specific and the analysis concentrates on the communicative intent of the writer, indicators of moves that consist of interactional, logical, transactional ones could be used (p. 115). From Swales's four-move model they see that question raising (Move Three) is an example of an interactional indicator of moves; gap indication (Move Three) as an example of logical one; ascribing key characteristics (Move One) as an example of transactional one. In this sense, they continue, Swales has 'shown a fairly liberated (and liberating) sweep through the text, unencumbered by the need for meticulous consistency of labelling, (that) can produce tremendous insights and provide us with ways of characterising genre' (p. 116). For these reasons, they conclude further that the functional perspectives found in Swales' GA are most suited for pedagogical purposes (p. 116).

Thus the moves and acts that are usually identified in the analysis of this approach should be the ones of the thick descriptive approach, the ones that use Swalean moves and not those that belong to the ranking approach. Thus there is no necessity to identify the elements at higher ranks since our focus is communicative intent. In the ranked moves for example, the elements at higher levels carry very little communicative implication. At higher levels, labels are given for easier identifications but these labels do not add to the communicative value of the discourse.

However, previous researchers have also reminded us to redefine the Swalean moves, to add validation and to increase the generality of our results.

Crookes (1986) comments that Swales's (1981) research lacks empirical validation. This agrees with Dudley-Evans's indication that "ESP research has tended to be qualitative but recently many more articles have included statistical analysis" (1994: 221). Although when Swales carried out the research in 1981, statistical validation was not used, when Swalean moves are adopted to deal with EST, validation should be introduced. The main reason for this is especially because EST deals with science and technology where mathematics, statistics and precision are a norm rather than a speciality. Thus it is timely that relevant means of validation be introduced in research dealing with scientific and technological DC. As a result, when adopting Swalean moves for use in EOPs, introducing statistical validation is a way of improvement.

The second comment on Swalean moves is the need to increase the generality of our results, which in a way adds to the invariability of Swalean moves, as dealt with earlier. Previous rsearchers see selecting the samples to be analysed more representatively and by using Swalean moves in different genres and subgenres as means of increasing the generality of our results. In the context of this present research, Swalean moves should be used not only in whole discourses of written texts but also in whole discourses of *oral* texts.

Peng reminds us that Swales' original interest was to find out 'how writers structured and commented upon references to Previous Research' therefore "he deliberately selected RAs which contained reports of previous research" and this "limits the

generality of his model because it clearly does not apply to RAs with no Move 2" (1987: 84). To avoid such limitation of generality in our results, the samples chosen to be analysed should be representative of the true population. The researcher should not have certain biasness at the outset, at the stage where samples are chosen. In the case of EOPs, representative samples can also be worked out by working with comparatively larger samples, preferably those which cover wider geographical coverage.

Hopkins and Dudley-Evans contend that the redefinition of Swalean moves needs "to take account of different genres and subgenres of academic writing" (1988: 116). While they only apply their discussion to written discourse, they are arguing that Swalean moves should be applied to different genres and subgenres which are essentially calls to use these moves more widely - not only in the genres of article introductions, but of other aspects as well. But the fact still remains that Swalean moves have so far been widely used to analyse introductions and in most cases (except for Thompson, 1994) they are used to analyse written discourses.

Thus there are two issues to be discussed here. The first issue is why previous researchers are concentrating on analysing the introduction, as Brett pointed out: "Genre-based analyses of the RAs have focused mostly on the Introduction section" (1994: 48). The second issue is why written discourses are the centre of attraction of previous researchers working with Swalean moves? There can be one possible explanation to these two different but related circumstances -- that introductions and written texts are easier to handle, implying the fact that the body of the text and oral discourse are more difficult to handle.

Let us first deal with the fact that introductions, whether written or oral are easier to handle, thus more previous researchers are able to deal with Swalean moves in this section, or at least certain aspects of the text but not whole texts. One clue to the fact that these two types of texts are easier to handle than other parts of the discourse comes from Hopkins and Dudley Evans who themselves deal with certain aspect of a written text (i.e., discussion section). They admit that:

> Although it has been relatively easy in discourse description to handle beginnings and endings, topic change and maintenance, one of the greatest problems – particularly in monologue – is how to deal with the very long informing sections that so often occur in the middle articles, dissertations, and lectures (p. 120).

While what they refer to as 'topic change' and maintenance' were not clearly explained, what they mean by 'beginnings' and 'endings' refer to introductions and conclusions/terminations.

In the case of EOPs, the introduction and the conclusion (or the termination) sections are the most transparent sections to a discourse analyst as they are the most obviously non-technical parts of the OPs. By non-technical we mean the non-engineering nature of the discourse, the nature of discourse that would also exist in other non-engineering OPs. The concentration on the introduction sections are perhaps due to the transparency of these sections from the point of view of a discourse analyst.

However, our results will be much more complete if whole texts are analysed, since then we have the analysis results based on the complete structure of the texts, and not based on only parts of them. Although other than introductions, certain aspects of the text as discussed earlier (e.g. discussion section by Hopkins and Dudley-Evans) are also popular, there are very few researchers adopting Swalean moves in whole texts. Aside from short whole texts like

abstract, sales promotion and job application letters which are all done by Bhatia, only Nwogu has tried Swalean moves on a relatively long whole written discourse. Thus we can say that except for Nwogu (1991) for written and Dubois (1980a) for oral discourses, previous researchers, have not paid attention to analysing whole texts.

In the case of EOPs although handling the body of the discourse might be easier to the communicator since s/he is the expert in it - since s/he has dealt with it for a long time at the time the communication takes place, conversely it is most difficult for the discourse analyst because of the high technical content. In the case of written texts, the body of the text may be difficult to the analyst because of the cyclic nature of the text (Hopkins and Dudley-Evans, 1988). High technical content and cyclical pattern might be obstacles for researchers to apply Swalean moves to the body of the texts but for the sake of a more complete set of results for a specific chosen communicative setting, the whole text should be the target of future discourse analysts.

A more complete and thorough set of results on the genre of a certain communicative setting should also mean that Swalean moves should also be adopted to *oral* discourse. This takes us to the second issue - the fact that more previous researchers deal with *written* rather than *oral* texts. Hopkins and Dudley Evans, as indicated earlier have hinted that monologues (i.e., an *oral* discourse) are in particular, difficult to handle (p. 120). Another hint comes from Dubois who herself has analysed whole texts of *oral* discourse (biomedical talks). She argues: "From personal experience, I know what tremendous effort a thorough study of spoken presentations can be, yet the task of teaching NNS a

repertoire of professional speaking forms - discipline-specific where required -- cannot be complete until we replace lists of individual scientists' personal preferences with careful objective studies" (1986: 77). Although she is arguing the necessity of research, she also argues that the necessity of complete results on professional *oral* discourse should not be sacrificed because of the difficulty in analysing an *oral* discourse. Thus since as stated earlier, so far only Thompson (1994) has used Swalean moves to analyse an oral discourse (lecture introductions) and only Dubois (1980a) so far has analysed a whole oral discourse (i.e., biomedical slide talks), using the thick descriptive approach, more whole oral discourse such as the present research should be encouraged.

Now, how will the framework for describing the genre of EOPs look like? The framework should be able to generate reliable data on the engineering discipline, at least sufficient to describe the genre and the genre expectations of EOPs which involve especially the NS population, but which will not alienate the NNS population.

The foregoing review of the trends in analysing genre studies provides a basis for the description of the framework to be adopted in analysing the genre of EOPs. The aim is to learn from the experiences of previous researchers and to be able to correct the weaknesses that have emerged. Thus the framework to be used in this research can be described from the points of view of its approach, its attempts to increase validation and its stand on the model for NNSs.

Let us now describe its approach. As stated earlier, of the three approaches already described, thick descriptive approach is the most appropriate one with *Swalean moves* as the unit to be used to analyse the text to generate the genre of EOPs. This is to

ensure the natural inclusion of the characteristics of thick descriptions such as the psychological and sociological ones which neither of the other two approaches can promise. Moreover, based on the characteristics of genre studies described in Chapter 3, we can say that the thick descriptive approach would be most suitable for this research because if we look at the content, purpose, setting, and the disciplines involved in the analysis of the data, the approach which our research most closely resembles is that of GA. As stated earlier, GA requires thick descriptive approach because the aim of a GA is to generate a 'thick' description.

Taking a thick descriptive approach does not mean leaving aside the other two approaches completely. From the traditional approach, the rhetorical and grammatical description could be useful as and when necessary but it will not form the framework of the approach. From the ranking approach, the labels such as *moves, acts, metastatements, concluding statement, frame* and *focus* could be used to label the communicative or the structural elements in the framework used for analysing the genre of EOPs, but again the idea of ranking will not form the framework of the approach.

The multidisciplinary approach and thick description also mean that not only relevant theories within ESP but also relevant theories outside ESP (such as those in communication studies by Lapakko, 1988) are considered to develop the framework of the research. Thus the framework needed is one which will describe all the characteristics of a genre -- putting emphasis on the communicative intent and being able to identify the macro structure (the introduction-body-termination), the substructure (in terms of Swalean moves), the predictable order and other conventions that actually serve this communicative intent. The

characteristics of the data that have emerged from previous studies such as the unpredictable order, the recurrence or the cyclic nature and the great variability of the communicative elements are used as guiding concepts to study the corpus.

In addition, lessons on the need to increase the generalisability of the results should be learnt from previous researchers dealing with genre studies. Thus the present framework seeks to increase validation thus increase the generalisability of the data via a number of attempts.

First, if most previous researchers use Swalean moves to analyse certain sections of a discourse (e.g. the introduction only), in this research it is applied to analyse the whole discourse (i.e. the introduction, body and termination). Whereas previous research has applied this framework to written discourse, this research applies it to oral discourse. As Hopkins and Dudley-Evans argued, an analysis framework should be applicable to both spoken and written discourse (1988: 120).

The next two means of achieving generalisability are related to the number of EOPs being analysed and the geographical coverage of the data collection. Of course, if judged from the capability of PO to handle large corpus described in Chapter 4, sixty-eight EOPs and four engineering meetings may not be that 'large'. However, compared to the practices of previous researchers who deal with oral discourse such as in the case of Dubis, Shalom, Weissberg and Thompson, we will appreciate that our research covers a comparatively larger sample than theirs. Weissberg works with ten seminar presentations observed in one seminar (1993). While we know that Thompson deals with eighteen lecture introductions, there is no indication where these lecture

introductions were performed. Shalom deals with one conference but does not deal with specific OPs (1993:39). Of these Dubois's (1980a) corpus is largest -- Dubois works with fourty-nine speeches recorded from one conference.

Moreover, in terms of the duration of the oral discourse being analysed (the third factor which could assist us in achieving more generality), these biomedical speeches (i.e. twelve minutes each) are shorter than the EOPs. The duration of the EOPs being analysed consists of three types. A total of 70.6% of them ran from fifteen to twenty minutes, 20.6% ran from twenty-five to thirty minutes and 8.8% ran from thirty to forty-five minutes. Thus the shortest EOP is still longer than the biomedical speeches.

The fourth factor which assists more generalisability was the introduction of statistical validation. SPSS Win was used to count the moves in the OPs and percentages were used to report the questionnaire responses.

Finally, to increase the generalisability, the position of NNSs as opposed to that of NSs has to be addressed. In all the previous research adopting Swalean moves in written discourse, the question of whether the text is written by NS or NNS did not arise at all perhaps because the authors did not consider the issue as important. As a result, the performance of NNSs is not compared with that of their NS counterparts. In previous research dealing with Swalean moves in oral discourse, this issue seems important in Weissberg's research (1993) where NNS students' seminar presentations were amongst those analysed. In addition, he discussed the inability of most NNS presenters to meet the genre expectations of the faculty members. However, such utilisation did

not arise in all other research dealing with Swalean moves in oral discourse being cited here.

In the context of this research, the model to be taken by the NNS engineering population -- whether they should take the NNSs' or the NSs' model of analysis -- has to be clarified.

Much has been said about NSs not being the only model of English language use since English also thrives in an L2 situation such as in Singapore where NNSs also show creativity in using the language, although at times not congruent with NS use in NS contexts in English speaking countries (UK, US Australia, etc.). Kachru argues that:

> The spread of English across cultures has two sides. First, a significant segment of the world's population uses it as their *other* tongue (as a *second* or *foreign* language). Such use varies from broken to almost native (or ambilingual) competence. It is this side of English which has actually elevated it to the status of an international (or universal) language. But we still know very little about the form and function of the varieties which have developed as the other tongues. The discussion on such varieties is still restricted to the realms of pedagogy, or to methods for teaching English as second language. There are only two restricted aspects; other, more interesting aspects seem to be left out. The other side of English, is therefore not viewed in its proper sociological, linguistic and literacy manifestations. The global consequences (good or bad) of English as the other tongue have hardly been presented, and certainly the perspective of those who use it as the other tongue has been largely ignored. The side of the *native* speaker has been concentrated upon, to a point where it has acquired a questionable status in terms of *norms*, *description*, and *prescription* (Italics in original text) (1982:2-3).

Kachru argues that the NNS variety of English that has achieved a near N status should be recognised and that the NS variety should not be concentrated upon to a point where it could set absolute 'norms and prescription.' His contention provides a continuum where linguists and analysts could locate the position of their case to be able to decide whether to accept or to reject a certain NNS variety and to be able to limit the 'acceptability' of a NS variety. At the NNS end of the continuum, Kachru and others argue that NSs are not necessarily the 'correct' model.

As against this position, Swales (1990) and others have strongly argued that the world of research and academics has been dominated by NSs, and that NNSs will have to meet the high expectations to be able to compete. Swales further contends that, although for those in the average world of English as an L2 "Native-speaker competence is a point of arrival", agreeing with Coupland (1984), for those in business and technical communication, "average native-speaker acquisition is ... a point of departure, not arrival" (p. 10-11). In the world of "general academic climate" that "gives much evaluative weight to publication and presentation", according to Swales, giving attention to research English is "somehow elitist" (p. 11). There are also the evaluations based on the "privileged researchers and unprivileged instructors" where the researchers consist of presumably NSs. Swales further argued that discourse community expectations in terms of competence, are not necessarily manifested 'in quality textual products' (p. 11) (because a paper, according to him may have received comprehensive outside editing and an OP may have been meticulously rehearsed). For him, this competence is achieved when NNSs can operate as members of the Anglophone DCs that most likely dominate their academic, especially research areas.

Theoretically we might be able to follow Kachru's advice but in actual practice, what Swales says is persuasive. A linguist might be able to see the relevance of Kachru's advice. However, non linguists, such as engineering DC members, especially those who are not aware of linguistic issues and are only worried about their survival, might not be able to even think whether what they are doing is 'right' or 'wrong' because they just do what is normally acceptable in their DC. If what is acceptable to their DC members is

to imitate the genre of the NS presenters, the NNS presenters will aspire this imitation.

With respect to these two ends of the continuum, in this research no prescription will be made. Since improving the performance of NNS presenters is the ultimate objective of this research, information was gathered from both N and NN SIs.

Of the sixty-eight EOPs being analysed, two were presented in a team. Of the sixty-six single OPs, twenty-four were delivered by NSs and forty-two by NNSs. One of the team OPs was delivered by one NS and one NNS. The other team OP was presented by three NSs and one NNS. Thus although there were sixty-eight EOPs, seventy-two presenters were involved of which twenty-eight were NSs and forty-four were NNSs.

Of the 100 questionnaires, sixty-six were collected from NNSs of various origins and thirty-four from NSs.

The corpus was collected from both NNSs and NSs to address the problems of all the population in the DC. Sources which do not address NNSs' difficulties, and those which do not include NNSs in the corpus give the false impression that the DC members consist of only NSs. By including corpus from both NS and NNS presenters, it was possible to discuss the implications of the data connected to NNS presenters in Chapters 6, 7, and 8. We have aimed to identify the similarities, or differences of EOPs delivered by NSs and NNSs, but without pronouncing on which is 'correct' or 'wrong'. It is up to the DC members to adopt the norm they prefer. The outcome of the framework described in the preceding paragraphs is reported in the following three chapters.

Chapter 6

THE GENRE OF EOPs: CONVENTIONALISED FEATURES

As mentioned in Chapter 1, this research has three RQs:

1. Are OPs in engineering a genre?
2. Are there systematic differences (or similarities) between EOPs delivered by NSs and those by NNSs of English?
3. What are the DC's beliefs concerning what constitute 'good' OPs in engineering?

The genre and the genre expectations of EOPs will be discussed in an attempt to provide data to answer these RQs in three chapters -- Chapters 6, 7 and 8. The first two RQs are being dealt with in Chapters 6 and 7 and the third RQ will be dealt with in Chapter 8.

Before these RQs are answered the multidisciplinary nature of the research needs to be clarified.

Several disciplines are involved in explaining the results. As pointed out in Chapter 3, the approach of a genre study such as this present one, is broadly multidisciplinary. In discussing observations of a genre, Bhatia prefers a "fair amount of cross-fertilisation" of the multidisciplinary nature of the discourse being analysed (1993:16) and highlights three disciplines that might be involved in the analysis of a discourse using GA - linguistics, sociology and psychology (p. 17-29).

However, since this research emphasizes on analysing the discourse (i.e., EOPs) as a whole rather than on the lexico-grammatical features, 'pure' linguistic interpretations were dealt with minimally.

Moreover, since this research adopts GA as its framework, "it is primarily for applied linguistic purposes" (Bhatia, 1993: 2). This means that the linguistic treatment of research adopting GA is essentially *applied* in nature. This has clearly been explained by Bhatia when he said that a research such as this one does not adopt "pure linguistic description" nor "surface analysis of linguistic form" but rather "language description as explanation" (1993:1) explained in Chapter 1. Thus in this research, register analysis in which the authors "draw ... conclusions about the linguistic/ stylistic variation in different varieties" (Bhatia, p. 6) such as the one by Barber (1962, in Bhatia) was not generated.

Bhatia also claims that the linguistic treatment of research such as this one is not "an extension of grammatical formalism" but "discourse analysis of institutionalised use of language in socio-cultural settings within a heavy emphasis on communication as social action" (p. 3-4). That is why the reader will only come across discussions on elements that carry a certain degree of communicative purpose or social action.

In addition, the linguistic treatment found in this research is not one which is "based on a particular theoretical framework in linguistics" such as transformational generative framework, nor one which uses the "systemic linguistic framework" but one which is concerned more with "the actual communication in an institutionalised socio-cultural context" (Bhatia, 1993:4). Other examples of theoretical linguistic frameworks are grammar translation and structural approaches. *Systemic linguistic* framework here refers to the grammatical-rhetorical framework referred to as the *modes* analysis in Chapter 5.

In order to embark on 'language description as explanation" contained in GA, as said earlier, the approach taken has got to be multidisciplinary.

Perhaps the answer to the second RQ would need more linguistic treatment but the answers to the other two RQs would need more sociological treatment. For instance, in answering the first RQ there are standardised features to be pointed out. The standardised features are linguistic in nature but the social roles of these features, the reasons for the DC members' preferences, and the cultural constraints that lead to the standardised features belong to the realms of sociology. Psychology plays an even greater role in answering the RQs. The cognitive structuring of the moves in the EOPs, the variations in moves and the use of visual aids need psychological explanations. Why they appear in such a form could be due to the medium, due to the presenters' attempts to meet the listeners' requirements, due to their organisations' guidelines, due to the 'social action' or due to the individual presenter's choice. These reasons cause the presenters to come up with strategies in the form of the tactical choices that Bhatia pointed out. These could be interpreted as belonging to the realms of psychology.

The "cross-fertilisation" of the multidisciplinary nature of the discourse being analysed that Bhatia prefers is clarified since the approach taken is "language description as explanation" and not "surface-level linguistic description" or "register analysis" (p. 10). What is on the surface could be linguistic but the explanation of the surface is not. If *linguistics* is cross-fertilised with *sociology* and *psychology* to become *sociolinguistics* and *psycho linguistics* respectively, these applied versions play a greater role than 'pure' linguistic ones. Most of what was pointed earlier to be in the

realms of sociology and psychology would belong to sociolinguistics and psycho linguistics when both the originating disciplines are jointly involved.

However, in this research the multidisciplinary coverage is treated in a more general or broad terms rather than a thorough one. It exists because it is in the GA package. Thus it does not seem necessary, or feasible, to deliberately trace the detail of the different disciplines involved. Although various disciplines are involved in the explanations, they are highlighted only when there is need to.

Let us now consider the answers to the first RQ thus argue for the position of the EOPs to be a genre. In doing so, we should first remember that *engineering* OPs are related to academic and professional activities. Thus, the term *EOPs* refers to OPs related to academic and professional activities taking place in the engineering DC.

Previous researchers' comments on OPs could be of use in our attempt to answer this RQ, Swales classifies *OPs* as belonging to "other research process genres" (1990: 177). This is agreed by Weissberg, who noted that his findings support Swales's contention that the graduate seminar is an independent genre related to the experimental research article, and 'not merely an oral replication' (1993: 23). Shalom's (1993) observation that a poster presentation is an embryonic research process genre also adds to Swale's description of OPs.

According to Swales, genres should be the same in purpose, social setting and language modality. Making use of these parameters, Weissberg (1993) observed that the conference presentations in Dubois's (1980a) corpus and the seminar

presentations in his data proved to be different from RAs in these aspects. Thus, he argued, these OPs constitute a genre of their own. The preceding examples also hint to us that OPs in engineering could be a genre.

To investigate this hypothesis, the findings of this research are discussed in terms of the three parameters pointed out by Swales (1990) cited earlier, of the definition of the word *genre* given by Bhatia (1993), Swales (1990) and Bakhtin (1986), and of the features that qualify a discourse as a genre outlined by Johns (1994). These definitions establish the scope of the description of the *genre* of the EOPs in this research. We should be reminded however that because of the extensive use of GA on written works, genre works have appeared to be synonymous to written works. Thus, the definitions under consideration are those of written texts.

First there is a need to clarify the relationship between the various authors' definitions of *genre*. If we accept Bakhtin's assertion that 'where there is style there is genre' (1986:66) in the analysis of discourse, that means we could include not only socio-cultural and psycho-linguistic elements, but also *anything*, as long as the phenomena are, to use Bakhtin's term, 'relatively stable types' (Bakhtin 1986: 60). Based on this definition, then, recurring features among engineering meetings, seminars and conferences alike, are the best factors which will constitute the *genre* of the engineering OPs being analysed. However, not every recurring feature will qualify as a characteristic of a genre. Johns's (1994), Bhatia's (1993), and Swales's (1990) definitions of *genre* make clear that the feature must always have a communicative purpose.

To understand the gist of the definitions of the word *genre* expressed by Johns, Bhatia and Swales, there is a need to cite each

definition and discuss their relationships in greater detail. The first is from Swales whose definition of genre is

> a class of communicative events, the members of which share some set of communicative purposes. These purposes are recognised 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 here conceived narrowly focused on comparable rhetorical action. In addition to purpose, exemplars of a genre exhibit various patterns of similarity in terms of structure, style, content and intended audience. If all high probability expectations are realised, the exemplar will be viewed as prototypical by the parent discourse community. The genre names inherited and produced by discourse communities and imported by others constitute valuable ethnographic communication, but typically need further validation (1990: 58).

The second is from Bhatia, who defines *genre* as "an instance of successful achievement of a specific communicative purpose using conventionalised knowledge of linguistic and discoursal resources" (1993:16);

The third is from Johns, who looks at *genre* as a 'vehicle for social action' (p. 16); to make the vehicle effective, according to her, there have to be at least five criteria which a discourse should share to qualify itself as a genre:

i Name recognition
ii Form and style similarities
iii Metalinguistics
iv Form and style similarities to serve the communicative purpose of the DC
v Permitted variations in form, style and purpose (1994: 16).

"Form and style similarities" require the description of the similarities but "Form and style similarities to serve the communicative purpose of the DC" require us to show how these similarities serve the communicative purpose of the DC members.

The summary of the three definitions will be used to discuss the genre of EOPs in two chapters in which the emphasised words will be highlighted. Those discussed in this chapter include the fact that the nucleus of a genre is 'communicative purpose' (Bhatia, Johns, Swales) or 'community purpose' (Johns) that carries the

'social action' (Johns) which produces 'sociolinguistic implications' (Johns). This nucleus is said to determine or shape or influence the structure (Swales, Bhatia) or the form (Johns), the content (Swales), the style (Bhatia, Swales, Johns) and the target audience (Bhatia, Swales) of the text. This nucleus also determines its genre name (Swales, Johns) and the metalinguistics (Johns).

The remaining summary discussed in Chapter 7 include the fact that there are constraints (Bhatia, Swales) which caused the emergence of variations (Johns) in terms of intent (Bhatia, Swales) or purpose (Johns), form (Swales, Bhatia, Johns), style (Johns), positioning and functional value (Bhatia, Swales). This functional value will be discussed in relation to schemata. These constraints and variations are usually in connection with the novices and the experts (Bhatia, Johns) who use the genre. From feature similarities we can identify the exemplars and from the exemplars we can identify the prototypes (Swales) of the genre.

THE SIGNIFICANCE OF COMMUNICATIVE PURPOSE

First let us consider the various terms used to suggest the significance of communicative purpose, the first factor in the preceding summary of genre definitions. The terms 'communicative goal', 'communicative purpose' (Swales 1990; Bhatia 1993; Johns, 1994), 'sociolinguistic implications,' 'social action' and 'community purpose' (Johns 1994:15, 18) are inter-related.

In discussing Miller's (1984) concept of "social action" Johns states that *genre* is a 'vehicle for social action' (1994: 16). Her example of 'social action' is the act of persuading the National Science Foundation to continue giving funds to the grant writers to carry out their research. This is related to audience analysis in that

the communicative intent of the discourse is defined as changing "the attitude or a behaviour among readers within the community addressed" (p. 16).

Johns says that"... when we select texts for research and instruction, we should first consider the interaction between the community of readers and writers in which the text is a means of communication" (p. 15) and "(w)e should ask initially, 'What purposes do these particular features of texts serve within the discourse communities in which they are vehicles for social action?'"(p. 15-16). We can see here that the 'communicative purpose' and 'communicative goal' which Bhatia and Swales use interchangeably, carry or contain the 'social action' that Johns points out (p. 15). That is the relationship between 'communicative goal', 'communicative purpose', 'social action' and 'sociolinguistic implications'.

Now, where does the term 'community purpose' come in? Johns uses the terms 'community purpose' and 'communicative purpose' interchangeably (p. 18) in her explanation of the reason for the similarities in form and style of a genre.

Cumulatively, we can conclude that the terms 'communicative purpose', 'communicative goal' and 'community purpose' are congruent. It is the same term which carries or contains the 'social action' and gives the 'sociolinguistic implications' of the features of the discourse and shapes the form and style of the genre. Although these three authors' contexts are those of written discourse, the implication of the communicative purpose has to be the same if EOPs are to qualify as a *genre*.

Using the same notions we can explore their relevance in the engineering DC by discussing the communicative goal of having

conferences and seminars, therefore the communicative goals of making OPs in the field of engineering.

Two questions were asked through questionnaires on the goals of having seminars and conferences:

What is/are the goal(s) of having seminars and conferences in your field? (Appendix C: Question 33);

Does everyone present at the seminar – as a presenter/ an organiser/ a member of the audience have the same goal? (Appendix C: Question 34)

In the question on the goal(s) of having seminars and conferences in their field (Appendix C: Question 33), the informants were asked to select from five choices - Disseminate Information, Establish Contacts, Get Recognition, Sell services, Other goals. The results of the questionnaires show that most of the respondents (41.54%) chose 'Disseminate Information', followed by 'Establish Contacts' (29.23%), followed by 'Get Recognition' (16.92%), 'Sell services' (9.23%) and finally Other goals (3.08%).

What kind of information do the engineering DC members need to disseminate? Through the questionnaires and from conversations with the DC members we learn that the information could be on 'recent developments' or 'latest technology.' From the OPs being analysed, we know that they disseminate information on up-to-date technology/method, approach, design, analysis, model or systems which are defined in the section dealing with the type and classification of topics being presented in the EOPs.

'Other' goals identified were to 'get a degree', to 'exchange ideas', to 'exchange information', 'to gain related knowledge/ information' and "for application in own factory". While 'to get a degree' is a separate goal, the remaining goals are complementary to 'disseminate information.' Since 'disseminating information' does not mean exchange of ideas, most of the responses for 'Other goals'

added this dimension to include both parties, the speaker and the listener or the originator and the audience. Thus 'disseminating information' alone does not seem to be enough. 'Exchange of ideas' is a fairer alternative. While there are some members of the audience who come to seminars and conferences, unable to contribute something to others and attend such meetings to gain new information, those who have the information not only disseminate it but also get new knowledge or new information in return for example through feedback. This two-way information sharing is true for both academic and professional contexts.

To the question whether everyone present at the seminar or conference has the same goal (Appendix C: Question 34), the result shows that 47% said 'yes', 43% said 'no' and 10% said either "Not sure" or "Don't know." While those who answered 'yes' strengthen the impact of 'disseminating information', those who said 'no', 'not sure' or 'don't know' described the goals as 'assessing others' works, to 'get contracts' and to 'get promotion' which can be categorised as group one and to 'sell equipment and expertise' which can be categorised as group two. These two groups of responses were found to either reiterate or give variants to earlier responses. The first group of response reiterates and gives variants to 'Get Recognition' and the second group reiterates or gives variants to 'Sell Services'.

Respondents who did not find 'establish contacts' accurate, added 'making new contacts' to the list of responses. This seems to show that the word 'new' is significant. Contacts that are already established are not enough since new ones have to be made from time to time and this can effectively be done by attending seminars and conferences. The DC members need to establish (new) contacts

for better chances of information sharing. They need to get themselves or their institutions recognised in order to be able to contribute to or to lead in the information exchange process. This is prestigious from the academic point of view and prosperous or profitable from the commercial point of view, especially because this will encourage sale of service, equipment or expertise. These are the underlying 'social actions' (Johns, 1994) which give the 'sociolinguistic implications' of the communicative goal in the form of 'exchange of information.'

THE SIMILARITIES OR CONVENTIONALISED FEATURES

Let us now discuss the similarities or the conventionalised features, the second factor found in the summary of the definitions of genre. If 'communicative purpose' is the controlling factor or the nucleus of a genre, 'conventionalised knowledge of linguistic and discoursal resources' is the medium to achieve it. According to previous researchers (Johns, Bhatia, Swales), features that are similar or conventionalised, are genre name, content, structure/form/style, intended audience, and metalinguistics.

Genre Name

Let us first discuss genre name. Johns (personal correspondence, 1994) expressed the opinion that Swales (1990) refers to genres as *named* discourses. OPs, according to her, may not be genres because "they are called different things by community members and because they vary too much." However, she agrees that if we were to consider them as such, then the SIs must always call them by name and they must agree upon *some* features of the presentations that are repeated, or, to use Bakhtin's (1986) words,

the features that are 'stable types,' that give this particular genre its basic character.

'Genre name' is what Johns calls *name recognition* - one of the features that Bhatia calls *discoursal resource*. According to Johns *genres* are "discourses that initiated members in a community can give a name to" (1994:16). Some of the examples given were grant writers who can identify grant proposals, IBM workers who can identify memos, researchers who can identify RAs in which the DC members share "schemata for the genres that they use for communication" (Johns 1994: 17). Based on this argument then, if the engineering DC has a certain name that recognises the concept of *OPs* then EOPs qualify as a genre.

According to Swales "The genre names inherited and produced by discourse communities and imported by others constitute valuable ethnographic communication, but typically need further validation" (1990:58). In this research the term name that the engineering DC uses for the concept of *oral presentations* was validated. To find out whether the engineering DC has a name which could recognise 'OPs', seven questions were asked. The first question (Appendix C: Question 17) asked whether the respondents had heard each of the following terms:

Technical Presentation
Oral Presentation
Presentation
Research Presentation
Oral Research Presentation
Speech
Professional speaking
Public Speaking
Speaking to a Group
Bread and Butter Speaking
Seminar Presentation
Poster Presentations
Progress Reports
Proposals

The second to the sixth questions (Appendix C: Questions 18 to 22) asked which of those terms were used to:

- describe activities that can be called oral presentations,
- describe oral presentations on research;
- describe oral presentations on non-research;
- describe technical activities;
- describe non-technical activities.

The seventh question (Appendix C: Question 23) asked whether the term *presentation* automatically means that it is delivered orally.

In the first question (Appendix C: Question 17), the respondents were asked to choose the terms they had heard according to the ratings *very often*, *often*, *sometimes*, and *never*. To ensure that only salient terms were retained, only responses belonging to ratings *very often* and *often* were retained. To ensure only salient terms were retained, terms which were voted by 60% of the total number of the respondents and less were dropped from the list, and only terms which were voted by 61% of the respondents and more were included. This method of retaining salient responses is also true for the first three questions (Appendix C: Questions 18 to 20). The percentage of the respondents who had either *often* or *very often* heard of the term, was 86.44% for *Public Speaking* , 86.44% for *Speech*, 81.36% for *Technical Presentation*, 81.36% for *Seminar Presentation* and 79.66% for *OP* and finally 69.49% for *Research Presentation*. These terms also proved to be amongst those relevant as answers in the following questions for eliciting information on genre name.

The second question (Appendix C: Question 18) asked which of those terms were used to describe activities that could be called *OPs*. Only those terms retained in the first question were listed here. The percentages of the scores were 83.64% for *Technical*

Presentation, 83.64% for *OP*, 80% for *Seminar Presentations*, 74.55% for *Public Speaking*, 72.73% for *Speech*, and 70.91% for *Research Presentation*. The percentages (83.64%) of respondents choosing *technical presentations* and *OPs* were identical. This could be interpreted as meaning that these two terms are actually interchangeable to the engineering DC members.

The third question (Appendix C: Question 19) asked which of the terms in the first question was used to describe oral presentations on research. The word *research* here covers research activities which are academic in nature, usually taking place in universities and industries. Among the examples of OPs that are research in nature are Prns 4, 5, 6, 15 (Appendix A). The result indicated that 78.18% of the respondents chose *Research Presentations*. From here we can perhaps assume that the term *research presentation* used by Swales (1990) is also the term used by the engineering DC to describe OPs on research.

Responses for the fourth and the sixth questions are reported jointly since the results point to the same term. The fourth question (Appendix C: Question 20) asked which of the terms listed in the first question were used to describe OP on non-research. The term *non-research* was suggested to us by the DC members during the piloting stage to mean 'speeches on activities other than research' for example those connected with consultancy activities which are essentially professional activities in their field (i.e. activities on practical applications mentioned in Chapter 1). Professional activities deal with *projects* and *services* mostly taking place outside academic institutions. Examples of such projects are the building of the infrastructure of a city, as delivered by Prs 68 and 12 (Appendix A). Seminar presentations on projects are

always reinforced by mass media coverage (television, newspaper, radio) in order to inform the public of what is happening, especially that which affects the public. Most of the OPs delivered at the Urban Transport Seminar Petaling Jaya Malaysia were topics of this nature. Examples of such *services* are consultancy services, related to the use of a certain engineering product (Pr38) or a management approach (Pr66) (Appendix A). It was found that 66.67% of the respondents chose *Public Speaking* as the term which is used to describe activities on non-research.

The sixth question (Appendix C: Question 22) asked which of the terms listed in the first question was used to describe speeches on non-technical activities. A total of 83.78% of the respondents chose *Public Speaking* as the term used to describe activities on non-technical activities. Although the percentage of respondents in both the questions differ, the term with the highest scores was *Public Speaking* for both the questions.

This shows that the engineering DC members use *public speaking* to refer to both *non-technical* and *non-research* activities. We can perhaps assume from the responses of these two questions that non-technical activities tend to be those non-research ones. We can also make a general assumption that technical activities in this DC tend to be related to research. The technicality of an activity proved to lie in a continuum between 'research' and 'non-research' ones.

However, while non-research activities tend to be non-technical and research ones tend to be technical, there are technical aspects being discussed in non-research activities as in the case of Pr8 (Appendix A). Thus this result is connected to the implication of the term *public speaking* which should have laymen as its

audience as clarified in Chapter 3. Since technicality occurs in all types of the engineering DC activities, their entire speaking activities that are publicly performed should have been *professional* rather than *public* speaking. Although *professional speaking* was given as one of the choices, the implication of their choice was that they were not aware of the difference between these two terms. Thus the SIs are equally unaware of the difference between these two terms as their colleagues whose writings have been cited and discussed in Chapter 3 -- they also use the term *public* speaking when it should have been *professional* speaking.

The fifth question (Appendix C: Question 21) asked which of the terms listed in the first question were used to describe *technical activities.* The result shows that 89.74% of the respondents chose Technical Presentation. Thus *Technical Presentation* is the term used to describe speeches on technical activities.

The last question on genre name (Appendix C: Question 23) asked whether the word *presentation* automatically means that it is delivered orally. The majority thought (64.15%) that the term *presentation* does not automatically mean it is delivered orally.

In conclusion, in terms of the name of the genre (Johns, 1994; Swales 1990), the SIs' responses show that the engineering DC members do have a certain term used to call the OPs, a name that differentiates *oral presentation* from other activities. From these responses we can gather six terms that are salient amongst the Engineering DC members: *public speaking, speech, technical presentation, seminar presentation, oral presentation* and *research presentations.* Of these *technical presentation* describes activities

that are called 'oral presentation' (or technical oral presentations); *research presentation* describes oral presentations on research; *public speaking* describes oral presentations on non-research and on non-technical activities. The term *oral presentations* could include *technical presentations* since the engineering DC members deal mainly with technical oral presentations and the percentages of respondents choosing the two terms were similar. It was also found that the term *presentation* does not automatically mean that it is delivered orally. The word *oral* has to be there to make it mean that it is delivered orally.

Content

Content is also considered as a 'similar' or 'conventionalised' feature, following Swales (1990) and Bakhtin (1986). It will be a truism to say that EOPs are a genre because the topics deal with engineering. However, Bakhtin's (1986) description of genre as belonging to the same theme (Bakhtin, 1986) and Swales's (1990) suggestion that the choice of content and style is being shaped by the communicative purpose of the genre cannot be dismissed entirely. In the case of EOPs, conventionalised content refers to a describable pattern of topics within the engineering discipline.

To investigate the pattern of the topics of the EOPs, Shalom's (1993) classification of topics was used, and then cross-checked with the SIs' responses and with the classification of the sixty-eight actual EOPs. The SIs were contacted several times to cross-check the findings. In most instances, NS and NNS informants were contacted and the speakers of the OPs being analysed were the first priority.

Shalom identifies two types of topics: *scientific* topics which she defines as 'those related to the lecture or poster' and *procedural* topics which are 'related to the organisational side of the discussions' (1993:40). The first classification of the topic is clear - it is the classification of the topics presented in poster or paper (and talk); but 'procedural' topic in Shalom's work refers to the classification of the organiser's speech act, rather than that of the topics presented by the speakers. Thus the term 'management' could be a better term than 'procedural' to describe the non-scientific engineering topics being analysed in this research. Thus we have 'scientific' or 'technical' topics at one end and 'management' topics at the other end. But there is a third classification in between the two. It is applied in nature but could be either procedural or scientific/technical. Thus this classification was first expanded to:

a. Procedural (On management);

b. Scientific/technical (On core research, highly scientific and /or highly technical);

c. Practical application (On projects carried out in the community).

This classification was forwarded to the SIs to find out whether they agreed with the topic classification and whether there is consensus in their classifications in terms of these three factors.

The responses did not show consensus in the classification of some topics and in such cases, if the presenter of the OP her/himself gave a response, the latter's answer was recorded as the most valid, adopting Selinker's (1979) advice on the most reliable type of SI (i.e. the "author"). In the context of this research, Selinker's advice would mean that the presenters themselves should be the best judges of the classification of the topics of their

own OPs. The following examples were determined through the SIs' responses decided in this manner.

Examples of 'scientific' topics in previous research are those presented in biomedical speeches analysed by Dubois's (1980a) and those presented in animal science and agronomy student seminar presentations analysed by Weissberg (1993). In the context of the EOPs, the scientific topics have to be paired with the technical ones because of the applied nature of engineering discipline discussed in Chapter 1. Examples of scientific/technical topics as a result of the SI's responses using Shalom's (1993) classification system are Prns 65, 60, 59, 56, 44, and 16 as can be seen in Appendix A. Examples of Procedural topics are Prns 67 and 66; Examples of topics on practical applications are Prns 68, 63 and 6 of the same Appendix.

The descriptive approach developed from Shalom was not totally agreed by the SIs. An experienced NS informant answered "More or less" instead of "Yes". An experienced NNS presenter who lives in an English speaking country answered "Difficult to agree 100% unless the terms are defined extensively" and he posed the question "Is modelling regarded as procedural? What about design?" Based on the definitions of topic classification that emerged from Shalom's (1993) work, 'modelling' and 'design' are both procedural, but these two topics are also scientific and technical. Thus this classification was cross-checked further.

In the second attempt, the classification system used was suggested by a NS presenter SI (LOUGH NSBro) who agreed with the preceding classification system but suggested another classification system. She suggested that EOPs exhibit two components: *Theory* and *application or testing*. She defined *theory* as one that could"... range from the brief statement of a management approach to a

detailed mechanical model" and *application* as "a traditional laboratory experiment" or "a case-study application in a company." 'Mechanical model' according to one SI (LOUGH NSMar) "are used to demonstrate something theory based" and 'laboratory testing' "puts mechanical model into practice and tests it at a range of settings between its extreme limits" (LOUGH NSMar). Another SI (LOUGH NSCas) explained that 'laboratory testing' "means experiment on real products/ materials using real process but perhaps in highly constrained structures" and 'mechanical model' as "an abstract mathematical representation of a product/ process which is frequently tested by computer simulation". This classification system is found to be more comprehensive and that is why it was used to classify all the topics being analysed (Appendix A).

Another cross-check is the analyst's observation which identified the OPs being analysed as: *design, approach, method, system, model,* or *analysis* (indicated in Appendix A). This classification was also forwarded to the SIs for approval, and improvement of definitions:

a) 'Design' refers to 'the process of specifying products or software, manufacturing facilities, control system, etc. that the author has created' (LOUGH NSBr, NSBro); a plan or sketch of the "analysis of function as well as presentation of results (graphically)" (LOUGH NSCas); the word 'design' is usually found in the title.

b) 'Approach' is forwarding an argument using the speaker's angle or perspective (LOUGH NSBro);

c) 'Method' refers to 'way of doing something'. When the word 'system' is not mentioned in the title it is labelled as 'method';

d) 'System' refers to 'a set of connected things.' Usually the word 'system' is mentioned in the title. One SI (LOUGH NSCas) warned that this term is "often used very loosely";

e) 'Model' refers to an often simplified representation of an entity that has been created to assist in understanding the entity itself (LOUGH NSBro). The entity could be a conceptual and prototypical product, software, manufacturing facilities, control systems etc. that the presenter creates or invents; the word 'model' is usually found in the title.

g) 'Analysis' refers to detailed study of something. The word 'analysis' is usually found in the title.

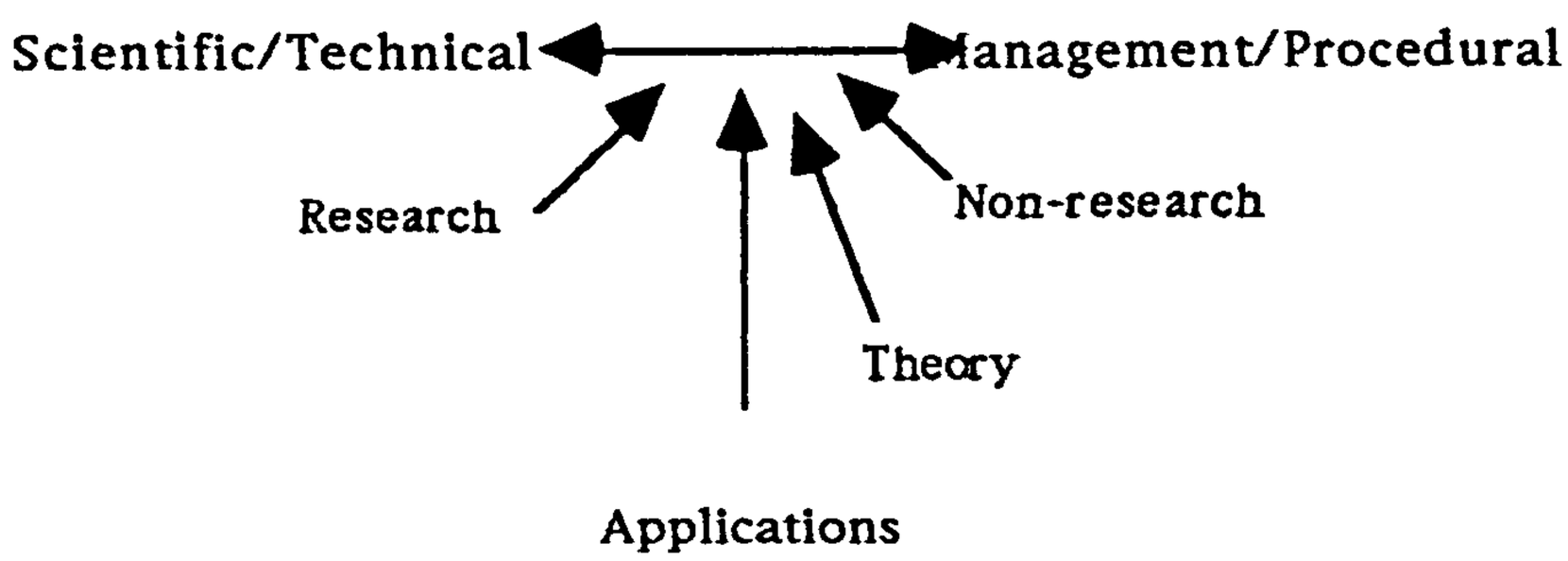
What pattern do the topics of the EOPs have? The description of the classification of topics, first into procedural/ management -- practical application/projects -- scientific/ technical/ research, then into *theory* and *application*, then into *design, approach, method, system, model,* or *analysis* are attempts to prove that they are 'thematic' and that they fall into a certain pattern. In the section on genre name the EOPs have been categorised into research or non-research, technical or non-technical. This is another attempt at classifying the topics, but how do these classifications collaboratively prove to us that the topics of the EOPs are thematic or have a certain pattern?

Engineering topics are more 'applied' in nature and can be described as being situated in the middle of a continuum between *scientific/technical* at one end to *procedural and management* on the other end (Figure 4):

Figure 4

Topics of EOPs

Topics of Engineering Oral Presentations



The *research* or the *technical* topics tend to be nearer to the scientific/technical end but the non-research/non-technical topics tend to be at the management/procedural end. As said earlier the topics of the EOPs analysed in this research are either theory or application. Generally those that could be classified as theory could be placed nearer to the management/ procedural end since a 'theory' could "... range from the brief statement of a management approach to a detailed mechanical model" (SI). But except for the four topics classified as 'analysis' other categories (approach, design, method, model and system) proved to be either theory or application. Thus topics which are categorised as 'application' whether it is analysis, approach, design, method, model or system are placed at the middle of the continuum (Figure 4). Most (79%) of the topics analysed are application and the position of these topics is at the middle of the continuum. The fact that most of the topics

are application could be because of the applied nature of engineering discipline itself, as explained in Chapter 1.

If we are concerned about whether the topics of the EOPs have a theme, one of the characteristics of a genre pointed out by Bakhtin (1986), perhaps *applicability* is the theme. This forms the describable shape or pattern of the topics dealt with in EOPs. Applicability occurred presumably to suit the 'problem-solving' (Olsen and Huckin, 1990:43) mission the discipline has.

Structure/Form/Style

Let us now turn to the structure or the form and the style of EOPs. According to Johns, if a discourse has similarities in form and style it qualifies itself as a genre (1994: 17). Similarities in form and style belong to what Bhatia (1993) calls *discoursal resource.* Johns's suggestion that this *form* can be called "moves" or "titles and headings" (p. 17) and Swales's reference to *structure* as the "schematic structure" that the discourse has (1990:58), do not show any difference in the notion of the two terms but are used as a matter of preference -- Swales prefers to call it *structure* but Johns prefers to call it *form.* Thus in this thesis the word *structure* and *form* are used interchangeably.

The transcribed OPs are the best type of source for form or structure and style similarities, although questionnaire responses from the SIs are also brought in. It was found that similarities in the *structure* and the *style* of the EOPs being analysed are describable separately, but since *form* and *style* are very closely related, explanations sometimes overlap. For instance when dealing with the sequence of the communicative elements, the elements related to style have to be discussed inseparably with the elements

related to structure. Nevertheless, attempts were made to discuss them separately.

In order to describe the similarities in form or structure, the third conventionalised feature, there is a need to first identify the communicative elements, second to determine the manner of identifying these communicative elements and third, to determine the manner of identifying the similarities of the communicative elements thus the form (Johns 1994) or the structure (Swales 1990).

What are the communicative elements to be identified? The most suitable types of communicative elements identified to describe the 'schematic structure' of the OPs in this research are *moves, sub-moves, acts , floats* and *sub-floats.*

Let us first deal with *moves.* Although the type of *moves* adopted in analysing the communicative elements in this research is *Swalean moves* (See Chapter 5) these moves evolved from the *moves* initiated by Bellack (in Sinclair and Coulthard), adopted by Sinclair and Coulthard (1975), popularised by Swales, and adopted by others such as Hopkins and Dudley-Evans (1988), Nwogu (1991) and others. The *Swalean moves* being adopted in this research is the communicative moves as defined by Edmondson (1981) and Bhatia (993) and not the structural moves as defined by Sinclair and Coulthard (1975) explained in Chapter 5. Communicative moves carry the notion of interaction. An interactional move as pointed out in Chapter 5, can be illustrated in the following examples following Edmondson:

One move: Is it 5 o'clock? No
One move: Is it 5 o'clock? Yes, I think so.
Two moves: Is it 5 o'clock? Yes, why? (1981:6).

Although Edmondson's examples are in the context of a dialogue, they are useful in understanding the basic concept and the boundary of a *move* as a communicative unit.

Let us now see how the remaining communicative elements identified in this research (*sub-moves, floats, sub-floats* and *acts*) relate to moves. In this research, a *move* is a *collection of the presenters' approaches to advance in order to express a communicative intent* and a *sub-move* is defined as *one of these approaches in expressing the said communicative intent.*

A *float* can be defined as *a collection of the presenters' cyclic elements that occurred abundantly* and a *sub-float* as *one of the variants of this collection.* The term *float* was given to the communicative elements because they do literally float all around the OP (i.e., they do not have any fixed position) *and* they occurred more abundantly than moves. In each OP, a presenter may use one or all the sub-floats in a float While previous researchers (Thompson, 1994; Nwogu 1991) use 'cyclic' to refer to the repetition or cycling of information in a spoken discourse, in this research it is called the 'floating' characteristic. Some sub-moves also have the floating or the cyclic characteristics but they did not occur as abundantly as floats. This will be indicated in the six main criteria that determined the significance of the communicative elements where the acceptable frequency of occurrence for floats was set higher than that for moves. In the first criterion for example, the frequency of occurrence that was considered as 'significant' for moves was 20% but that for floats was 30%.

Examples of *sub-floats* are found in Appendix G. For instance Metastatement (Sub-float 5.2) is the caption which starts with " We'll go through ..." where the presenter told the audience what

he was going to do in the whole OP, and was also considered as Sub-move I.3B (preview in detail). To cite a few more examples of sub-floats illustrated in Appendix G, there were also definition (Sub-float 4.2): "Diffusion is a + process in..."; false start (Sub-float 1.1): "... with thell ++" and rhetorical question (Sub-move 3.2): "What is our problem?". More examples of sub-floats will be explained in relation to Table 2. Unlike sub-floats, floats do not appear in this Appendix because floats are the researcher's conceptual categorisation of sub-floats.

In relation to the relationship between these communicative elements with moves, we can say that EOPs are structured by the *sub-moves.* and the *sub-moves* are in turn structured by *acts* which, in this research, are called *floats*..

Next, what is the manner of identifying the communicative elements? The most reliable manner of identifying the communicative elements was found to be both by cognitive and structural or linguistic signals. Structural elements could be identified as those that can be perceived through purely linguistic signals (i.e., via structural structuring). For instance disfluencies such as *em, if you like* and *you know* can be readily detected when they occur without relying on any other signals except their mere existence. From Appendix G for example, Sub-float 4.3 (Example/Illustration) the word *example* (italicised) is usually found in the transcription and this is normally used as a signal for the identification. In the same manner the words *literature* (Appendix F) signals Sub-float B.2E (Review of literature) and *ground properly* signal Sub-float T.4A (How to implement it properly) in Appendix E.

Other elements like metastatements and concluding statements however, need to be identified along with some

cognitive signals such as their positioning and context (cognitive structuring). For example in Appendix G the position of "We'll go through er.." that signals to us of what to come assists us in locating and labelling it as a metastatement (Sub-float 5.2). In the same manner, the position of *That is misprocess* in the same Appendix that occurred at the end of the explanation assists us in labelling and identifying it as concluding statement (sub-float 5.3). Although in many cases the communicative elements can be expressed in terms of the elements in subsidiary discourse (Montgomery, 1977) or *structural floats* (e.g. false-start, aside, illustration, metastatement, concluding statement) as they are called in this research, "convention, appropriacy and context" (Paltridge, 1994:288) are more reliable ways of identifying the boundaries.

Change of visual aid is one signal for appropriacy and context that was used in determining the boundaries of the communicative elements. Popularity and communicative purpose (Johns 1994; Swales, 1990; Bhatia, 1993) are signals for conventions that were used to determine the boundaries of the elements. The *moves* and the *sub-moves* (including the floating *moves*) were identified through cognitive structuring but the *floats* (especially the acts) through structural structuring.

Now what is the manner used in identifying the similarities of the conventionalised elements? The similarities of the communicative elements, thus the *form* (Johns 1994) or the *structure* (Swales 1990) were determined by taking mainly three factors into consideration. They include previous researchers' advice, precedents created in previous research and the nature of the communicative elements in EOPs.

At first the communicative elements retained in the final list were those which occurred at least once in the OPs being analysed because, taking Johns's (1994) advice, the decision to retain them could not be based on higher frequency alone. She suggested that factors related to the 'social action' of the communicator should be taken into consideration. Except in the case of Sub-float 4.1 (Confidentiality or Commerciality) where the act of expressing the 'social action' was immediately heard by the audience, in the context of EOPs being analysed, the 'social action' contained in the communicative purpose is contained in the discourse as a whole. Moreover, different presenters tried to achieve their communicative purpose differently. These presenters' different styles in using different communicative elements, collaboratively achieve the 'social action.' However, these communicative elements were so numerous and varied that a cutting off point has to be decided upon.

It was not easy to determine the cutting off point of the frequency of the communicative elements because of the lack of precedent created in previous research. As stated in Chapter 5, previous researchers either did not rely on validation such as frequencies (Swales, 1981; Dubois, 1980a; Nwogu, 1991; Weissberg, 1993) or were using small corpus and report all the communicative elements (Peng, 1967). Weissberg (1993) worked with ten seminar presentations and Nwogu (1991) used fifteen texts but both of them did not validate their results. Dubois (1980a) and Swales (1981) used a large corpus (forty-eight for Swales; forty-nine to fifty for Dubois) but they did not validate the communicative elements either. They used expressions like "most" (Weissberg, 1993: 29), "most often, though not necessarily" (Nwogu, 1991:116)

and the like. Peng (1967: 93) worked with ten papers and reported even one instance of her move (Move 8 - Justification).

The only guideline is found in Thompson's (1994) research. She worked with eighteen lecture introductions and the minimum instance of occurrence of the move that she reported was six, i.e., "Refer to earlier lectures" (p. 8), which is equivalent to 33%. If six instances is taken as a valid judgement, six out of sixty-eight (in the case of this research on the genre of EOPs), gives 9%. If Thompson's research could be used as a judgement of validity we should take both 9% and 33% into consideration. Thus, the validity could lie between 9% to 33% of the occurrence of the communicative elements in the case of sixty-eight EOPs.

Thus in this thesis, only communicative elements that were very significant are reported. To determine the high significance, the similarities of the structure was determined through the following six main criteria and only those which met one of these characteristics were reported:

1. The element should occur in at least 20% (for sub-moves), 30% (for floats) of both NS and NNS presenters: in the figures this category is marked by one star (*);
2. The element should occur in at least 20% (for sub-moves), 30% (for floats) of NS presenters: in the figures this category is marked by two stars (**);
3. The element should occur in at least 20% (for sub-moves), 30% (for floats) of NNS presenters: in the figures this category is marked by one alias sign (@);
4. The element should occur in between 17%-19% (for sub-moves), 17%-29% (for floats) of NS presenters and for Table 1, the sub-move must have the characteristic of a float. In the figures this category is marked by three stars (***);
5. The element should occur in between 17%-19% (for sub-moves), 17%-29% (for floats) of both NS and NNS presenters but for Table 1 the sub-move must have the characteristic of a float. In the figures this category is marked by four stars (****);

6. The element should occur in between 17%-19% (for sub-moves), 17%-29% (for floats) of NNS presenters but for Table 1 the sub-move must have the characteristics of a float. In the figures this category is marked by two alias signs (@@).

The recurrence of the communicative elements in EOPs was determined by cross-tabling the NS/NNS status of the presenters with the frequency of each communicative element among the presenters. The legitimacy of a move is automatically determined by the qualification of its sub-move and the legitimacy of a float is automatically determined by the qualification of its sub-float.

The communicative elements identified in EOPs were varied and scattered. However, those that occurred in no-fixed order (i.e., the floats and the sub-floats) were more abundant than those that occurred in relatively fixed order (i.e., the moves and sub-moves). Thus the acceptability of the percentage of occurrence for the elements that occur in relatively fixed order has to be lower i.e., 20%. This means *moves* and *sub-moves* that occur 20% were considered as conventionalised or similar. The percentage for the *floats* however, as hinted earlier, had to be higher since they occurred abundantly. Aside (sub-float 3.3) for example, occurred in 79% of NS presentations and in 60% NNS presentations. Illustration/example (sub-float 4.3) occurred in 79% of NS OPs and in 76% of NN OPs. Thus in the preceding six criteria the higher percentages refer to the *floats* and *sub-floats* and the lower ones refer to the *moves* and *sub-moves.*

In addition, other variables such as the *cyclical* nature (in this thesis it refers to the *floating* nature) and sociological factor of the communicative features had to be considered to acknowledge genuinely accountable features. For instance the sub-moves which

have lower percentage of occurrence (17%) had to have the characteristic of a float. This refers to criteria numbers four, five and six which are not applicable for the elements which occurred in no-fixed order as all of them are already floats. Float 4.1 (Commerciality and Confidentiality) occurred only in 13% of the OPs delivered by NS and 5% of OPs delivered by NNS but was retained because of the 'social action' it carries. Limitations which consist of high frequency and social significance were attempts to avoid describing the 'forms' as "simple, rigid formulas ... but as 'recurring verbal responses to particular shared contexts ..." (Johns, 1994: 17).

Now, the structure or the form of EOPs, the third similar or conventionalised feature, can be described as consisting of the *moves* and the *sub-moves* which occur in 'relatively fixed order' and the *floats* and the *sub-floats* which occur in 'no-fixed order'. Let us first describe the elements that have a relatively fixed order and take the *Introduction-Body-Termination* format, as indicated in Table 1.

Table 1

The Structure of EOPs -- Relatively Fixed Order

(Moves and Sub-moves)

INTRODUCTION		
Move I.1: Orientating the listeners		
*	I.1A	by thanking the chairman
*	I.1B	by acknowledging the audience
*	I.1C	by greeting the audience
***	I.1D	by expressing appreciation for the chance to make OP
Move I.2. Orientating the Content		
*	I.2A	by leading the audience into the content
*	I.2B	by announcing the title of the OP
**	I.2C	by announcing the subject (and the title) of the OP
*	I.2D	by commenting on the subject or title or subject and title of the oral presentation

Table 1 -- *Continued*

Move I.3. Focusing on the Content		
**	I.3A	by previewing the structure of the OP briefly
*	I.3B	by previewing the structure of the OP in detail
***	I.3C	by limiting the scope of coverage of the work
BODY		
Move B.1: Presenting Background Information		
*	B.1A	by expressing the main/initial purpose or main/initial objective or main/initial aim or reason/motivation/driving force of the work or rationale or justification of the work
**	B.1B	by highlighting the significance or need or main benefits of the work
*	B.1C	by referring to established knowledge in the field)
**	B.1D	by highlighting the history of (an) important element(s) in the oral presentation
**	B.1E	by showing comparison between old (the present situation) and new (to be proposed)
*	B.1F	by highlighting the current state or current trend or the conventional practice)
Move B.2: Identifying what is needed		
@	B.2A	by highlighting the circumstances that make the proposed solution necessary
**	B.2B	by identifying what needs to be done
***	B.2C	by rationalising what needs to be done
*	B.2D	by highlighting the problems faced in the current system and measures taken to relieve the problems faced in the current system
**	B.2E	by reviewing the literature
***	B.2F	by discussing the choices available for selection or by defining the components
Move B3: Announcing the proposed solution or product		
*	B3A	by making a brief announcement e.g. in the form of statement of purpose
**	B.3B	by highlighting its major function or characteristic or use
*	B.3C	by highlighting its major importance or significance or necessity
Move B 4: Describing how the proposed solution was worked out or how the proposed design or process is carried out		
*	B.4A	by describing the process of the model or procedure or work i.e. how it was observed
@	B.4B	by describing the experiment of the model or procedure or work i.e. what was observed
**	B.4C	by describing the objectives of the work
*	B.4D	by rationalising how decisions (on choice etc.) were made
@	B.4E	by highlighting the components or elements or details involved in the process or design
*	B.4F	by listing the sequence or phases or stages of the development or design or the procedure of the model or system
*	B.4G	by making commentary e.g. on results or on principles and concepts
**	B.4H	by highlighting problems
**	B.4I	by highlighting the methods or approach
@@	B.4J	by listing functional requirements or design considerations or design parameters

Table 1 -- *Continued*

Move B 5: Describing the Proposed solution or model		
**	B.5A	by highlighting the overall concept of the work or model or project
**	B.5B	by highlighting levels
**	B.5C	by highlighting the structure of the work or model
@@	B.5D	by highlighting the advantages or benefits or value of the proposed solution or model
**	B.5E	by highlighting the options available
**	B.5F	by highlighting the components or different parts or functional elements of the work
*	B.5G	by highlighting the technical configurations or technical specifications or features of the model or system or the equipment needed
***	B.5H	by highlighting the working principles of the model or system or substance
Move SB 4: Describing how the proposed solution was worked out or how the proposed design or process is carried out		
*	SB.4A	by describing the process of the model or procedure or work or how it was observed
@@	SB.4D	by rationalising how decisions (on choice etc.) were made
@@	SB.4E	by highlighting the components or elements or details involved in the process or design
Move B 6: Trying the Proposed solution:		
**	B.6A	by discussing the use or utilisation of the system or model
***	B.6B	by discussing the application of the system or model
*	B.6C	by highlighting the operation or mechanism of the system i.e., how the system works
*	B.6D	by highlighting facts related to the pilot test of the system or model or solution
***	B.6E	by reference to established knowledge in the field
Move B 7: Discussing the (expected) result of the evaluation of the proposed change or model or solution		
**	B.7A	by highlighting the results
**	B.7B	by highlighting the positive/ important characteristics of the results
**	B.7C	by highlighting the result of pilot/simulation as proof of success of the proposed solution
TERMINATION		
Move T1: Checking the time		
**	T.1A	by checking own time
Move T 2: Hinting the coming of the end of the OP		
*	T.2A	by 'conclusion' expressions
Move T.3: Looking forward		
**	T.3A	by highlighting the future or possible application
*	T.3B	by stressing the need for the future work or development or improvement
@	T.3C	by giving hints on how to implement it successfully
****	T.3D	by discussing its prospects for success or by recommending it
Move T 4: Tying up		
*	T.4A	by generalising the topic or approach or application
*	T.4B	by summarising or reinforcing the main points
*	T.4C	by stating the most significant positive fact in the OP

Table 1 -- *Continued*

Move T 5: Orientating the listeners
* T.5A by saying 'Thank You' or its variants
* T.5B by stating that it is the end of the OP
** T.5C by inviting question

Before we describe the different moves and the sub-moves that occur in the macro sections in the preceding table, there are two logistic factors that need to be pointed out. First, note that in Table 1 the numbering of the INTRODUCTION begins with I, the numbering of the BODY of the OP begins with B and the numbering of the TERMINATION begins with T. Second, this Introduction-Body-Termination format was adapted from a similar format used in reporting the genre of engineering research presentations (Seliman, 1995a) which was adapted from Dubois (1980a) who adapted it from 'folk narratives'. Dubois explains that *termination* is used instead of *conclusion* because *conclusion* could accommodate only *content orientation* whereas *termination* can accommodate both *content orientation* and *listener orientation.*

What are the communicative elements that exist in the three macro sections found in Table 1? There are three moves in the introduction (I.1, I.2, I.3); there are five moves in the termination (T.1, T.2, T.3, T.4, and T.5) and there are eight moves in the body (B.1, B.2, B.3, B.4, B.5, SB.4, B.6 and B.7).

INTRODUCTION

In the introduction, conventionally EOPrs orientated the listeners (I.1), orientated the content (I.2), and focused on the content (I.3). In orientating the listeners, conventionally, EOPrs thanked the

chairman (I.1A), acknowledged the audience (I.1B) for instance by saying 'ladies and gentlemen' or by looking at them or smiling at them and greeted them (I.1C). EOPrs also orientated the listeners by expressing their appreciation for the chance to deliver OPs (I. 1D).

In orientating the content (I.2), EOPrs typically lead the audience into the content (I.2A) before announcing the title (I.2B) and/or announcing the subject and/or the title (I.2C) of the OP. Leading the audience to the content (I.2A) was found to be in a form of 'starter' (Sinclair and Coulthard's, 1975: 34) defined as acts which "provide information about, or direct attention or thoughts towards... ." In the case of EOPs, 'starters' are in the form of asides, which will be explained later, or comments on the subject or title, or subject and title (I.2D) of the OP, as in the case of Pr36.

Starters can also be in the form of circumstantial comments as in Pr17. 'Circumstantial comments' are comments made in response to the incidents that happen at that particular time. These comments are connected to the 'conversational elements' pointed out by Weissberg (1993:28). The presence of these comments and elements qualify those parts of the OPs as 'fresh talk' (Goffman, 1981:171). Some Prs announced only the title (I.2B) by repeating the title found in print, some others announced the subject by mentioning part of the title in print (I.2C). In print here refers to the conference proceedings or the visual aids. The presenters also normally announce the title and/or the subject and then comment on them (I.2D).

In focusing on the content (Move I.3), an EOPr normally previewed the structure (I.3A, I.3B) defined by Dubois as "a table of contents ... an advance organiser, a schema ... for readers" (1991:

146-147). The definition which concerns written form is curiously also found in the EOPs. These two sub-moves were found to be similar except one is brief (I.3A) and the other is in detail (I.3B). Although the preview is 'a table of contents', Move I.3 (Focusing on the Content) cannot be used as the only source to determine the moves of the body of the OPs because of the occurrence of the brief version. For example Pr30 mentioned only one point in the preview but the OP contained many body moves. In addition, an EOPr focused on the content by limiting the scope of coverage of the OP (I.3C) at this point.

TERMINATION

The termination is explained after the Introduction because they are similar in that both are the 'bracketing' phases (Goffman, 1981: 175) or the non-technical (Dubois, 1981) parts of the OPs "the part of the presentation which globally exists in any speech" (Seliman, 1995a:8). The termination has 5 moves: Checking the time (Move T.1), Hinting at the coming of the end of the OP (Move T.2), Looking forward (Move T.3), Tying up (Move T.4) and Orientating the listeners (Move T.5). The most common way of checking the time (T.1) was by checking the presenters' own time (T.1A) and the most common way of hinting at the coming of the end of the OP (Move T.2) was by use of concluding expressions (T.2A) such as "(in) conclusion," "finally", "last but not least", "to sum up" (Pr3), "you'll get to lunch, don't worry" (Pr66), " I am running out of time" (Pr4, Pr11).

There are four ways (sub-moves) of looking forward (Move T.3). Two are by highlighting the future or possible application

(T.3A) and by stressing the need for future work or development or improvement (T.3B). An example of T.3B from Pr48 is:

We've got to improve the overall performance of the system + em we don't get the () reduce the set up time as we don't have to do the () anymore + this + is all done by the + er + the laser sensor ...

The other two were by giving hints on how to implement the project successfully (T.3C) and by discussing its prospects for success or by recommending it (T.3D).

Tying up (Move T.4) was achieved by generalising the topic or approach or application (T.4A) and/or by summarising or reinforcing the main points (T.4B) as reported also by Hyland, by stating the most significant positive fact in the OP (T.4C) or what Hyland calls "rounding off" (1991: 36).

Orientating the listeners (Move T.5) was the last common move in the termination. It was achieved by saying 'Thank You' or its variants (T.5A). Some speakers who did not thank the audience when terminating did not do so because they did not actually finish the OPs - such as in the case of Pr44 and Pr60 who got the same strict chairman who actually thanked the presenters before the presenters thanked the audience. Orientating the listeners (T.5) was also achieved by stating that it was the end of the OP (T.5B) and by inviting questions (T.5C).

BODY

The moves in the body of the EOPs are most difficult to determine and describe as they involve technical concepts with which non-specialists are not familiar. Technical concepts here are concepts that are related to the engineering topics discussed in the preceding section, rather than related to discourse analysis. An EOPr normally

had 7 moves to deliver the content of his presentation, the fourth of which (i.e., B.4) was repeated (as SB.4) (Table 1).

First an EOPr normally presented the background information (Move B.1), found earlier by Nwogu (1991) although his data is written. There were normally six ways (sub-moves) of presenting the background information. It was done by expressing the main or initial purpose or objective or motivation of the work (B.1A), by highlighting the significance or the main benefits of the work (B.1B) and by referring to established knowledge in the field (B.1C). Referring to established knowledge (B.1C) has also been reported to occur in medical texts (Nwogu, p.,115). This was followed by highlighting the history of one or more important elements in the OP (B.1D), by showing comparison between the present situation and the situation to be proposed (B.1E) and by highlighting the current state or current trend or the conventional practice (B.1F).

Next, an EOPr normally identified what was needed (Move B.2) which could be interpreted as equivalent to Swales's " establishing a niche" (Move 2) (1990:141) in the CARS model for article introductions because in both cases this move prepares itself for the argument to come. In the case of EOPs this move prepared for the announcement of the proposed solution (Move B.3) and in the case of the CARS model it prepares itself for the occupation of the niche (Move 3). Evidence showed that in order to identify what was needed (Move B.2), a Pr in engineering had these six ways (sub-moves) at his disposal.

After showing how to identify what was needed (B.2), normally next was to announce the proposed solution or product (Move B.3) that has been referred to as similar to Swales's

"occupying the niche" (p. 141). Results showed that there were three ways (sub-moves) of doing it. One is by making a brief announcement e.g. in the form of statement of purpose (B.3A), followed by highlighting its major function or characteristic or use (B.3B) and highlighting its major importance, significance or necessity (B.3C).

Describing how the proposed solution was worked out or how the proposed design or process was carried out (Move B.4) was the fourth move in the body of the EOPs. This move had ten sub-moves. Of all the moves in the entire structure, this move (B.4) had the greatest number of sub-moves that met the six selection criteria already explained. Three of the sub-moves (B.4A, B.4D, B.4E) were repeated between Moves B.5 and B.6 and were named as SBA, SBD and SBE respectively (See Table 1 above).

An EOPr normally described how the proposed solution was carried out (B.4, SBA) by describing the process of the model or procedure or work i.e., how it was observed (B.4A), by describing the experiment of the model or procedure or work i.e., what was observed (B.4B), by describing the objectives of the work (B.4C), by rationalising how decisions (on choice etc.) were made (B.4D, SBD), and by highlighting the components or elements or details involved in the process or design (B.4E, SBE). Describing how the proposed solution was worked out (Move B 4) was also done by listing the sequence or phases or stages of the development or design or the procedure of the model or system (B.4F), by giving a commentary (B.4G) such as on the results or on the underlying principles and concepts (sub-float 4.3) found in Table 2 to be shown, by highlighting problems (B.4H), by highlighting the methods or

approach (B.4I) and by listing functional requirements or design considerations or design parameters (B.4J).

The fifth move in the body of the EOPs was Describing the Proposed Solution or model (Move B.5). There were eight ways of accomplishing this move. Five of them were by highlighting the overall concept of the work or model or project (B.5A), by highlighting levels (B.5B), by highlighting the structure of the work or model (B.5C), by highlighting the advantages or benefits or value of the proposed solution or model (B.5D) and by highlighting the options available (B.5E). Three more ways were by highlighting the components or different parts or functional elements of the work (B.5F), by highlighting the technical configurations or technical specifications or features of the model or system or the equipment needed (B.5G), and by highlighting the working principles of the model or system or substance (B.5H).

The seventh body move of the EOPs was Trying the Proposed Solution (Move B6). The Prs carried out this move in five ways. Two of them were by discussing the use or utilisation of the system or model (B.6A), and by discussing the application of the system or model (B.6B). An example of move B.6B is from Pr34:

It is relatively easy because you have smaller number of people |+ It is relatively easier + because () and then as the company () it is a barrier + you know you have people of different section or within the company |+

Two other ways of trying the proposed solution (Move B.6) was by highlighting the operation or mechanism of the system i.e., how the system works (B.6C) and by highlighting facts related to the pilot test of the system, model or solution (B.6D). The term 'simulation' is not used so as not to confuse it with OPs that were solely based on simulations. Another way of explaining how the proposed

solution was tried was when an EOPr referred to established knowledge in the field (B.6E).

The eighth and the last move in the body of the EOPs was discussing the (expected) result of the evaluation of the proposed change or model or solution (Move B.7) and there were three common ways (sub-moves) of accomplishing it. It was done by highlighting the results (B.7A), by highlighting the positive or important characteristics of the results (B.7B) and by highlighting the result of the pilot run (e.g. result of case study) as a proof of success of the proposed solution (B.7C). There were four more types of sub-moves that could be attached to any of the eight moves of the body but they are dealt with in relation to the floats presented in Table 2.

The second category of similar structure or forms of the EOPs are those that occur in no fixed order as presented in Table 2:

Table 2

The Structure of EOPs -- No Fixed Order

(Floats and Sub-floats)

Float 1: NS-NNS styles		
*	1.1	False Start
**	1.2	Reported Direct Speech - Talk to self
**	1.3	Exchange
@	1.4	*With that I end*
Float 2: Fillers		
**	2.1	*Em*
@@	2.2	*What do you/we call*
***	2.3	*If you like*
Float 3: General Rhetoric		
*	3.1	*OK*
*	3.2	Rhetorical Question
*	3.3	Aside
*	3.4	Rhetorical Statement
***	3.5	*Let/Allow me*

Table 2 -- *Continued*

Float 4: Sub-Moves		
	4.1	Commerciality/ Confidentiality
*	4.2	Definition
*	4.3	Example/Illustration
*	4.4	Highlighting background principles and concepts
Float 5: Engineering Rhetoric		
*	5.1	*Simple*
*	5.2	Metastatement
*	5.3	Concluding Statement
Float 6: Longer OPs		
****	6.1	Summary
***	6.2	Action to be taken

There are two factors that need to be pointed out. One is the classification of floats and the other is the differences between the cognitive and the structural communicative elements.

There are two types of floats. One is cognitive (called cognitive floats or sub-moves) and the other is structural (called structural floats or the acts). The cognitive floats are similar to those that occurred in Table 1 and the structural floats are similar to most of the elements that are reported in Table 2, except for those that are classified as cognitive floats.

The cognitive floats reported in Table 2 are those sub-moves that were mentioned earlier as sub-moves that could be attached to any of the eight moves of the body of the EOPs reported in Table 1. They are sub-floats 4.1 to 4.4; sub-floats 6.1, 6.2 (Tables 2 and 3). They are the ones called *cognitive float* as illustrated in Table 3:

Table 3

The Structure of EOPs -- No Fixed Order

(Cognitive Floats and Sub-floats)

Float 4: Sub-Moves
4.1 Cmmerciality/Confidentiality
4.2 Definition
4.3 Example/Illustration
4.4 Highlighting background principles and concepts
6: Longer OPs
6.1 Summary
6.2 Action to be taken

For binary classification, the rest of the *floats* found in Table 2 are considered as *structural floats* . Thus the communicative elements are easier to be referred to as cognitive and structural elements since floats and sub-floats can also be cognitive (Table 3), although none of the moves and sub-moves reported in Table 1 are structural.

Let us now describe some of the differences between the cognitive and the structural communicative elements. The cognitive elements are different from the structural elements in terms of their occurrence in the level of delicacy and in terms of their communicative value.

First of all, most of the cognitive elements coincide with the upper level of Montgomery's (1977) main discourse (*focus* and *inform*) but the structural elements consist of what Montgomery describes as 'subsidiary discourse' (*aside* and *gloss*) and what he terms as 'lower level main discourse' (*metastatement* and *rhetorical question*) (p. 99). In this research however, the elements are more extensively identified.

According to Montgomery, *acts* (structural elements) are linguistic elements which occur at rank five (p. 64) or secondary

"delicacy" in a rank analysis (p. 87) and *sub-moves*, like *moves* (cognitive elements) occur at "primary delicacy" (p. 64). There are only five ranks and two levels of delicacy in Montgomery's rank scale. Thus *acts* (structural elements) occur at the lowest level and moves (cognitive elements) occur at the highest. This means the audience hear the *acts* (structural sub-floats) as they are reported here. For instance for disfluency *em* (Sub-float 2.1), the audience hear it as *em* and the analyst reports it as *em*. On the other hand, the audience do not hear *sub-moves* (cognitive elements) that occur at primary level of delicacy as *sub-moves* but as something else that could be in the form of background principles and concepts (sub-float 4.4), summary (sub-float 6.1) or any of the sub-moves that occur in relatively fixed order reported in Tables 1 and 3.

Next is the difference between the structural elements and cognitive elements in terms of their communicative value. This can be seen in terms of how they assist the presenters to achieve the latter's' communicative goals in which the cognitive elements were found to carry more immediate communicative value and more communicative weight than the structural elements. This is because the communicative goal is contained in the cognitive floats i.e., communicative elements, which may use some or many of the structural floats, i.e. the structural elements.

The structural floats provide the elements of the structure of the communicative goal, but the cognitive elements carry the communicative goals themselves as a whole. For example before engaging in any of the following cognitive floats, a presenter breathes in and said "*em*," then began to express the cognitive floats. However, *em* is not obligatory in doing this and its

occurrence may be due to other factors and not the communicative goal itself.

We can also look at the semantic versus structural nature of the two elements in determining the communicative weight. Here the cognitive elements contain more communicative weight because they carry the semantic weight of the communicative goal whereas the structural floats carry only the structural weight.

Another difference between *structural floats* (structural elements) and *cognitive floats* (cognitive elements) is their attachment to the communicative elements occurring in relatively fixed order (Table 1). The structural floats structure the moves and the sub-moves but the cognitive floats structure only the moves. The structural floats could structure any of the moves or sub-moves that occur both in relatively fixed order and in no-fixed order (the floating sub-moves). The floating sub-moves on the other hand could structure any of the moves that occur in relatively fixed order. The first four cognitive floats (sub-floats 4.1 to 4.4) were found to occur in many of the moves of the body but the last two cognitive floats (sub-floats 6.1 and 6.2) tend to occur towards the end of the body of the OPs.

Before we continue with the fourth conventionalised feature, the style, there are two factors that need to be discussed at this point. They are the sequence and the recurrence of the communicative elements. These elements were found to be in harmony with the unpredictable sequence and the cyclical pattern (Nwogu, 1991; Thompson, 1994b) of the occurrence of the communicative elements in previous research which use Swalean moves pointed out in Chapter 5.

THE RECURRENCE OF THE COMMUNICATIVE ELEMENTS

The recurrence of the communicative elements was significant and would have been much more difficult to handle if they were not coded into spreadsheets of the SPSS Win. Elements that recur are those that have the main characteristic of a float. Thus before we discuss the instances of recurrence, we should clarify what a float means.

The floating characteristic refers to an instance where the element occurs more than once in any one particular OP. Number one in the spread-sheets (available upon request) indicates that the communicative element occurred only once in any one particular OP; Likewise, numbers other than 1 (i.e., 2, 3 , 4, etc.,) were assigned to the number of times a particular element occurred in any one particular OP. For instance we find that Pr17 has two B.1A (Expressing initial purpose), and therefore this sub-move has the characteristic of a float since it occurs more than once in one particular OP (Pr17). Another example is Pr58 who has ten SB.4D (Rationalising how decisions are made) which indicate that this sub-move is over qualified as a float.

As far as recurrence is concerned, we can say that both the sub-moves and the sub-floats recur and are free to recur in any part of an OP as the presenter needs them to. All the elements listed as *floats* literally float in the OPs. However, not all of the *moves* float. Thus recurrence is less true for the *moves* and *sub-moves* but is especially true for the *floats* and *sub-floats*, cognitive or structural. In other words, although some of the sub-moves that occurred in relatively fixed order also float, the greater frequency of the floating characteristics occurred among the floats. The non-floating sub-moves were found to be fairly stable. For instance all

presenters were found to be thanking the chairman (Sub-move I.1A) only once.

Thus the *floating* characteristic signals a higher frequency of occurrence not only as the total of a specific float in the sixty-eight analysed OPs, but for each analysed OP as well. The maximum frequency of occurrence of a float in one particular OP is interesting to note. The element 'OK' (Sub-float 3.1) occurred 130 times in Pr24; Rhetorical questions (Sub-float 3.2) occurred forty-five times in Pr35; Filler 'em' (Sub-float 2.1) occurred twenty-nine times in Pr6; 'highlighting background principles and concepts (Sub-float 4.4) occurred twenty-six times in Pr49. 'Highlighting the operation or mechanism of the system' (B.6C) occurred eleven times in Pr17.

The greater number of occurrence of the communicative elements which occurred in no-fixed order (i.e., the *floats* and *sub-floats),* compared to those which occurred in relatively fixed order (i.e., the *moves* and *sub-moves*), made the floats significant in the structure of the analysed EOPs. For example in addition to the higher frequency of occurrence of *floats* in some individual OPs, in the total of sixty-eight EOPs analysed, at least ninety-eight definitions, 145 example/illustrations, 169 background principles and concepts, seventy-seven instances of the use of the word 'simple,' 251 instances of the use of metastatement and 147 instances of the use of concluding statement were found.

On the contrary, not as many sub-moves were found. The *floating* sub-moves (i.e., occurring in relatively fixed order), which were supposed to occur in a greater number due to the floating characteristic did not occur as many as those that occurred in no fixed order. The floating move with the greatest number of occurrence was B.2D (highlighting problems faced in the current

system) and it occurred only forty-four times in the sixty-eight OPs being analysed.

In terms of cognitive versus structural floats, the recurrence was observed to be greater in the case of structural ones. The greatest number of occurrence for structural float was 251 (Sub-float 5.2: Metastatement) but the greatest number of occurrence of cognitive float was only 169 (Sub-float 4.4: Highlighting background principles and concepts).

THE SEQUENCE OF THE COMMUNICATIVE ELEMENTS

The sequence or order of the occurrence of the communicative elements (*moves, sub-moves* and *floats*) was not easily predictable. The sequence was more difficult to determine than the frequency and had to be determined first before coding them into the SPSS Win.

Except for the *floats* , it was found that the sequence of the *moves* and the *sub-moves* was relatively fixed in macro sections labelled as 'relatively fixed order' (Table 1), or "in no-fixed order" (Table 2). The moves and sub-moves of the introduction and the termination were found to be more relatively fixed than those in the body of the OPs. This was determined by counting the number of the floating sub-moves in the introduction (three out of eleven or 27%), in the body (thirty-four out of forty-four or 77%) and in the termination (seven out of twelve or 58%). The floating characteristic proves the mobile position of the element.

Within each major section, especially within the body of the OPs, the location of the moves and sub-moves largely depends on the presenters' choice of which move or sub-move to adopt and Prs did not necessarily choose them in neat fixed order as presented in

Table 1, with a few exceptions. For instance the sequence of each non-floating sub-move was found to be fairly stably fixed, especially in the introduction. Sub-move I.1A (thanking the chairman) was always found to be at the beginning of Move I.1 (Orientating the listeners) and Sub-move T.5A (saying 'Thank you') was found to be always at the beginning of the last move (Move T.5).

At individual levels, the sequence of the communicative elements varies a lot even within each move. For instance from Pr13, Move B.1C (referring to established knowledge) occurred side by side with B.1F (highlighting the current state): "(B.1C) Klang is a crowded area. Not as crowded as Singapore but is crowded. (B.1F) I think the warning is it will get worse before it gets better." As explained earlier, the floats do literally float and it was impossible to report the exact sequence of their occurrence. The sequence reported in Table 2 are only estimations.

Because of the different degrees of unpredictable sequence and recurrence of the communicative elements, the structure of the EOPs reported in Table 1 is only the overall structure of all the sixty-eight EOPs analysed. Each OP has a selection of the elements of its own. For instance Pr54 (Appendix F) has the following structure (Table 4):

Table 4

The Structure of one EOP (Pr 54)

INTRODUCTION
Sub-Move I.1A by thanking the chairman
Sub-Move I.1B by acknowledging the audience
Sub-Move I.1C by greeting the audience
Sub-Move I.2C by announcing the subject (and the title) of the oral presentation
Sub-Move I.2D by commenting on the subject or title or subject and title of the OP
Sub-Move I.3B by previewing the structure of the OP in detail

BODY
Sub-Move B.1C by referring to established knowledge in the field
Sub-Move B.2B by identifying what needs to be done
Sub-Move B.2E by reviewing the literature
Sub-Move B.3B by highlighting its major function or characteristic or use
Sub-Move B.3C by highlighting its major importance or significance or necessity
Sub-Move B.4D by rationalising how decisions (on choice etc.) were made
Sub-Move B.4E by highlighting the components or elements or details involved in the process or design
Sub-Move B.4G by making commentary e.g. on results or on principles and concepts (2)
Sub-Move B.4H by highlighting problems (2)
Sub-Move B.4I by highlighting the methods or approach
Sub-Move B.5B by highlighting levels
Sub-Move B.5C by highlighting the structure of the work or model
Sub-Move B.6C by highlighting the operation or mechanism of the system i.e., how the system works (2)
Sub-Move B.7B by highlighting the positive/ important characteristics of the results (2)

TERMINATION
Sub-Move T.1A by checking own time
Sub-Move T.2A by 'conclusion' expression
Sub-Move T.3B by stressing the need for the future work or development or improvement
Sub-Move T.4A by generalising the topic or approach or application
Sub-Move T.5A by saying 'Thank You' or its variants
Sub-Move T.5C by inviting question

The number found in brackets indicates the frequency of the floating sub-move for this particular OP. The sub-moves with no bracketed number occurred only once. Pr54 has two instances of sub-moves B.4G, B.4H and B.6C and B.7B. This means that not all the sub-moves reported in Table 1 occur in one OP because each presenter has his/her own selection of the sub-moves. The implication of the sequence and the recurrence of the

communicative elements is that a presenter could choose any of the sub-moves (or sub-floats) in the same or different moves (or floats) as many times as s/he needs to.

THE SIMILARITIES OR THE CONVENTIONALISED FEATURES -- *Continued*

Let us now continue with our description of the similarities or conventionalised feature -- in terms of style. If a discourse has style similarities, it qualifies as a genre (Johns, 1994: 17). Style similarities belong to Bhatia's *discoursal resource* (1993). The similarities in style were already indirectly explained by the similarities in form or structure clarified in the preceding section as the former were found to be outcomes of the latter. In other words, similarities in form or structure give the discourse its style. The floating characteristic of the elements (Tables 1 and 2), for example, provides the evidence for the cyclical style of the Prs although it would also be caused by the time limit imposed on the Prs and the medium of transmission of the discourse.

One example of OP with floating elements is Pr35 who repeated Sub-floats 1.2 (Reported Speech), 3.1 (*OK*), 3.2 (Rhetorical Question), 3.5 (*Let/allow me*), 5.1 (*Simple*) and 5.2 (Metastatement) in different environments in the entire OP. Such cyclical style agrees with findings of previous research, for instance those related to discussion sections in articles and dissertations (Hopkins and Dudley-Evans, 1988: 117), and those related to sociology RAs (Brett, 1994:51), and lecture introductions (Thompson, 1994). Examples of cyclical style as a result of less strict time limit was found in Pr52, an expert, who had more asides (Float 3.3) and more summaries after certain chunks (Float 6.1). This cyclical style is also a

characteristic of the oral medium or transmission of EOPs. As noted in Chapter 2, oral style is not the same as written style. In an oral discourse, there is a greater tendency for the elements to be repeated or cycled.

The style dealt with in this section is the style that was observed to have similar characteristics due to the same describable factors that have shaped these similarities in the structure. The time limit and medium of transmission are examples of such describable factors. Other describable factors are similar choice and sociological traits.

A style similarity was found to be the result of similar sub-moves being used despite different individual choices. For instance Pr57 and Pr58 expressed their B4J (functional requirements or design considerations or design parameters) in the form of B4D (rationalising how decisions were made) but Pr67 illustrated that the two sub-moves (B.4D and B.4J) are actually different and he used them separately.

Pr57 was telling the audience the good result of combining features found in different elements that are needed in the design of the model:

.. if you compare to the UBT by itself and also the MOSFET and for example + er + one of the attribute is low powered conduction loss + which we can find in the BJT but it is not available on the MOSFET + see + but when we combine the two together + the MOSFET and the BJT + in this restructure + we find that we have low powered conduction loss + and prior to that we have + high BGT which is available on the MOSFET but we don't get this on BJT |+ So when we combine the two together + we get the high potency speed on the MOSFET |+ Er although it is superior on MOSFET on its own in terms of speed + but er + it is quite er + which is er + good thing when we compare on BGT on its own |+

The *good result* here is the rationalisation for its choice (B.4D) and the *need to combine* becomes the functional requirements or design considerations or the design parameters (B.4J) of the model.

In the same manner, 'to reduce multiple effect ' (B.4D) is the rationale for using copper plates as a requirement (B.4J) to make the model in Pr58: "...and as I said the current is high at this stage + so copper plates are used instead of er + multiple core + to reduce the multiple effect |+ "

The two sub-moves (B.4D and B.4J) were different but were realised in one expression by the preceding two presenters. This difference can be seen in Pr67's separate use of these two sub-moves:

(B.4D): We need to choose + which is the best + of the many techniques that are available for particular situation + we need to know what level of information + to put in the CAD model so that we can drive the technique + and drive it correctly |+ And also + how do we go about it + building CAD model to make sure that it has all the correct information and at least consistent with the needs of the rapid prototyping system |+

(B.4J): So if we look at some of the things that are in the typical design specifications + we see that the function of the part + the size of the part + the material that is going to be used + how many you need to produce + when you need to produce them + and so on |+

Pr67 was telling the audience that accuracy is the rationale for knowing the best technique to choose (B.4D). He later added that function, size, material and the quantity are the typical design specifications (B.4J). These presenters did exercise their own individual choices but in the end, the total number of sub-moves used by all of them (Prs 57, 58 and 67) were the same i.e., two (B.4J and B.4D).

A style similarity was also found to be interestingly related to the sociological traits of the presenters but here the similarities are in terms of describable patterns rather than similarities per se. Describable patterns of style include both similarities and differences which actually affect one another. For instance although more NS presenters opted a certain element of the OP and more NNS presenters opted for a certain other elements (i.e.,

TEXT BOUND INTO

THE SPINE

differences), the NS or the NNS styles was each similar in that each was describable as belonging to either NNS or NS styles. Such similarities and differences in the NNS and NS styles will be able to provide data to answer the second RQ (Are there systematic differences or similarities between EOPs delivered by NSs and those by NNSs of English?).

The describable patterns of style related to the sociological traits of the presenters fall into three categories: First, in terms of differences that are related more to the structural elements of their EOPs rather than the cognitive elements. Second, patterns that appeared as contrasts and third, those that appeared as congruents.

Let us first describe the fact that the differences of the EOPs delivered by the NS and those by NNS presenters were describable more in terms of the structural rather than cognitive elements of the EOPs. Table 5 illustrates the differences in terms of the structural elements of the EOPs:

Table 5
Percentage of Native and Non-Native Presenters Adopting the Floats

COLUMN 1 Sub-Float	Column 2 Non-Native Speaker	Column 3 Native Speaker
1.1 False Start	33 [12]	21
1.2 Reported Direct Speech -Talk to self	12	42 [30]
1.3 Exchange	19	50 [31]
1.4 *With that I end*	31 [31]	00
2.1 *Em*	19	67 [48]
2.2 *What do you/we call*	19 [19]	00

Table 5--
Continued

2.3 *If you like*	00	25 [25]
3.1 *OK*	38	54 [16]
3.2 Rhetorical Question	60 [10]	50
3.3 Aside	60	79 [19]
3.4 Rhetorical Statement	62 [4]	58
3.5 *Let/Allow me*	14	25 [11]
4.1 Commerciality/ Confidentiality	5	13 [8]
4.2 Definition	45	75 [30]
4.3 Example/ Illustration	76	79 [3]
4.4 Highlighting background principles and concepts	67	75 [8]
5.1 *Simple*	31	58 [27]
5.2 Metastatement	71	92 [21]
5.3 Concluding Statement	55	85 [30]
6.1 Summary	17 [same]	17 [same]
6.2 Action to be taken	10	21 [11]
Total: 21 (items)	76 [differences] in 5 items	318 [differences] in 15 items
Average	76/5=15.2	318/15=21.2

Grand Average: 394/21=18.76

Table 5 lists differences in percentage of NS and NNS presenters adopting the floats which are structural rather than cognitive, except for Sub-floats 4.1 to 4.4 and 6.1 to 6.2 explained earlier. For example we can see that 33% of the NNS presenters made false starts (1.1) but only 21% of the NS presenters did; Only 12% of the NNS presenters used reported direct speech but 42% of the NS presenters did, and so on.

Before we go on, what do the numbers in the square brackets indicate? The numbers in square brackets next to the scores for the NNS presenters (second column) refer to the greater percentage of NNS presenters using that particular element. For example the percentage of Prs making false starts (1.1) is 12% higher in NNS Prs than that in NS Prs. In the same manner, the numbers in brackets next to the scores of the NS Prs refer to the greater percentage of NS Prs using that particular element. For example, the percentage of Prs using reported direct speech (1.2) was 30% higher in NS Prs compared to that in NNS Prs, and so on.

In order to describe the differences between OPs delivered by NNS and those by NS in terms of the structural elements, we have to first limit our choice to only those which show significant differences. Notice that nineteen is the lowest significant percentage which reports the occurrence of an element which occurred in one type of Prs (i.e., NNS presenters) but did not occur in the other type of Prs (i.e., NS presenters). In other words the percentage of Prs taking Sub-float 2.2 (*What do you/we call*), is 19% higher in NNS Prs than that in NS Prs. The number (i.e., 19%) is considered as significant because in fact none of the NS Prs took this Sub-float. Thus nineteen is taken as the cutting off point for the elements being compared.

Taking nineteen as the cutting off point, the percentage of occurrence of the elements presented in Table 5 is higher in the NNS Prs in two aspects (Sub-floats 1.4 and 2.2) and higher in the NS Prs in eight aspects (Sub-floats 1.2, 1.3, 2.1, 2.3, 3.3, 4.2 5.1 and 5.3). Thus there are ten aspects of the floats (48%) that show differences between the EOPs delivered by the NNS and the NS Prs. There was only one subfloat (5%) which show equal scores in both the NS and the NNS presentations (i.e., Subfloat 6.1). The average of the higher percentage of elements that occurred in NS presentations is 21.2 and that in NNS presentations is 15.2. In addition the grand average of the difference in the elements is 18.76 (See Table 5).

These figures are however, less conspicuous in terms of moves, the cognitive elements, as presented in Table 6. Raw scores are presented along with the percentages (put in round brackets). The differences in percentage (put in square brackets) of NS and NNS presenters adopting the sub-moves are also shown.

Table 6
Frequencies of Native and Non-Native Presenters Adopting the Sub-moves

Sub-Move	Non-Native Speaker n=42 Raw Score (%)	Native Speaker n=26 Raw Score (%)
I.1A	21 (50) [11]	10 (39)
I.1B	13 (31) [same]	8 (31) [same]
I.1C	25 (60) [29]	8 (31)
I.1D	6 (14) [similar]	4 (15) [similar]

Table 6--
Continued

I.2A	16 (38) [similar]	10 (39) [similar]
I.2B	24 (57) [30]	7 (27)
I.2C	5 (12)	10 (39) [27]
I.2D	11 (26) [similar]	7 (27) [similar]
I.3A	5 (12)	6 (23) [11]
I.3B	15 (36)	10 (39) [3]
I.3C	4 (10)	7 (27) [17]
B.1A	16 (38)	12 (46) [8]
B.1B	3 (7)	5 (19) [12]
B.1C	10 (24)	8 (31) [7]
B.1D	8 (19)	8 (31) [12]
B.1E	3 (07)	5 (19) [12]
B.1F	15 (36)	10 (38) [2]
B.2A	10 (24) [12]	3 (12)
B.2B	7 (17)	5 (19) [2]
B.2C	8 (19) [4]	4 (15)
B.2D	19 (45)	14 (54) [9]
B.2E	4 (10)	8 (31) [21]
B.2F	2 (5)	4 (15) [10]
B.3A	19 (45) [similar]	12 (46) [similar]
B.3B	6 (14)	5 (19) [5]
B.3C	7 (17) [2]	4 (15)

	Table 6-- *Continued*	
B.4A/ SB.4A	13 (31)/10 (24) =23 (55) [5]	7 (27)/6 (23) =13 (50)
B.4B	9 (21) [13]	2 (8)
B.4C	4 (10)	5 (19) [9]
B.4D/ SB.4D	14 (33)/8 (19) =22 (52) [6]	9 (35)/3 (12) =12 (46)
B.4E/ SB.4E	11 (26)/8 (19) = 19 (45) [22]	4 (15)/2 (8) =6 (23)
B.4F	15 (36)	10 (39) [3]
B.4G	15 (36) [5]	8 (31)
B.4H	7 (17)	10 (39) [22]
B.4I	6 (14)	6 (23) [9]
B.4J	10 (24) [12]	3 (12)
B.5A	6 (14)	7 (27) [13]
B.5B	3 (7)	5 (19) [12]
B.5C	6 (14)	5 (19) [5]
B.5D	4 (10) [6]	1 (4)
B.5E	4 (10)	5 (19) [9]
B.5F	9 (19) [6]	6 (13)
B.5G	13 (31) [same]	8 (31) [same]
B.5H	3 (7)	4 (15) [8]
B.6A	3 (7)	5 (19) [12]
B.6B	2 (5)	3 (12) [7]

	Table 6-- *Continued*	
B.6C	12 (29)	9 (35) [6]
B.6D	10 (24)	8 (31) [7]
B.6E	1 (2)	2 (8) [6]
B.7A	7 (17)	5 (19) [2]
B.7B	8 (19)	6 (23) [4]
B.7C	7 (17)	5 (19) [2]
T.1A	3 (07)	7 (27) [20]
T.2A	21 (50) [same]	13 (50) [same]
T.3A	8 (19) [same]	5 (19) [same]
T.3B	9 (21) [2]	5 (19)
T.3C	11 (26) [18]	2 (8)
T.3D	12 (29) [14]	4 (15)
T.4A	4 (10)	4 (15) [5]
T.4B	17 (41) [10]	8 (31)
T.4C	15 (36) [13]	6 (23)
T.5A	24 (57) [7]	13 (50)
T.5B	15 (36) [5]	8 (31)
T.5C	6 (14)	6 (23) [9]
Total: 64 (items)	203 differences in 20 items	328 differences in 35 items
Average	203/20=10.15	328/35=9.37

Grand Average: 531/55=9.65

The percentage of scores and the figures that show differences (i.e., those in square brackets) that occurred in relation to the floats presented in Table 5 are greater compared to those that occurred in relation to moves as presented in Table 6. What is the implication of this greater (in terms of floats) or lesser (in terms of moves) significant differences (i.e., 19% difference or more) in terms of the hypothesis that the differences are related more to the structural elements of their EOPs rather than to the cognitive ones?

There are four sub-moves (cognitive) which show equal scores in both the NS and the NNS presentations (i.e., Sub-moves I.1B, B.5G, T.2A and T.3A) presented in Table 6 when there is only one sub-float (globally structural) (i.e., Sub-float 6.1) presented in Table 5. This comparison shows similarities exist more in moves than in floats. Three is the minimum percentage of difference in terms of Sub-floats presented in Table 5 (Sub-float 4.3) but 1 is the minimum difference of percentage in terms of Sub-moves presented in Table 6. The smaller the minimum difference, the more similar are the elements and this means similarities between the presentations of the NSs and those of the NNSs are more similar in terms of moves than in terms of floats. In addition there are four items of such minimum difference (i.e., with one percentage of difference), indicated by '[similar]' in Table 6 (i.e., I.1D, I. 2A,I. 2D, B. 3A) but there is none such characteristic in Table 5. The foregoing 'congruence' are proofs which show that the differences were related more to the structural elements (floats) of the EOPs rather than the cognitive elements (moves).

Also taking nineteen (i.e., 19%) as the cutting off point, while the percentage of occurrence of the elements presented in Table 5 is higher in the NNS presenters in two *significant* aspects (i.e., 19%

difference or more) (i.e., Sub-floats 1.4 and 2.2), those in Table 6 are higher in four *significant* aspects (Sub-moves I. 1C, I.2B, B.4A/SB.4A and B.4E/SB.4E). While the percentage of occurrence of the elements presented in Table 5 is higher in the NS presenters in *nine significant* aspects (Sub-floats 1.2, 1.3, 2.1, 2.3, 3.3, 4.2, 5.1, 5.2, 5.3), that presented in Table 6 is higher in *four significant* aspects (Sub-moves I. 2C, B. 2E, B. 4H and T. 1A). Thus while there are eleven significant aspects (52.3%) that show differences between EOPs delivered by the NNS and the NS presenters in relation to floats, (Table 5) there are only seven significant aspects (10.9%) in relation to moves (Table 6). Although the total number of elements in moves is much greater (fifty-five) than those in floats (twenty-one), the significant differences in moves (seven) is lesser than that in floats (eleven). From the greater number of aspects of differences in floats (eleven, i.e., 52.3%) compared to that in terms of moves (six i.e., 10.9%), we can say that differences were related more to the structural elements of their EOPs rather than the cognitive elements.

The average of the higher percentage of elements that occurred in NS presentations is 9.37 and that in NNS presentations is 10. 1 in terms of moves but 21.2 and 15.2 respectively in terms of floats. We can see that these figures are higher in terms of floats (structural) than in terms of moves (cognitive). In addition the grand average of the difference in the elements presented in Table 6 (moves) is 9.65 but that presented in Table 5 (floats) is 18.76. All these figures show a greater difference in terms of the structural elements (floats) of their EOPs rather than that of the cognitive elements (moves).

Simultaneously, such differences also mean that the EOPs delivered by NNSs and NSs show greater similarities in terms of cognitive elements (moves) rather than structural elements (floats). Before we discuss more of the similarities in styles in relation to the congruent styles, let us first discuss the contrasting styles, the second type of describable styles of EOPs delivered by NS and those delivered by NNS presenters.

Contrasting styles in NS and NNS presenters were detected through the contrasting percentages of NS and NNS presenters adopting the sub-floats (Table 5) and the sub-moves (Table 6).

Taking only the significant ones, in terms of sub-floats, a greater percentage of NNS presenters were found to be showing false start (1.1), using *With that I end* when concluding their OPs (1.4) and saying *What do you/we call* (2.2) as disfluency.

'Disfluency/Fillers' as mentioned in Chapter 2, refers to the utterance made when a presenter needed more time to think of what to say. For instance Pr18 who had nineteen such disfluencies uttered *What do you/we call* (2.2) as disfluency before coming up with the word 'visual': "So here + the current + at + with respect to the () 2RD with this er + what do you call + er visual ...". Pr16 uttered this disfluency before coming up with the word 'machine': "... the model of the + er + what do you call machine + er ...".

When concluding their OPs, Pr27 said "With this I end my presentation +" and Pr59 said "With that I end my presentation |" (Sub-float 1.4).

False starts are abandoned attempts at making sentences, for instance from Pr62: "And the + but I want + I just want to highlight the + taxonomy that we used in this feature presentation |+"

On the other hand, no NS presenters used Sub-floats 1.4 (*With that I end*) and 2.2 (*What do you/we call*) (Table 5).

In terms of moves (cognitive elements), more NNS presenters were found to announce the title of the OPs (I.2B) (Pr59: "The topic of my discussion today is er + Linking the diffusion furnace to a personal computer software and hardware improvement I ++" (Tables 2 and 6).

At another extreme, in terms of floats, more NS presenters than their NNS counterparts were observed to be using general as well as engineering rhetorical devices. Rhetorical devices are the presenters' 'instruments' used in their attempts to reach the audience more effectively.

The general rhetorical devices in question include reporting direct speech (Sub-float1.2), making exchanges (1.3), saying *em* (2.1) and *If you like* (2.3) as disfluencies/fillers, saying *OK* (3.1), using asides (3.3) and saying *Let/Allow me* (3.5). 'Reported Direct speech' refers to instances where, NS presenters so to speak 'grumble' to themselves, as in Pr11: "It is sent to the manufacturing engineering and said 'A-ha I know + because I've been in 20 years...' " and Pr65: "It was frightening when people say 'Why don't you use the new method?'". As said earlier, instances of NS presenters making such statements are significantly more than that of their NNS counterparts.

An 'exchange' (1.3) here refers to having a dialogue either with the chairman, the audience, or a projectionist. Pr54 (Appendix F) had all the three types of exchanges:

((Someone fixed slide)) "Right I+ Thank you very much" [to the projectionist], "I don't know how many of you here are familiar with IDEFF I+" [to the audience], and "How long do you have the time + — ?" [to the chairman]. Making an exchange requires a natural and casual skill of using the language and this proves to be difficult to the NNS presenters.

Aside (3.3) is 'talking about something else' (Strodt-Lopez (1991). An example of aside (3.3) which was also found in NS OPs more than in NNS OPs is from Pr31: First of all I + have to apologise to + the people who listened to I this this + more almost identical presentation at the () conference last week + The only thing I can promise is to try to make it better + This also needs to be produced casually and it proves to be equally difficult to NNS presenters.

An example of *em* (2.1) and *If you like* (2.3) as disfluencies or fillers is from the same presenter (Pr60): "*Em* + this is the current level of line of research *if you like*." This presenter (Pr60) had as many as nine (the most) *if you like*s but not as many *em*s. Pr6 had the most *em* (twenty-nine). Interestingly, none of the NNS presenters used *If you like* although some did use *em* (Table 5). Through a thorough exposure to the NS culture, a NNS presenter will naturally be able to acquire these two disfluencies.

More NS presenters (54%) said *OK* (3.1), but the maximum frequency is only thirty-eight (Pr66) in a thirty-minute OP. Fewer NNS presenters (38%) said *OK* but one NNS presenter (Pr24) said *OK* 130 times in an OP of the same length:

Pr66: Now + in the TPM program + this is a problem I+ OK I+ This is a big problem because the engineers here get into thinking a bit like the er + like chief executive officer ' OK there's involvement it's happening down there somewhere' +

Pr24: OK? If you ask me — + OK come to the point + Give me the title of the talk OK + ISO 9000 OK + Mechanical drawing OK + dimensioning error + OK er that's it period OK?

Let/Allow me (3.5) in NS and NNS presenters emerged in similar manner with *OK*. The maximum number of occurrence in NS was six (Pr66) but the maximum number of occurrence in NNS was seventeen (Pr24).

Pr66: Let's talk about why you are all doing it and trying to do it I+.

Pr24: Let me show a conventional plus minus drawing OK +

One (rhetorical) function of *OK* (3.1) and *Let/Allow me* (3.5) used by these presenters can be a boundary marker (Dubois, 1996: personal correspondence) but further work is needed to trace the rhetorical functions from the 'insiders' viewpoint (the SIs' viewpoint). As said earlier, these are stylistic traits that could well occur in any other OPs, not necessarily in engineering.

However, engineering rhetorical devices such as the use of definition (4.2), the word *simple* (5.1), metastatment (5.2) and concluding statements (5.3) are more likely to occur in *engineering* OPs. In addition as said earlier these elements were found to be more common in EOPs delivered by NSs than those delivered by NNSs.

While the explanations for metastatement (5.2) and concluding statement (5.3) are found in a separate section, according to one SI (PEMAS NNS LL) definitions (4.2) are given because they are necessary to "define the scope of work or to clarify a point" since conference papers are supposed to present new ideas/concepts. An example of a definition is from Pr27: "The definition of indexing time is time taken to remove the previously tested device"

From the following OP excerpts, we can see that the word *simple* is often being used when describing something technical. For instance:

Pr65: I like to keep things simple + so in the project we worked + we worked with simple + er topology we we could ...We kept the er + machine model extremely simple and keeping up simple ... . So we designed the system using a very simple model ...

Pr 27: But our objective for this was to have it low cost + we wanted to be simple |+ a simple mechanisation project |+ ...It is simple and basic concept |+ a simple low cost mechanisation + ... The technology we use is very simple + We just ...There is a stat test in progress + a pass and a fail signal |+ Very simple interface + very simple components +

One SI (LOUGH NSBr) explained that there are two possible explanations for the use of the word *simple*: Firstly it is an 'apologetic' usage:

Often the real-life situation is so complex that only a very simplified version of reality can be modelled. This is especially true in the world of computer simulation. In these cases the presenter is probably using the word slightly apologetically. He is acknowledging that he knows that his model is unrealistic before a member of the audience points it out.

Secondly it is a 'proud' usage:

When designing a tool, it is often considered a desirable feature to make it as simple as possible. So, if the presenter says something like 'We made the tool simple', he is really asking the audience to congratulate him on his skill.

Since as stated earlier, more NS presenters than their NNS counterparts used the word *simple* (5.1) (Table 5), based on the SI's explanations then, we can conclude that NS presenters were found to be more rhetorical in their discourse than their NNS counterparts.

As said earlier, there were fewer distinct differences to point out in connection with the moves (Table 6), as compared to in connection with floats (Table 5). In Table 6, the few significant differences (i.e., differences in 19% or more) are in terms of announcing the subject or title of the OP (I.2C), reviewing the literature (B. 2E), highlighting problems (B. 4H) and checking own time (T. 1A) which occurred more in OPs delivered by NSs compared to those delivered by NNSs.

Earlier, it has been stated that more NNS presenters were found to express the title of OPs (I. 2B). Now, we are saying that more NS presenters were found to be announcing the subject of the OP) (I. 2C) (See Table 6). An example is from Pr54: "What I am going to talk to you today + is we are actually modelling for product introduction !+" The version that was observed to be popular among the NNS presenters

(I. 2B) cited earlier is a direct way of expressing the title, but I. 2C is a more indirect one.

More NS presenters were also found to be reviewing the literature (B. 2E), as in Pr53: "The next era is + the II in fact is the most significant one + is from 1970 through 1990 and beyond + and beyond I+ ...". More NS presenters were found highlighting problems (B. 4H), as in Pr64: "Similarly there are many problems primarily there were a shortage for the right kind of people ... to + help the design engineers ... " and more NS presenters were also found checking their own time (T. 1A) as in Pr54: "How long do you have the time + — ?" compared to their NNS counterparts.

The third type of describable styles of EOPs delivered by NS and those delivered by NNS presenters is their congruent styles. Congruent styles of both NS and NNS presenters could be seen by tracing the percentages of the sub-moves and floats which occur in equal or almost equal percentages in both NS and NNS presenters.

As said earlier, there were four sub-moves (6.25%) which show equal scores in both the NS and the NNS OPs (Table 6) and there was one sub-float (4.76%) with equal scores for both in the NS and NNS OPs (Table 5). If we could, as argued earlier, work with nineteen as the cutting off point to decide on the significance of the differences in moves and floats found in the OPs of the NSs and NNSs, we could perhaps work with fourteen as the cutting off point to count the similarities as significant. If this dividing line is acceptable, the percentage for sub-moves is ninety and that for sub-floats is forty-three. The congruent style based on this criterion then, can be described as similar in the choice of moves in 90% of the sub-moves and in 43 % of the sub-floats. Since as argued earlier, the differences are more distinct in floats which are structural, this new criterion proves even more that the OPs

delivered by the NNSs and NSs are similar in terms of moves or the cognitive aspect.

The four sub-moves which show equal scores in both the NS and the NNS presentations are Sub-moves I.1B, B. 5G, T. 2A and T. 3A presented in Table 6; The single sub-float which shows equal score was 6.1 (Summary) presented in Table 5. Thus we witnessed exact similarities in the presenters choice of thanking the chairmen (I.1B), highlighting the technical configurations (B. 5G), terminating by using 'conclusion' expressions (T2 A) and in highlighting future applications (T. 3A) (See Table 1). Other similar sub-moves are found in Table 6 and Table 1.

What are the implications of the preceding differences, contrasts and congruents? The congruence provides evidence of NNS following NS style and, in the case of two rhetorical elements (*OK* and *Let/Allow me*), the tendency of NNS presenters to overdo in imitating their NS counterparts. This evidence proves that NNSs actually follow the Anglophone styles, as pointed out by Swales (1990). NS trends are predominant in that of NNS shown by the percentages illustrated in Tables 5 and 6. Let us take sub-moves which are labelled as *same* and *similar* in Table 6 as example. The sub-moves labelled as same cannot be argued further because they do not tilt towards any. The case of those labelled as *[similar]* can be used for our argument. Four sub-moves (I. 1C, I. 1D, I. 2A and I. 2D) were found to be 'similar' in Table 6 and all of them (i.e., 100%) tilted towards NS (i.e. the percentage of NSs using the element is slightly higher than that of their NNS counterparts) and none tilted towards NNSs (i.e. the percentage of NNSs using the element is slightly higher than that of their NS counterparts). This means the result showed that the *similar* styles in the choice of sub-moves

belong to NSs. Had the case been the reverse (i.e., NSs following NNSs) the *similar* styles should have bee more tilted towards the NNSs. This is so because usually the originator is more established (thus statistically gets more score) than the imitator. In this case the originators are the NS presenters and the imitator the NNSs.

The originators can also be traced from the 'typical' styles of both the NS and NNS presenters. From Tables 1 and 2 for example, all the sub-moves and sub-floats marked by stars (*) are characteristics of NS styles and all those marked by alias signs (@) are characteristics of NNS styles.

By simple calculation, we can immediately see that there are many more stars than alias signs. This shows that the NSs, (whose styles are indicated by stars) are the originators and the NNSs (whose styles are indicated by alias signs) are the imitators.

There are a total of eighty-eight elements (twenty-one sub-floats and sixty-seven sub-moves). Of these, thirty-five (40%) (those with two and three stars) are 'typical' NS styles, but only ten (11.36%) (those with one and two alias signs) are 'typical' NNS styles. The rest (forty-three or 49%) (those with one and four stars) belong to both NNS and NS styles. Of the ten (11.36%) 'typical' NNS styles, three sub-moves (SB.4D, SB.4E and B.4E) can be interpreted to belong to NS styles although the sub-floats belong to NNS styles unavoidably.

From Table 1, we can see that sub-move SB.4D (two alias signs) is similar to B.4D (one star). In addition SB.4E and B.4E which belong to two and one alias signs respectively are the same. The two sub-moves in each set (set B.4D and set B.4E) are the same. The B.4D set were both *Rationalising how decisions (on choice etc.) were made* and the B.4E set were both *Highlighting the components*

involved in the process or design (Table 1). They were separated because each was qualified to exist on its own in that position, according to the six criteria used.

However, if each set was considered as one, which they could because they were the same, their added scores qualify them for one star (element that occur in at least 20% of the sub-moves of both NS and NNS presenters). The B.4D has already qualified (because it already has one star) even before the addition of the score from SB.4D. The score for the B.4E set was 45% in NNS and 25.3% in NS presenters which undoubtedly qualify the set for one star. This means there would be only three (B.2A, B.4B and T.3C) (instead of four) sub-moves with one alias sign and there would be only two (B.4I and B.5D) instead of four, with two alias signs. On the other hand, there would be an addition of one sub-move (B.4E) in the one star category. Thus this leaves 'typical' NNS style (those with alias signs) in terms of sub-moves and sub-floats, with only seven elements (8%) instead of ten (11.36%).

Sub-floats 1.4 (*With that I end*) and 2.2 (*What do you/we call*) existed there unavoidably since they had to do with the interference of the presenters' L1 in their acquisition of English. Of the 62% NNS OPs being analysed, 57.4% were delivered by Asians and most of these Asians were Chinese and Indians who have lived with the Malays long enough to have Malay language interference in their OPs delivered in English. Thus these two sub-floats most probably would be characteristics of Asian presenters. If this is true, sub-float 1.4 most probably would be a direct translation of the Malay style of ending talks *Dengan itu saya akhiri ucapan saya* (With that I end my talk). Along the same line, sub-float 2.2 would

be a direct translation of *Apa itu/Apa tu* (What do you/we call) uttered as fillers.

This claim is strengthened by the fact that these two sub-floats did not occur in NS OPs (Table 5). Even if these two sub-floats do not decrease the percentage of typical NNS styles neither did it increase that of the congruent styles, when we consider 8% to be NNS styles, the percentage for the congruent styles should be increased at least by 3%. When we compare typical NS style (40%) with legitimately typical NN styles (8%) we can see the great contrast. The percentage of the latter's style is not significant and does not stand out to claim its own identity. Its identity lies at the congruent style which consists of around 52% (49% plus 3%). In other words NNS styles imitate those of NSs'. NNS presenters did not have a separate genre.

Our discussion on the structure/form/style of EOPs now concentrates on the overview of the sub-moves adopted by novice, expert, NS and NNS presenters as found in the sixty-eight EOPs being analysed in this research. This overview is expressed in Table 7.

Table 7
Frequencies of Moves by Sub-groups of Presenters
Number of Presenters: 68

Sub-Move	Novice n=38	Expert n=30	NS n=26	NNS n=42	Overall Frequency of Occurrence in 68 EOPs
Sub-Move	Raw Score/ (percentage)/ [percentage of difference from the norm]	Raw Score/ (percentage)/ [percentage of difference from the norm]	Raw Score/ (percentage)/ [percentage of difference from the norm]	Raw Score/ (percentage)/ [percentage of difference from the norm]	Raw Score/ (percentage)
I.1A $	15 (39.5%) [-6.1]	16 (53.3%) [+7.7]	10 (38.5%) [-7.1]	21 (50%) [+4.4]	31 (45.6%)
I.1B #	13 (34.2%) [+3.3]	8 (26.7%) [-4.2]	8 (30.8%) [-0.1]	13 (31%) [+0.1]	21 (30.9%)
I.1C #	21 (55.3%) [+6.8]	12 (40%) [-8.5]	8 (30.8%) [-17.7]	25 (60%) [+11.5]	33 (48.5%)
I.1D !	4 (10.5%) [-4.2]	6 (20%) [+5.3]	4 (15.4%) [+0.3]	6 (14.3%) [-0.4]	10 (14.7%)
I.2A !	11 (29.0%) [-9.12]	15 (50%) [+11.8]	10 (38.5%) [+0.13]	16 (38%) [-0.2]	26 (38.2%)
I.2B #	26 (68.4%) [+22.8]	5 (16.7%) [-28.7]	7 (26.9%) [-18.7]	24 (57%) [+11.4]	31 (45.6%)
I.2C !	5 (13.2) [-8.9]	10 (33.3%) [+11.2]	10 (38.5%) [+16.4]	5 (11.9%) [-10.2]	15 (22.1%)
I.2D !	7 (18.4%) [-8.1]	11 (36.7%) [+10.2]	7 (26.9%) [+0.4]	11 (26.2%) [-0.3]	18 (26.5%)
I.3A !	3 (7.9%) [-8.3]	8 (26.7%) [+10.5]	6 (23.1%) [+6.9]	5 (11.9%) [-4.3]	11 (16.2%)

Table 7 -- *Continued*

I.3B &	17 (44.7%) [+7.9]	8 (26.7%) [10.1]	10 (38.5%) [+1.7]	15 (35.7%) [-1.1]	25 (36.8%)
I.3C &	7 (18.4%) [+2.2]	4 (13.3%) [-2.9]	7 (26.9%) [+10.7]	4 (9.5%) [-6.7]	11 (16.2%)
B.1A !	14 (36.8%) [-4.4]	14 (46.7%) [-12.2]	12 (46.2%) [+5]	16 (38%) [-3.2]	28 (41.2%)
B.1B !	4 (10.5%) [-1.3]	4 (13.3%) [+1.5]	5 (19.2%) [+7.4]	3 (7.1%) [-4.7]	8 (11.8%)
B.1C !	8 (21.1%) [-5.4]	10 (33.3%) [+6.8]	8 (30.8%) [+4.3]	10 (23.8%) [-2.7]	18 (26.5%)
B.1D !	7 (18.4%) [-0.7]	9 (30%) [+10.9]	8 (30.8%) [+11.7]	8 (19%) [-0.1]	16 (23.5%)
B.1E &	5 (13.2%) [+1.4]	3 (10%) [-1.8]	5 (19.2%) [+7.4]	3 (7.1%) [-4.7]	8 (11.8%)
B.1F !	10 (26.3%) [-10.5]	15 (50%) [+13.2]	10 (38.5%) [+1.7]	15 (35.7%) [-1.1]	25 (36.8%)
B.2A $	5 (13.2%) [-5.9]	8 (26.7%) [+7.6]	3 (11.5%) [-7.6]	10 (23.8%) [+4.7]	13 (19.1%)
B.2B !	4 (10.5%) [-7.2]	8 (26.7%) [+9]	5 (19.2) [+1.5]	7 (16.7%) [-1]	12 (17.7%)
B.2C $	4 (10.5%) [-7.2]	8 (26.7%) [+8.3]	4 (15.4%) [-2.3]	8 (19%) [+1.3]	12 (17.7%)
B.2D !	16 (42.1%) [-6.4]	17 (56.7%) [+8.2]	14 (53.9%) [+5.4]	19 (45.2%) [-3.5]	33 (48.5%)
B.2E !	5 (13.2%) [-4.5]	17 (56.7%) [+39]	8 (30.8%) [+13.1]	4 (9.5%) [-8.2]	12 (17.6%)
B.2F !	2 (5.3%) [-3.5]	4 (13.3%) [+4.5]	4 (15.4%) [+6.6]	2 (4.8%) [-4]	6 (8.8%)
B.3A !	16 (42.1%) [-3.5]	15 (50%) [+4.4]	12 (46.2%) [+0.6]	19 (45%) [-0.6]	31 (45.6%)

Table 7 --- *Continued*

B.3B !	5 (13.2) [-3]	6 (20%) [+3.8]	5 (19.2%) [+3]	6 (14.3%) [-1.9]	11 (16.2%)
B.3C #	7 (18.4%) [+2.2]	4 (13.3%) [-2.9]	4 (15.4%) [-0.5]	7 (16.7%) [+0.5]	11 (16.2%)
B.4A/ SB.4A #	14/12 =26 (68.4%) [+15.5]	6/4 =10 (33.3%) [-19.6]	7/6 =13 (50%) [-2.9]	13/10 =23 (54.8%) [+1.9]	20/16 =36 (52.9%)
B.4B #	8 (21.1%) [+4.9]	3 (10%) [-6.2]	2 (7.7%) [-8.5]	9 (21.4%) [+5.2]	11 (16.2%)
B.4C	5 (13.2%) [0]	4 (13.3%) [+0.07]	5 (19.2%) [+6]	4 (9.5%) [-3.7]	9 (13.2%)
B.4D/ SB.4D	12/7 =19 (50%) [0]	11/4 =15 (50%) [0]	9/3 =12 (46.2%) [-3.8]	14/8 =22 (52.4%) [+2.4]	23/11 =34 (50%)
B.4E/ SB.4E $	7/6=13 (34.2%) [-2.6]	8/4=12 (40%) [+3.2]	4 /2 =6 (23.1%) [-13.7]	11 /8 = 19 (45.2%) [+8.4]	15/10 =25 (36.8%)
B.4F &	17 (44.7%) [+7.9]	8 (26.7%) [-10.1]	10 (38%) [+1.7]	15 (35.7%) [-1.1]	25 (36.8%)
B.4G $	12 (31.6%) [-2.2]	11 (36.7%) [+2.9]	8 (30.9%) [2.9]	15 (35.7%) [+1.9]	23 (33.8%)
B.4H !	8 (21.1%) [-8.3]	11 (36.7%) [+7.3]	10 (38%) [+9.1]	7 (16.7%) [-12.7]	20 (29.4%)
B.4I &	8 (21.1%) [+8.4]	4 (13.3%) [-4.4]	6 (23.1%) [+5.4]	6 (14.3%) [-3.4]	12 (17.7%)
B.4J #	8 (21.1%) [+2.]	5 (16.7%) [-2.4]	3 (11.5%) [-7.6]	10 (23.8%) [+4.7]	13 (19.1%)
B.5A !	6 (15.8%) [-3.3]	7 (23.3%) [4.2]	7 (26.9%) [+7.8]	6 (14.3%) [-4.8]	13 (19.1%)
B.5B !	2 (5.3%) [-6.5]	6 (20%) [+8.2]	5 (19.2%) [+7.4]	3 (7%) [-7.1]	8 (11.8%)
B.5C !	5 (13.2%) [-3]	6 (20%) [+3.8]	5 (19.2%) [+3]	6 (14.3%) [-1.9]	11 (16.2%)

Table 7 --- *Continued*

B.5D #	4 (10.5%) [+3.1]	1 (3.3%) [-4.1]	1 (3.9%) [-3.5]	4 (9.5%) [+2.1]	5 (7.4%)
B.5E	5 (13.2%) [0]	4 (13.3%) [+0.1]	5 (19.2%) [+6]	4 (9.5%) [-3.7]	9 (13.2%)
B.5F	7 (18.4%) [-2.2]	7 (23.3%) [+2.7]	6 (23.1%) [+2.5]	9 (21.4%) [+0.8]	14 (20.6%)
B.5G $	9 (23.6%) [-7.3]	12 (40%) [+9.1]	8 (30.8%) [-0.1]	13 (31%) [+0.1]	21 (30.9%)
B.5H !	3 (7.9%) [-2.4]	4 (13.3%) [+3]	4 (15.4%) [+5.1]	3 (7.1%) [-3.2]	7 (10.3%)
B.6A !	4 (10.5%) [-1.3]	4 (13.3%) [+1.5]	5 (19.2%) [+7.4]	3 (7.1%) [-4.7]	8 (11.8%)
B.6B !	1 (2.6%) [-4.8]	4 (13.3%) [+5.9]	3 (11.5%) [+4.1]	2 (4.8%) [-2.6]	5 (7.4%)
B.6C !	11 (29.0%) [-1.9]	10 (33.3%) [+2.4]	9 (34.6%) [+3.7]	12 (28.6%) [-2.3]	21 (30.9%)
B.6D &	11 (29.0%) [+2.5]	7 (23.3%) [-3.2]	8 (30.8%) [+4.3]	10 (23.8%) [-2.7]	18 (26.5%)
B.6E !	1 (2.6%) [-1.8]	2 (6.7%) [+2.3]	2 (7.7%) [+3.3]	1 (2.4%) [-2]	3 (4.4%)
B.7A &	9 (23.6%) [+5.9]	3 (10%) [-7.7]	5 (19.2%) [+1.5]	7 (16.7%) [-1]	12 (17.7%)
B.7B &	9 (23.6%) [+3]	5 (16.7%) [-3.9]	6 (23.1%) [+2.5]	8 (19%) [-1.6]	14 (20.6%)
B.7C !	5 (13.1%) [-4.5]	7 (23.3%) [+5.6]	5 (19.2%) [+1.5]	7 (16.7%) [-1]	12 (17.7%)
T.1A !	2 (5.3%) [-9.4]	8 (26.7%) [+12]	7 (26.9%) [+12.2]	3 (7.1%) [-7.6]	10 (14.7%)
T.2A	22 (57.9%) [+7.8]	12 (40%) [-10]	13 (50%) [0]	21 (50%) [0]	34 (50%)
T.3A &	8 (21.1%) [+2]	5 (16.7%) [-2.4]	5 (19.2%) [0.1]	8 (19%) [-0.1]	13 (19.1%)

Table 7 --- *Continued*

T.3B #	10 (26.3%) [+5.7]	4 (13.3%) [-7.3]	(19.2%) [-1.4]	9 (21.4%) [+0.8]	14 (20.6%)
T.3C $	7 (18.4%) [-0.7]	6 (20%) [+0.9]	2 (7.7%) [-11.4]	11 (26.2%) [+7.1]	13 (19.1%)
T.3D #	9 (23.6%) [+0.1]	7 (23.3%) [-0.2]	4 (15.4%) [-1.1]	12 (28.6%) [+5.1]	16 (23.5%)
T.4A !	3 (7.9%) [-3.9]	5 (16.7%) [+4.9]	4 (15.4%) [+3.6]	4 (9.5%) [-2.8]	8 (11.8%)
T.4B #	16 (42.1%) [+5.3]	9 (30%) [-6.8]	8 (30.8%) [-6]	17 (40.5%) [+3.7]	25 (36.8%)
T.4C $	11 (29.0%) [-1.9]	10 (33.3%) [+2.4]	6 (23.1%) [-7.8]	15 (35.7%) [+4.8]	21 (30.9%)
T.5A $	19 (50%) [-4.4]	18 (60%) [+5.6]	13 (50%) [-4.4]	24 (57%) [+2.6]	37 (54.4%)
T.5B #	15 (39.5%) [-5.7]	8 (26.7%) [-7.1]	8 (30.8%) [-3.8]	15 (35.7%) [+1.9]	23 (33.8%)
T.5C !	6 (15.8%) [-1.9]	6 (20%) +2.3]	6 (23%) [+5.4]	6 (14.3%) [-3.4]	12 (17.7%)

Table 7 shows the frequencies of all sub-moves by sub-groups of presenters (novice, expert, NS, NNS). Both raw scores and percentages are given. Percentages are put in round brackets (). The numbers put in square brackets [] show the difference between the percentage of a particular sub-group and that of the overall frequency of occurrence. The overall frequency of occurrence is considered as the norm. Thus a minus sign [-] that precedes the number indicates that the number is less than that of

the overall frequency of occurrence; a plus sign [+] indicates that the number is more. For example the percentage of NNSs adopting I.1A (Thanking the chairman) is 4.4% more than that of the percentage of the overall frequency of occurrence in the sixty-eight EOPs being analysed. Thus the minus sign signals a neglect of the element compared to the norm and the plus sign signals a concern.

Upon close scrutiny of the scores, we will find that based on the preceding differences in percentages, scores of certain sub-groups of presenters show describable patterns, four of which are shown in Table 8:

Table 8

Frequency of Occurrence of Four Significant Patterns of Sub-moves

Pattern	Symbol	Frequency of occurrence
-++-	!	29
+-+	#	12
+-+-	&	9
-+-+	$	9

Eight patterns were possible but only four patterns (Table 8) were considered significant thus being reported here. The decision of whether it is significant or not is based on the frequency of occurrence. Those not reported in Table 8 consisted of three patterns which occurred only once and one pattern which occurred only twice.

One striking factor about the patterns not reported in Table 8 was that, except for one sub-move (i.e., B.5F), all the three remaining sub-moves (i.e., B. 4C, B4D/SB4D, B.5E) contain scores which show no difference with those of the overall frequency of occurrence in the 68 EOPs being analysed. From Table 7 we can see that the scores for B.4C of novice presenters was the same with that of the overall score for the 68 EOPs. The scores for sub-moves B.4D/SB4D of novice and expert presenters were found to be the same as those of the overall 68 EOPs. In the same manner, the score for Sub-move B.5E of novice presenters was the same as that for the 68 EOPs. We can thus see that two out of three sub-moves which show the same scores with the overall 68 EOPs belonged to the novice presenters. This is a proof that the tendency of the novice presenters conforming to the norms is greater than that of the experts.

As shown in Table 8, of those considered significant, twenty-nine was the maximum frequency of occurrence, followed by twelve and nine which occurred in two patterns. The symbols used to signal the four patterns and these patterns have been indicated in Table 7.

The minus or the plus signs used to name the pattern follows the sequence of the sub-groups found in Table 7. For example in the pattern ++++ the first plus sign refers to the scores of novice presenters, the second plus sign refers to that of experts, the third plus sign refers to that of NS presenters and the fourth plus sign refers to the scores of NNS presenters.

The most significant pattern (marked !), (i.e., the one which occurred twenty-nine times) is -++- which means neglect by novice presenters (-), concern by experts (+), concern by NSs (+) and

neglect by NNSs (-). Such a pattern occurred in sub-moves I. 1D (Express appreciation for making OP), I. 2A (Lead audience to content), I. 2C (Announce subject/title), I. 2D (Comment on subject/title), I. 3A (Preview briefly), B1A (Expressing the main/initial purpose/objective/ reason/motivation of the work), B. 1B (Highlight significance of work), B. 1C (Refer to established knowledge in the field), B. 1D (Highlight history of an important element in the OP), B. 1F (Highlight current state), B. 2B (Identify what needs to be done), B.2D (Highlight problems faced in current system & measures taken), B. 2E (Review literature), B.2F (Discuss choices available or define components), B.3A (Announce solution), B.3B (Highlight major function/characteristic/use), B. 4H (Highlight problems & solution taken), B. 5A (Highlight overall concept of work), B. 5B (Highlight levels), B. 5C (Highlight structure of work), B. 5H (Highlight working principles of work), B. 6A (Discuss utilisation of system/model), B. 6B (Discuss application of system/model), B. 6C (Highlight how the system works), B. 6E (Refer to established knowledge), B.7C (Highlight result of pilot), T. 1A (Check own time), T.4A (Generalise topic) and T. 5C (Invite question). This means to say that, in the sixty-eight EOPs being analysed, the preceding sub-moves were neglected by the novice and NNS presenters but were concerned by the experts and the NS presenters.

The next significant pattern (i.e., that which occurred twelve times) was +--+ (marked #). This pattern means concern by novice presenters (+), neglect by expert presenters (-), neglect by NS presenters (-) and concern by NNS presenters (+). It occurred in sub-moves I.1B (Acknowledging the audience), I. 1C (Greet audience), I. 2 B (Identify what needs to be done), B. 3C (Highlight

major importance), B. 4A/SB. 4A (Describe how the work was observed), B. 4B (Describe what was observed), B. 4J (List functional requirements), B. 5D (Highlight advantages of the proposed solution), T. 3D (Discuss prospects of success), T.4B (Summarise main points) and T.5B (Stating that it is the end of the OP). This seems to be the reverse of the pattern explained in the preceding paragraph. The novice and the NNS presenters seemed to be concerned in these twelve elements but the NS and the expert presenters seemed to neglect them.

The third and the fourth patterns have the same frequency of occurrence (i.e., nine). The third pattern was +-+- (marked &) and the sub-moves which have this pattern were I. 3B (Detail preview of the structure of the OP), I. 3C (Limit scope), B. 1E (Show comparison between old and new), B.4F (List sequence of the development of the work), B. 6D (Highlight facts on pilot test), B. 7A (Highlight results) and B. 7B (Highlight positive characteristic of the results). According to this result these sub-moves have been neglected by the expert and the NNS presenters (-) but have been concerned by the novice and the NS presenters (+).

The fourth pattern, -+-+ (marked as $), was essentially the reverse of the third pattern. Sub-moves I. 1A (Thank the chairman), B. 2A (Lead audience to content), B.2C (Rationalising what needs to be done), B.4D/SB.4D (Rationalising how decisions [on choice etc.] were made), B.4E/S.B.4E (Highlight the components involved in the process), B.4G (Make commentary e.g., on results/principles/concept), B.5G (Highlighting the technical configurations/ technical specifications /features of the model/ system/ equipment needed), T. 3C (Give hints on how to implement it successfully), T. 4C (State the most significant positive fact) and T.

5A (Say *thank you* or its variants) belong to this pattern. These sub-moves had been neglected by the novice and the NS presenters but had been the concern of the expert and the NNS presenters whose EOPs have been analysed in this research.

From the first, second, third and the fourth patterns (symbolised as !, #, &, $ respectively) we can discuss the implications of the scores in two categories. One category is based on the emerging pattern of the established genre characteristics (i.e., the first and the second patterns) and the second category is based on the emerging pattern of the less established genre characteristics (i.e., the third and the fourth patterns). The first two patterns were considered as 'established' because of the higher frequency of occurrence (i.e., twenty-nine and twelve) and the 'less established' because of the lower frequency of occurrence (i.e., nine for both patterns). As said earlier the first pattern (symbolised as !) was -++- and the second pattern (symbolised as #) was +--+. In the first pattern, both the novice and the NNS presenters neglected (-) certain sub-moves in the first pattern but were concerned (+) in certain sub-moves in the second pattern. Thus we see that in the 'established' pattern, the scores of the novice and NNS presenters showed the same pattern. In the same manner, the scores for the expert and NS presenters show similar patterns since both expert and NS presenters were concerned (+) in certain sub-moves in the first pattern but neglected (-) certain sub-moves in the second pattern (See Tables 7 and 8). The fact that these patterns emerged in 'established' patterns showed that such was the trend at the time the EOPs were recorded. In other words the trend at that time was for the novice to be similar with NNS presenters and that for the experts with NS presenters.

In 'less established' patterns on the other hand, the trend was for the novice to be similar with NS presenters and the expert with NNS. Both the novice and the NS presenters showed concern (+) in certain sub-moves in the third pattern (&) but showed neglect (-) in certain sub-moves in the fourth pattern ($). Thus we see that in the 'less established' pattern, the scores of the expert and NNS presenters showed the same pattern. In the same manner, the scores for the expert and NNS presenters showed similar patterns since both expert and NNS presenters neglected (-) certain sub-moves in the third pattern but were concerned (+) in certain sub-moves in the fourth pattern (See Tables 7 and 8). The fact that these patterns emerged in 'less established' patterns showed that such could be the directions of the future. More definitely, this tendency in the 'less established pattern' supports the contention that novice presenters imitate NSs presenters and NNS presenters follow expert presenters that will be dealt with more in the following chapter.

Now, what are the implications of the differences and contrasts? Contrasting features explain some cultural factors that influence the presenters. False starts for example, were found more in OPs delivered by NNS presenters than those delivered by NS presenters because of their 'handicap' in oral English, since it is the presenters' L2. *If you like* was found only in OPs delivered by NS presenters because that is what a NS would say as a filler. This expression has not appealed to the NNS presenters to imitate, but it might in the future.

The implications of the differences of the cognitive elements (Table 6) and the structural elements (Table 5) can be explained in the way these elements structure the OPs. As described by

Montgomery these structural elements, as said earlier, occurred at secondary or lowest level of delicacy (1977: 87) i.e., the listeners hear them as they are reported here and the cognitive elements occurred at primary or higher level of delicacy i.e., the listeners do not hear as they are reported here. At whichever level they occur, their existence thus their structuring of the OPs, depends on one another. These elements were considered as recurring similarities of styles connected to the N or NN status of the presenters because they recur in one native status but not in the other.

However, the fact that the NSs' and the NNSs' OPs differ in terms of the floats (structural) more than in terms of moves (cognitive), indicates that their differences occur at periphery level and not at core level. As will be explained in Chapter 8, *periphery level* here refers to delivery styles which belong to variable elements and *core level* here refers to the invariable elements of the OPs. While in terms of the stability of the moves compared to that of the floats we can say that the moves are more invariable than the floats, the implication of such differences is that they do not affect the NNS presenters' OPs in terms of their technicality.

Thus if the second RQ (Are there systematic differences or similarities between OPs delivered by NSs and those by NNSs of English?) is brought in, we can now say yes, there are similarities and differences but these similarities and differences have to be interpreted along with their psychological and sociological implications.

Intended Audience

The next conventionalised feature is in terms of intended audience. Similarity in intended audience is not one of the five features

outlined by Johns (1994) as the criteria of a genre, but is stated in Swales's (1990) and Bhatia's (1993) definitions. Swales explicitly stated that "(I)n addition to purpose, exemplars of a genre exhibit various patterns of similarity in terms of structure, style, content and intended audience" (p. 58). Bhatia on the other hand, stated similarities in 'intended audience' implicitly in his definition of genre as "an instance of a successful achievement of a specific communicative purpose ..." (p. 16). Bhatia (personal correspondence, 1994) indicates that 'a successful achievement of a communicative purpose' "is a restatement of the fact that a communicative purpose (and therefore a genre) becomes recognisable only if the participants share a common understanding of the nature of such a purpose." For such 'overlap' between the audiences' expectations and the speakers' purpose to take place, not only similarities that lie in the purpose, content, structure, and style, but also similarities that exist in the intended audience are describable.

The description of the similarities in the intended audience of EOPs has to take into consideration the environment in which these OPs were delivered. Thompson considers Dubois's (1980a) biomedical conference speech as a "publicly performed" genre when compared with the lectures in her corpus (1994:182). This is so presumably because the biomedical speeches were delivered in a conference and not in a classroom. Although this conference was only attended by those from one discipline (biomedicine), it is a public event of the biomedical DC.

Along the same line, the EOPs being studied in this present study were delivered in three conferences and a seminar. These events were attended by the DC members of the engineering discipline and were public events of this DC. If biomedical speeches

are considered as a 'publicly performed genre' (Thompson, 1994:182) then perhaps we can claim that the EOPs being studied in this research can also be considered as a "publicly performed genre" because they were also delivered in DC public events, as indicated by the SIs. Since the EOPs analysed in this research were delivered in DC public events, the intended audience of EOPs would have the characteristics of the audience of DC public events.

Audiences of such public events, according to the SIs consist of politicians, government officials, academicians, technical and business men.

In Chapter 1 it was mentioned that the applied nature of engineering was the root of the commercial nature of this discipline. Commerciality attracts business persons and thus they were one of the intended audiences of EOPs. In the EOPs indications of a business audience were quite obvious. To cite from two presenters, Pr52 mentioned "invest" and "entrepreneurs"; Pr35 mentioned "customer" and "demand". This is not different from Dulek's (1991) description of a business audience that is related to cost. The presence of business audience in EOPs could also be strongly felt in the presence of Sub-float 4.1 (commerciality/confidentiality) already explained.

A technical audience would inevitably be intended to be present by the speakers since they were engineering public events. Moreover, as discussed in Chapter 1, engineering deals with applied science, i.e., technology, where the technical persons are found. This explains the presence of technical terms such as *buffer storage* (Pr3), *mosfet* (Pr57) and the like, which could be found even from the titles of the EOPs being analysed (Appendix A). To us these technical terms are jargons as they are highly sophisticated and

specialised terms related to the field of engineering and are only understood by professionals in this DC. This does not contradict with Dulek's (1991) description of technical audience as related to professionalism, technicality, jargon-filled, highly specialised language, and even sophistication (p. 224-225).

An academic audience was also amongst those intended in EOPs. The academic stance (detached and not attached) taken by the speakers to be explained in Chapter 7, the academic topics and the preferred interest or inclination (i.e., academic preferable to commercial) were three signs of the nature of academic audience. Under the discussion on similarities in the content of EOPs, it has been explained that academic topics were presented in the EOPs - those research and technical topics described as nearer to the scientific/technical end of the continuum presented in Figure 4. This end of the continuum was more academic than those at the other end of the continuum (i.e. the management end) in the same figure. In addition, the occurrence of Sub-float 4.1 (Commerciality/Confidentiality) (See Figure 6) was explained to be less favourable compared to the academic inclination.

Political and government audiences although the smallest in number, seemed to be influential especially in engineering meetings observed in Malaysia. They were observed to be either officiating at the occasion, delivering welcoming/opening addresses or were simply present to listen to the OPs.

An example of a politician officiating at such a public event was seen at the Urban Transportation Seminar, where the minister of transportation was present. According to the SIs, the minister was present because of the grandness of the seminar, i.e., to announce the country's project on urban transportation.

In more academic DC public events, government officials were found to officiate at the events, as in the case of Pr25 (Appendix A) at the Power Engineering Conference, Pr 51 who delivered a welcoming address at PEMAS Conference and Pr29 who delivered an opening address at the Tenth National Conference on Manufacturing Research. Pr25 was the Director of the National Electricity Board Ltd. Malaysia (*Tenaga National Berhad*), Pr51 was the Deputy Director of MIMOS and Pr29 was the Pro-Vice-Chancellor Research of Loughborough University.

The presence of a government official and even a politician can be illustrated in three captions which occurred in the following order, in Prn68:

Caption 1: But what we are going to do + we are going to remove all street parking in line with our *Datok Bandar* and our *PM* that all street parking will be removed by the year 2000 |+ In line with that + we will-we will be the first initiators to do that job ((laughter)) +

Caption 2:
I guess one person who is not happy is *YB* — he's just there + ((laughter)) but he will have to endure with us er + during this-this + brief period |+

Caption 3:
We cannot change the + bus route too much |+ And that is *En.* —'s department earlier |+ That is one of the conditions they have given that we have got to keep the bus route within its existing system ...

YB found in the second caption is the Malay acronym for *Yang Berhormat* (The Honourable Gentleman) and this signals a face-to-face address to a politician. Although the minister of transport did not stay to hear this OP there seemed to be another politician who in fact stayed and listened to the OPs. Dulek reported that written documents that are intended for a political audience tend to contain diplomacy and 'overuse of passive sentences, with missing subjects' i.e., obscure (1991: 226). Although diplomacy in the second caption is seen in the use of *I guess*, obscurity in terms of passive sentences

with missing subjects have not been found presumably because EOPs are an oral transmission. However, the use of *I guess* could also be interpreted as a milder form of obscurity in which it signals a defensive reaction in having to address the politician.

En. in the third caption is the Malay short form for *Encik* (Mr. or Mister); *Datuk Bandar* in the first caption is the Malay word for the Mayor; and *PM* is the acronym for *Perdana Menteri* (Prime Minister). While the Mayor and the Prime Minister were not present to hear the OP, the 'Mister', a government official, was present. Dulek describes a government audience as wanting to see 'proper procedures being followed' in a written document (1991: 226). As seen in the illustration, government audiences of the EOPs also had this concern. In the third caption, the presenter was explaining his position that had to conform to the Kuala Lumpur City Hall regulation on the requirement not to change the bus route and in the first caption he was telling the audience how he kept to the Mayor's and the Prime Minister's ambition to remove street parking by the year 2000.

The last intended audience is that of legal one. Members of the legal profession need not necessarily have been physically present, but they feature as an implied audience in so far as EOPs clearly deal with legal preoccupations. Two examples are from Pr 17 and Pr52.

Pr52: So those of you who feel that er there's an entrepreneur waiting to get out in you + One to one in private if you like + and see what arrangements can be made |+ I see 'my sister' here in this room so I am getting nervous +| She'll ask me later what I am trying to say +

Pr17:
But SIRIM doesn't test functionality +. It tests safety |+ So if you use () for example this plug into the mains on computers () but they haye not checked () for use + er in this circuit ... If there is chance ((luck)) it is working |+ If it is not working + hard luck + You buy another one + They don't replace |+

Although Pr52 expressed his 'fears' in an anecdotal manner, there was nevertheless some 'fears' being expressed. Legal risks, threats and effects are probably projected through anecdotal evidence as normally presenters do not wish to state them objectively. Dulek indicates evidence of 'legal risks' can be heard from "anecdotal evidence of people losing promotions, jobs, lawsuits, and careers due to inappropriate statements ..." (1991: 227).

Pr17 highlighted a neglected consumer right and he was teaching the audience how to test functionality since SIRIM, he said does not test it.

We can see that legal concerns in EOPs could in fact come from the customer (Prn17), a government official (Prn52, Pr68) or a politician (Pr68). In fact, as indicated by Dulek, "there are legal risks from business, government, and political readers as well" (p. 227). Presumably because a written discourse is more permanent and binding, legal risks are higher in written compared to oral documents. Nevertheless such a legal threat, like an audience, "is never a fiction" (Dulek, p. 227). If legal audience in Dulek's written discourse causes OSHA (Occupational Safety and Health Administration) consultants to resort to 'by the book' and "heavy use of standardised language" (p. 227) in EOPs it has subtler effects but does affect the conventions used especially those by the novice and NNS presenters. Legal preoccupations related to novice-expert identity will be dealt with in the following chapter.

Metalanguage

According to Johns similarities in 'metalinguistics' are a conventionalised feature that a genre should share (1994: 17), and

in Bhatia's terms, it is categorised into 'discoursal resource.' Johns (1994:17) agrees with Enkvist (1990 in Johns), who states that metalinguistics is important to the understanding of a genre since we should differentiate between text and metatext (Johns, personal correspondence, 1995). In this research, the text of the OPs have been described especially in terms of its content, structure, form and style. This section describes its metatext, the 'features that support the text' (Johns, personal correspondence, 1995).

Before the 'metatext' of EOPs is defined, what previous researchers say about 'metalinguistics', and its variants are first looked into. Sinclair and Coulthard reported that in the context of classroom teaching, a metastatement "is to tell the class what is going to happen..." (1975:22). They describe a metastatement as referring to "an act ... whose function is to state what the discourse is going to be about. ...it is technically not part of the discourse but a commentary on the discourse ... telling them what he is going to tell them" (Sinclair and Coulthard, p. 39).

'Frame' and 'focus' are described as related to metalinguistics. They are highlighted by Nesi and Skelton (1987), Sinclair and Coulthard (1975) and Montgomery (1977). Nesi and Skelton who borrowed these two terms from Sinclair and Coulthard (1975) and Montgomery (1977) stated that "the function of a 'frame' is to signal a change in the direction of a talk - to tell the audience that a new subject is being discussed" (1987: 11). Examples of frames are 'now,' 'right,' 'well' (Nesi and Skelton p. 11; Sinclair and Coulthard, p. 22), 'good,' 'OK' (Sinclair and Coulthard, p. 22) and examples of 'focus' are firstly, secondly, finally, 'I want to...,' 'let's consider,' 'an interesting feature..', 'an important point...' (Nesi and Skelton p. 11). Frame' and 'focus' are said to be found a

lot in the metastatement in the classroom discourse analysed by Sinclair and Coulthard (p. 22).

Mauranen defines 'metatext' as "text about the text itself" whose elements "go beyond the propositional content" such as, according to her, the italicised part of the following sentence: "*The paper concludes by explaining why* the results of empirical work done by Chang (1983) do not correspond to the expected results" (1993:8). She cited some scholars who "take a comprehensive view of metatext, and include in it not only text organising elements, but also interactive elements such as expressions of the author's attitudes and certainty" (P. 8). She cited Markkanen et. al. (1990 in Mauranen, 1993:8), who defines 'metadiscourse' as "the linguistic material which does not add propositional information but which signals the presence of an author" (P. 8). She indicated that the italicised section of the following example illustrates metatext: "*For the purpose of illustration, let us assume that* ...= -0.015, a figure implied, for example, by assuming that treasury bills are risk free..." (p. 9).

Johns defines 'metalanguage' as "those features of a genre that go beyond the actual words of a text" (1994:17).

The terms used by these previous authors vary from 'metalinguistics' (Johns) to 'metatext' (Mauranen, Johns) to 'metastatement' (Sinclair and Coulthard, Cook) depending on their contexts, but the notion of the prefix 'meta' is the same - 'above', 'higher", 'beyond' or 'support'.

Metalanguage highlighted by earlier works (Cook, 1975; Sinclair and Coultard, 1975; Montgomery, 1977, etc.) are linguistic or verbal in form and those highlighted by recent works (Mauranen, 1993; Johns, 1994) are non-linguistic or non-verbal or

visual in nature. The strength of works such as those by Mauranen and Johns is in their capability to widen the scope of metalanguage to include the non-linguistic forms and the strength of earlier works like Sinclair and Coulthard and Cook is in their classification and structural description of the linguistic forms of metalinguistics.

In this research both the linguistic and the non-linguistic forms of 'metalinguistics' are utilised to describe the metalanguage of EOPs. In the case of EOPs however, since both the linguistic and non-linguistic aspects of 'metalanguage' will be dealt with, the word 'metatext' is thought to be more appropriate than 'metalinguistics'. The word 'metastatement(s)' will however be used to refer to specific statement(s), rather than to the general one.

Sinclair and Coulthard's structural descriptions of metatext however, are found to be only prospective and not retrospective (1975:39,43). Cook's meta number four is also a retrospective metastatement, explained as "Realised by a declarative which indicates the plan or recalls the theme of an earlier portion of discourse" and the example given is: "we spent too long on the first part of the lecture" (p. 95). Cook's definition of retrospective metastatement seems to be similar to Sinclair's and Coulthard's concluding statement defined as "a special kind of statement which occurs at the end of some transactions and summarises what he has done" (p. 39).

Although Sinclair and Coulthard later described this concluding statement as "the converse of metastatement" (p. 39), Cook's description of it as "recalling the theme" and Sinclair's and Coulthard's description of it as occurring "at the end" seem to be both referring to the retrospective position. In addition, these definitions do not contradict the definitions of metatexts by

Mauranen (1993) (i.e., text about text) and Markkanen (as one which signals the presence of the author) cited earlier. If this is right, then, it is "converse" in terms of the position, i.e., that Sinclair's and Coulthard's metastatement is prospective, and that the concluding statements have retrospective positions.

In the context of the EOPs, then, verbal metatexts consist of Float 5.2 (prospective metastatement) and Float 5.3 (retrospective metastatement) (Table 2). Float 5.2 is called 'metastatement' and float 5.3 is called 'concluding statement'. These floats were found to have the characteristics of verbal metatexts found in previous works already cited. By using a 'metastatement' (float 5.2), an EOPr told the audience what he was going to do in the OP. Such statements occurred when previewing the structure either briefly (I.3A) or in detail (I.3B), when explaining technical matters in the body of the OP and when terminating the OP.

An example of a brief outline (I.3A) in the form of metastatement is from Pr 66 "...but let me briefly remind you the definition of TPM + and I'll tell you why I am doing this |+" and an example of a detail outline (I.3B) in the form of a metastatement is from Pr35: "Now what you are going to see in this activity in the next er fifteen or twenty minute time + is ( ) |+ So what you are going to see now + is a machine + a simple machine that can address four different products |+"

These statements occurred at the position where preview would normally be found and therefore were considered as previews in terms of sub-moves (I.3A) as well as metastatements in terms of sub-floats (5.2). Like Mauranen who found previews as one of the sub-categories of metatext in her corpus (1993: 10) a preview or outline also emerged as one sub-category of prospective metastatements in the EOPs. Prospective metastatements could also

occur in the body of the OPs such as in the case of Pr66 ("Before I tell you why you should get serious about involving your operators + I want to remind you about the power of TPM + and + this is a very quick-quick er + refresher for those of you +..."). Another example is from Pr16 :"So next one is equation four |+" and it was followed by the presenter's explanation on equation four. An example of such statement that occurred in the termination is from Pr23: "I don't think we have time to + go through all the + () so I just show you + ()".

By using a retrospective metastatement, or the 'concluding statement' (Sub-float 5.3), an EOPr told the audience what he had finished telling them. In the EOPs, Sub-float 5.3 occurred at the end of some explanations and as Sinclair and Coulthard described, it summarised what the presenter had done. Examples are:

This is what basically this lecture is about + it is continuously building the foundation which will facilitate progress + in order to overcome these problems which I now talk about |+ (Pr53).

There you are |+ That's conventional + - mechanical drawing + OK? Isn't it simple? Conventional +- drawing |+ (Pr24).

The 'frame' and 'focus' that were coded and discussed in the EOPs were those which have sociological implications such as in the case of *OK* (Sub-float 3.1). (See the NNS-NS styles already discussed). In the sixty-eight EOPs analysed, a total of 263 *OK* (Float 3.1) were found. They assist the metastatement to change direction and enter a new phase. For example, the *OK* found in Pr24 cited in the preceding paragraph was followed by "Isn't it simple? Conventional +- drawing |+" to reinforce what had just been explained and then was followed by "Well + let me show you + GET drawing + GET drawing OK?" which is a new subject. So the change of direction took place from an explanation of "conventional +- drawing" to "GET drawing." In the case of Pr53, the change of direction took place from "progress" to "problems" to be "talked about".

The metastatements so far identified functioned as organising elements (Mauranen, 1993) for the presenters. For instance through the metastatement (Sub-float 5.2), the presenters were able to signal to the audience what they were going to tell them. After telling them what they wanted to tell them, they confirmed that they had done so (Sub-float 5.3) before they told them something new. These also could be considered as interactive elements (Mauranen, 1993) between the presenter and the audience. This could be realised through expressions of the author's attitudes and certainty (Mauranen, 1993) which can be seen in: "you should get serious" (Pr66) and "I don't think we have time to + go through all" (Pr23) already cited above.

Based on explanations given by Olsen and Huckin (1990) and especially by Johns (1994), visual aids in EOPs could be considered as having the characteristics of metastatements. Olsen and Huckin report that engineering lectures are heavily audio visualed. It has also been discussed in Chapter 3 that visuals are mandatory in monologues that are called OPs. This indicates that visual aid is an important phenomenon in engineering and it was found to be true in the sixty-eight OPs being analysed. In the OPs analysed, they were observed to be a must and although those observed in one conference could not be coded because they were audio taped and not videotaped, all the presenters did use visual aids. Two presenters did not use visual aids because they gave welcoming speeches. In all other OPs, visual aids of some sort were used. The importance of visuals in EOPs is illustrated by the fact that in each of the average fifteen to twenty minute OPs, visuals ranged from four to twenty six where twenty-six is the maximum found in one OP (Pr29).

In order to qualify for a metatext, there is need to prove that visual aids in EOPs have 'features that support the text' (Johns, personal correspondence, 1995). In order to see how visual aids in EOPs 'support the text', the term 'illustration' has to be defined. An illustration is an act of showing a visual representation of what is being explained. This act involves presenting the visual while uttering explanations. The visual aids were found to be in the form of diagrammatic or graphical representations of the text. A visual pointer is the first utterance that is used to direct the audience's attention to the visual (Seliman, 1995a). A visual pointer signals the presence of illustration. An example of obvious visual pointer found amongst the 68 analysed EOPs is: "If you see this er + prototype" (Pr58) and at the same time the audience's attention was directed to the visual.

However, not all visual aids were found to be shown with obvious visual pointers. One of the reasons for this was that not all visual aids were found to be instances of illustrations. If each visual is an instance of illustration, the number of visual aids would be equal with the number of illustrations. But there were lesser number of illustrations because some visual aids were not meant for illustration. Examples of such visual aids were transparencies or slides which had the title of the OP, the name of the presenter shown at the beginning of the OP and those which have e-mail or other addresses for contact which were shown at the end of the OPs. These were for communication and not for illustration.

Visual aids which were meant for illustration normally occurred in the body of the OP and they were usually accompanied by 'visual pointers'. It was noted elsewhere (Seliman, 1995a) that visual pointers which occurred in the body of the OPs were found to

be phrased more obviously but those which occurred in the introduction were found to be more incidental. The reason given earlier was because 'the body of the talk (was) supposed to be the main situation of the content which needed the visuals most' (Seliman, 1995a:14-15). In this research it was confirmed that the body of the OPs was where the 'support of text' took place in the form of 'visual representations of the text'. Thus the visuals that could be considered as metatext should exclude those which were shown as a form of communication, those which were normally shown at the beginning and at the end of the OPs.

Johns indicates that "visual representation of the text on paper" (1994: 17) is a type of metalanguage. Although not necessarily 'on paper', 'visuals' in EOPs are 'visual representation' of the text. If visuals could have features that 'support the text', they could have other aspects of metatext as well. Two aspects of visuals related to metatext that might be of some interest are why visuals are an important phenomenon in EOPs and which visuals are most popular.

Visual representations normally took the form of visual aids which were either projected on to a screen or audio. In the EOPs analysed, although an audio visual (video) was used in one OP, the rest were generally either OHP or side. To be exact, a total of 79% of them were overhead transparencies, 14% slides and the rest consist of a combination of a number of visuals thus making overhead transparencies the most popular visuals used. This is in harmony with the responses of the SIs contacted during and after the fieldwork, the responses of chosen or 'good' SIs (Appendix C: Question 31), and Shalom's (1993) report on overhead transparency

as the most common visual aid used by the oral presenters in the field of engineering.

The SIs indicated that the norm was to use available visuals and the impact of the presentation should come from the authenticity of the content of the research and the effectiveness of simple and reliable visual representation of it. The up-to-date visual, as one NS informant put it "can be very distractive" and this was true in one of the OPs being analysed. This presenter (Pr47) had such difficulties in fixing his computer to show his slides until the last quarter of the OP that he had to use his back-up which happened to be overhead transparency. This perhaps explains why overhead transparency emerged as the most common visual in this field.

After knowing what visuals they prefer, the next question asked concerned the reason for wanting to use visuals. The respondents contacted after the fieldwork were requested to choose the best reason for using visuals in their field. Most of the SIs (75 %) indicated that visuals are used for clarity of exposition to the audience. Only 25% of the SIs admitted that visuals are also for the presenters' guide. This points to the engineering DC members' preference for visual thinking, as Olsen indicates: "Visual thinking is a productive means to the organisation and understanding of complexity, a viable and valuable mode of thought well-suited to the needs of our data-laden epoch" (1991:18). These professionals believe that "...the traditional modes of expression and understanding lost their power to give meaning and persuade" (Olsen, 1991: 13).

The engineering DC members' preference for visuals and the type of visual chosen by the presenters in this research were

perhaps due to the nature of the engineering discipline, which relies more on concrete than abstract things. Thus accuracy is of supreme importance. Not only OPs must be as concrete as possible, they must also be as simple as possible, as unobtrusive as possible, so that their propositions are delivered smoothly. Engineering is a problem solving profession (Olsen and Huckin, 1990); thus EOPs are meant to solve some kind of problem and the DC members found that overhead transparencies were useful and reliable visual aids.

Thus we witness some describable similarities in the use of verbal and visual metatext in EOPs, which according to Johns (1994) qualify the discourse as a genre. In other words, the engineering DC members did share some characteristics of metatext -- in terms of which category of metatext (retrospective and prospective), the position the metatexts were used (introduction as preview, body when explaining technical terms and termination) and in the type of visual aids being used (overhead transparencies). If the elements of verbal metatext (Floats 4 and 5) were not sufficient to be claimed as the defining characteristics of EOPs, those of visual metatext should be able to strengthen this claim.

We have seen that EOPs were conventionalised in communicative purpose, genre name, content, structure or form, style, intended audience and metalanguage. How these conventionalised factors serve the communicative purpose of the DC and other remaining factors highlighted in the summary of the definitions of genre will be dealt with in the following chapter.

Chapter 7

CONVENTIONS: RATIONALE AND INTERPRETATIONS

In this chapter we will explore possible interpretations surrounding the conventionalised features discussed in the previous chapter. We will begin our discussion with the rationale of the similarities and conventions of the features in the genre of EOPs. We will now attempt to answer why there were conventions in certain factors -- what are the reasons for their existence and what are their functional values?

For an explanation we can turn to Johns who quotes Miller (1984) in defining *genre* as "composed of a constellation of recognisable forms bound together by an internal dynamic" (1994:17). Johns explains that this 'internal dynamic' refers to 'form' and 'style' similarities, and they 'assist the discourse community members to identify and distinguish them from other genres they know.' This means the similarities in form and style features distinguish OPs from other genres familiar to them, such as that of RAs. If such is the case, these similarities and conventions can be interpreted as the schemata, or what Bhatia (1993) and Swales (1990) refer to as functional value, which could assist the communicative goal that carries the 'social action' of the discourse or genre. This is the third factor in the summary of definitions of genre.

What are meant by schemata (plural), how are they acquired and how do they assist communication in a genre?

Agreeing with Rumelhart (1984 in Hewings and Henderson), Hewings and Henderson explain that schemata are "abstract generic concepts constructed by the mind on the basis of patterns of experience" (1987:167). In EOPs, these 'abstract generic concepts' refer to the similarities in the six conventionalised factors stated earlier. These 'generic concepts' also refer to the 'standardised rules' which include what the SIs call, the 'unwritten rules' connected to commerciality to be discussed. These two aspects form the schemata of the engineering DC in relation to the activity of making OPs.

Since the moves of OPs are also schematic in nature, it would be helpful to differentiate between *schema theory* and *schematic structuring* which is also called *cognitive structuring* (Bhatia, 1993). According to Bhatia, "cognitive structuring, in a way, is very much like schematic structuring in schema theory, except that in the former, it is the conventionalised and standardised organisation used by almost all the members of the professional community, whereas in the latter, it is often a reader's (an audience's) individual response to the text in question" (1993: 32). In other words, according to Bhatia, the difference lies only in the scope of users and not in the function. "Cognitive structuring" is used by *all* the members of the DC, but schema (singular) is used by the audience; the function of schema in both cases is the same - to assist communication. "Cognitive structuring" refers to the structuring of the 'moves' but "schema theory" refers to the 'abstract concepts' (Rummelhart, 1984 in Hewings and Henderson, 1987) which include those of the six aspects of similarities or conventions and the 'standardised, unwritten rules' of EOPs.

The 'patterns of experience' (Hewings and Henderson, 1987) might be of some interest in our discussion on how schemata are acquired. From the information gathered from the SIs, the 'patterns of experience' (Hewings and Henderson, 1987) in EOPs were found to be both consciously learnt and naturally acquired (Krashen, 1982). According to Krashen, adults learn language in two ways -- they can either acquire it *subconsciously* (informal and implicit as in child language acquisition) or learn it *consciously* (explicit and formal as in the language classroom).

The *conscious* learning 'patterns of experience' (Hewings and Henderson, p. 167) were found to be connected to their workplace and their knowledge of general public speaking. To find out their knowledge of general public speaking, the respondents were asked to choose the response(s) which best describe(s) their knowledge of general public speaking (Question 16 Appendix J). Four responses were given for them to choose from, as presented in Table 9:

Table 9

SIs' Knowledge of General Public Speaking

n=100

Choices	Raw Score and Percentage (%) of Responses
(1) Have read books/ manuals/ articles/ handouts on how to make a good speech;	34 (34)
2) Have listened to at least one lecture on public speaking or attended at least one public speaking course;	38 (38)
(3) Have sought advice from an expert on how to deliver a good presentation;	16 (16)

	Table 9 -- *Continued*
(4) Have never received any advice whatsoever whether orally or in written form on how to give a good presentation.	13 (13)

It was found that the percentage of responses for the first and the second choices were almost similar (i.e. 34% and 38% respectively -- Table 9). This pattern was observable in both the NS (29%) and the NNS (36%) respondents. Whether through reading (1) or through lectures (2) these *conscious* learning attempts (versus *subconscious* learning or *natural* acquisition) proved to be uncommon to them. Other conscious learning approaches were found to be infrequent too. Very few (i.e., 16%) sought advice from an expert on how to deliver a good presentation (3) and some (i.e., 13%) never even received any advice whatsoever on how to give a good OP (4). An interesting pattern arose in the percentage of respondents who had never received any advice from others on how to make a good OP. It was found that more NS respondents (i.e., 20%) were found to belong to this category than the NNS respondents (i.e., 9.5%). People may assume speaking a language equals knowledge of genres.

To find out about the conscious learning 'patterns of experience' (Hewings and Henderson, 1987:167) connected to their workplace the respondents were first asked whether their workplace offered some kind of speaking course or seminar or

workshop (Appendix C: Question 15a). Then they were asked whether the speaking course, seminar or workshop were general or technical in nature and whether the respondents considered these as guidelines in making OPs. Finally, they were asked where they normally got guidelines, regardless of what the workplace offers.

Although more (i.e., 57%) respondents, both NS (55%) and NNS (58%), reported that their workplaces offer some kind of speaking course or seminar or workshop, most (61%) of these were reported to be general rather than technical in nature. This tendency was also traced in both NS (64%) and NNS (58%) respondents. Although few work places offered a technical speaking course, seminar or workshop, more than half of them (58%) regarded these as a source of guidelines, both among NNS (56%) and NS (67%) respondents, although the percentage for the latter was slightly higher.

For the question of where they normally got guidelines on how to make OPs if not at their workplace (Appendix C: Question 15b), three choices were given: (1) Read articles/ books/ manuals/ handouts/ listen to speech on how to make a good oral presentation; (2) Follow specifications given by engineering seminars or conference; (3) Observe other OPs. The result indicated that a total of 26% of the respondents (22% of the NS and 28% of the NNS respondents) read articles/ books/ manuals/ handouts or listened to speeches on how to make a good oral presentation (1). A total of 23% of the respondents (24% of the NS and 22% of the NNS respondents) used specifications given by engineering seminars/conference (2). The trend in these two responses was found to be almost similar in both the NS and the NNs respondents. Most of the respondents (51%) however, found guidelines on how to make OPs by observing others making OPs.

This trend was found to be quite similar among both the NS (54%) and the NNS (49%) respondents. This *natural* 'pattern of experience' coincides with what was reported by Johns who indicated that the schemata for writing (learning to write and publish articles) can be acquired through reading the text and "thinking about how they are structured and how argumentation is built" (1994:17).

Many respondents (13%) who opted for number 1 (Read articles/ books/ manuals/ handouts/ listen to speech on how to make a good oral presentation) also opted for number 3 (Observe other OPs). Thus many of those who reported that they normally get guidelines on OPs through articles etc., would also "observe other OPs". The pattern is similar in both NS and NNS respondents. This makes the total percentage of those who found guidelines on how to make OPs by observing others delivering OPs even higher than the 51% reported in the preceding paragraph. This method of acquiring knowledge or schemata on general public speaking or getting guidelines on how to make OP is *natural acquisition* rather than *conscious learning* popularised by Krashen (1982). In other words the *natural* 'pattern of experience' was found to be more common amongst the engineering DC members than the *conscious* learning one.

With the highest percentage of vote, *conscious* 'pattern of experience' was found to emerge through the question on the manner of passing down 'standardised rules' to the novices (Appendix C: Question 44 and 45). A total of 69.23% [NS (64%); NNS (73%)] reported that the 'rules' were passed down to the novices by exposing them through several ways such as incorporating OP exercises into degree courses, workshops, or

exposing them to actual conferences/ seminars and requiring them to make OPs. Feedback, the respondents noted, was given on their OPs, sample OPs shown to them, followed by consultation and discussions. Conscious learning was found to be common within the SIs' experience undergoing academic courses (incorporated into degrees); Outside their academic activities, the natural pattern was still the more common practice. Moreover, many of these 'patterns of experience' were reported as processes of determining the form/structure and style *by the presenters themselves* within a recognisable set of characteristics of EOPs as a genre.

To explain how schemata assist communication in a genre, we could bring in Hewings and Henderson who conducted a study on the link between genre and schemata in relation to economics texts in a reading context. Their students were found to attempt "to mould the content of the articles into the framework of the textbooks" (1987:163) because they had the schema of textbooks but they did not have the schema of JAs. Further, in explaining the role of schema theory in reading, Hewings and Henderson state that 'When reading, if the reader brings to bear previous knowledge which is close to that assumed by the writer, the decoding process is facilitated' (1987:164). Huckin (1982 in Hewings and Henderson) summarised the function of schemata as follows:

> We are all aware that knowing something about a subject makes it easier to learn more about that subject: our prior knowledge serves as a framework which makes the new information more meaningful and easier to absorb" (1987:165.

Discussing from the point of view of the audience, according to Anderson schema is more concerned with the 'abstract concepts,' (thus Rumelhart's 'abstract generic concepts' thus the conventions of EOPs) that exist in the minds of the audience, which assist them

in processing information, in the "interaction of input with existing knowledge" (1977:417). In EOPs, however, a schema assists in the communication of both the presenter and the audience.

Thus in the context of EOPs, Anderson's "interaction of input with existing knowledge" refers to the process that takes place both in the audience and in the presenters. From a presenter's point of view, Anderson's *input* refers to the information on the audience and the content to be delivered; Anderson's *existing knowledge* refers to the schemata or the conventions of the genre that are 'stored in the (presenter's) brain' to gauge the accuracy of their decisions on the right content, the rhetoric to be used, etc.

From an audience's point of view, Anderson's "interaction of input with existing knowledge" (1977:417) takes place when s/he hears an EOP -- *input* refers to the OP being delivered and *existing knowledge* refers to the schemata that exist in the minds of the audience. Upon hearing the OPs, the schema that is 'stored in the brain', acts as 'a framework' into which new information fits. The schemata assist the audience in processing new information, as Dubois explains, if "(t)he hearer can't predict the structure, i.e., has no specific schema for what is being presented, ... the speaker needs to present one to assist the listener. The speaker provides the top-down structure into which the listener can fit the incoming data in bottom-up sequence" (personal correspondence 1994).

This "top-down" processing is what Carrell (1983:82) calls "conceptually-driven" and the "bottom-up" processing is what she calls "data-driven." She explains "bottom-up"/ "data-driven" as a processing "evoked by the incoming data; the features of the data enter the system through the best-fitting bottom level or specific schemata" and the 'top-down'/ "conceptually-driven" as a

processing which "occurs as the system searches the input for confirmation of predictions made on the basis of higher order, general schemata." In both presenter and audience, "(i)f appropriate schemata are already stored in the brain it is an easier matter to activate them than to try to establish new concepts and ideas on sketchy or non-existent foundations" (Hewings and Henderson, 1987:167). This framework is used to mould the new knowledge. With this stored schemata available in the minds of the audience, the new information is made "more meaningful and easier to absorb" (Hewings and Henderson, 1987:167).

Now, how is social action related to schemata? The SI's responses on the 'standardised/ unwritten rules' need to be explained here. They indicated that the 'unwritten rules' included omitting confidential elements, accompanying talks with visuals, and delivering the OPs within the given time. The SIs indicated that these unwritten 'rules' were left to the presenters themselves to imbibe through *natural* 'patterns of experience' (Hewings and Henderson, 1987:167) except for that connected to confidentiality which carries the notion of 'social action'. The latter was found to be spelt out by the institutions the presenters were representing. This could be caused by the institutions' great interest in guarding confidential information -- it is too important to be left unstated and it is vital that they be guarded because in EOPs, they were often related to commercial value. The fact that confidentiality float (Float 4.1) was not found as frequently as other floats, although commerciality emerged in many other forms, was not caused by the lack of its importance in shaping the genre but because this element was found to be tacit and 'unwritten'. Although tacit, it is significant.

Now, how does a schema assist 'social action'? In other words, how does the schema of the genre of EOPs serve the communicative goal of the genre users? First of all, we would remember that while Bhatia (1993:16) and Swales (1990:58) put *communicative goal* as the controlling factor in their definitions of *genre*, Johns (1994: 17) puts *social action* instead. Based on the capacity of the two overriding factors and putting them in the context of EOPs, we would be able to see that *communicative goal* carries the *social action*. As stated earlier, Johns defines a genre as a 'vehicle for social action' (1994:16). This vehicle is realised by shaping the conventions of the genre in the five features outlined by Johns already discussed, since, according to these authors (Bhatia, Swales and Johns) both *communicative goal* and the *social action* shape the conventions thus the schemata of the genre, in this case, of EOPs. Thus the social action is the reason for the form or shape of the 'generic concepts' or schemata.

Now, what could best explain why NNS presenters' styles imitate those of NSs'? Imitating the styles of the NS presenters must have been a necessity. If so, why is it a necessity to imitate the styles of the NS presenters? If we take the same argument that conventions, thus schemata are shaped by social action, we would agree that these NNS presenters imitated the styles of the NSs' for the same reason. In other words NNS presenters imitated the styles of the NS presenters because of survival.

Johns describes her experience in interviewing grant writers who "were much more interested in discussing the social action issues" such as "to convince the readers at the National Science Foundation to continue to give them funds for their research"

although she was "interested in the features of the texts that the engineers wrote" (1994:16) .

Likewise, the NNS presenters in the context of EOPs, felt that they needed to imitate the styles of NS presenters to be able to compete, especially at international levels, to secure grants and, more importantly, to be internationally acceptable, especially to the Anglophone community (Swales, 1990) which has the dominant influence. Along the same line, novices imitate experts (Johns, 1994:21) to be accultured into the DC (McKenna, 1987). To members of the audience, schema assists them in distinguishing one genre from another. To the experts, the schema assists them in identifying the type of genre (Johns, 1994:21). In addition the experts have personal goals to exploit (Bhatia, 1993:13) using the schema or genre. In the context of EOPs, this personal goal could be related to commercial purposes which could very well be closely linked with the confidential information that most of the DC members and institutions, especially those with commercial interests had great interest in keeping them confidential. This will be dealt with more under constraints and variations involving novices and experts.

CONSTRAINTS AND VARIATIONS INVOLVING NOVICE AND EXPERT PRESENTERS

This is the third factor found in the summary of definitions of genre. As stated in the previous chapter (in relation to Tables 7 and 8), novice and expert presenters were found to concern (+) or neglect (+) in different sets of sub-moves. Such differences had

already proven to us that the sub-moves preferred by novice and expert presenters were not similar.

According to Johns (1994) a genre normally has describable variations in form, style and purpose involving experts and novices. These variations cause 'blurred genres' (Geertz, 1993a), instances such as in the case of "philosophical inquiries looking like literary criticism" or "documentaries that read like true confessions" (Geertz, p. 20). Variations may be permitted, "but not always" (Johns, 1994: 22), and when they do occur, they are not initiated by the novices since "Initiated members of discourse communities are particularly insistent that the novices follow ... conventions" (Johns, p. 22).

These variations occur within constraints. There are variations but only within limits, as results of "constraints on allowable contributions" (Bhatia, 1993:14) in the conventions of the genre. According to Bhatia although the communicator "has a lot of freedom to use linguistic resources in any ways s/he likes, s/he must conform to certain standard practices within the boundaries of a particular genre" (p. 14). Bhatia continues that a skilled genre user can "exploit the rules and conventions" for certain "effects or private intentions" but "he cannot break away from such constraints completely without being noticeably odd" (p. 14).

Similar patterns were found in EOPs. To describe such variations, first of all novice and expert presenters had to be identified. In analysing the EOPs, only two labels were used. Those introduced as 'experienced' by the chairmen of the sessions were rated as 'skilled' and the rest as 'others'. Of the sixty-eight presenters whose EOPs were analysed in this research, 44% were rated as 'skilled' and 56% as 'others'. If these 'skilled' presenters are considered the 'experts' pointed out by previous researchers,

and the 'others' as the 'novices', there did emerge some describable variations, but in this thesis only obvious ones are reported. Thus *novices* in this thesis refers to presenters who are not necessarily absolute beginners but are not yet greatly experienced in the profession.

One variation (Johns, 1994) is the presenters' intent (Bhatia, 1993; Swales, 1990) or purpose (Johns). Although *purpose* is the "most stable feature" (Johns, 1994: 22) in a genre, variations could occur in it. Perhaps for the purpose of gaining easier recognition from other members of the DC, it was found that the tendency of the novice presenters was to present topics of a higher degree of appliedness compared to the skilled genre users. A total of 69% of the topics that were presented by the novices were application and 62% of the topics that were presented by the experts were theoretical. This means more skilled genre users presented 'approaches' which are relatively low in appliedness while more novice presenters, delivered topics which belong to design, model or system or even method, which have a higher degree of appliedness.

In relation to EOPs, the more applied the topic, the more it is related to commerciality. The less applied, the less it is related to commerciality. Thus we can see that the tendency of the novices was to go for appliedness/commerciality in which members of the audience are more interested, but the tendency of the experts was to work out theoretical topics to set some directions. One possible explanation is that the novices were not 'mature' enough to come up with any acceptable theoretical topic and the only way to gain acceptability was to come up with, as one SI (PEMAS NNFu) put it, "a new topic of the town" through his or her research.

Although the topic of an expert presenter is theoretical, commercial intention may be found being injected in the OP, as in the case of Pr66:

Before I did that + let me say a little about the company + very briefly |+ You may not heard of er + Productivity + quickly I am standing on the other side of the +++ ((moved to the other side of the OHP)) OK + Productivity is er + m + world + ( ) world-wide + we + we only wrote the book on TPM |+ We translated all these (publications) in Japanese ( ) + These for the first time ( ) + We probably have the longest list of publication in TPM an-and we are in America + Europe + Australia + New Zealand + ASEAN and the Far East |+ And we specialise er + not only in-in-in translating books into Japanese we also have a long list of er very hands on er + workshops er + that note you install these new er with practical systems ( ) in time and also TQM |+ I am + the ASEAN branch of this-of this + organisation |+

This presenter actually took the opportunity to 'advertise' his services. This kind of deliberate expression of commercial interest was not found in any of the OPs presented by the novices presumably because the topic is already applied thus commercial of some degree. Thus we see the interest in commerciality as a certainty, but novices and experts express commercial intention differently. While the novices expressed it implicitly, the experts did it explicitly.

Variation also occurred in positioning (Bhatia, 1993; Swales, 1990) or form (Johns, 1994). Variations proved to occur most in this category. They emerged especially in the introduction and in the termination of the OPs. In the introduction variations occurred in relation to expressing the preview and announcing the title. In the EOPs being analysed, 45% of the novices previewed in detail (I.3B) but only 27% of the experts did. Based on this popularity perhaps we could say that previewing in detail was a characteristic of a novice and previewing briefly of an expert. More so since the experts tend to deliver theoretical topics and according to Dubois,

there is less need to preview in theoretical papers because their structure is more predictable (personal correspondence, 1966).

Taking only previewing in detail as example, we can point out another variation - whether it was expressed straight forwardly or creatively. Pr59 (Appendix E), a novice straight forwardly said:

This is the outline of my presentation |+ We'll go through er + introduction + ...+ The problems we face with the current system + The proposed system + The impact of the change and also the implication from the other area ++

whereas Pr54 (Appendix F), an expert, creatively said:

I am going to get rid of our saying + 'why + we don't talk about modelling + product introduction' |+ Talk about what it is in product introduction that is important () What needs to be modelled |+ How now we talk of the process of doing that |+ And then very briefly ... |+ And then to talk a little more about the ... |+ And then where we are looking to go next |+

Variations also occurred in terms of the positioning of the preview. In most OPs the preview was expressed at Move I.3 (Focusing on the content) but a skilled genre user may delay it. For instance, Pr64, delayed this considerably and it was only announced after several sub-moves in the background of information (Move B.2).

In relation to title, the norm was to announce it and to announce it in the introduction, but deviations from this norm did occur. A total of 68% of the novices announced their title but only 17% of the experts did. On the other hand, 33% of the experts announced the subject but only 13% of the novices did. Thus perhaps we can say that novices tend to announce the title (I.2B) but experts tend to announce the subject (I.2C). Earlier it has been pointed out that NS presenters tend to announce the subject but NNS presenters tend to announce the title. NNS presenters proved to be similar with the novice presenters in that they tend to announce the title.

In relation to announcing the title in the Introduction, Pr31, a skilled genre user, did not announce the subject of the OP in the introduction but did it in the body of the OP and he did it very indirectly/subtly: "One thing to mention when we say 'process capability models for equipment selection' ..." followed by mentioning what needs to be done at different levels. The subject of his OP was 'process capability models for equipment selection.' This is obviously indirect compared to Pr59's statement of title: "The topic of my discussion today is er + Linking the diffusion furnace to a personal computer via ...".This title is still more direct compared to another title expressed by an expert (Pr54) "What I am going to talk to you today + is we are actually modelling for product introduction +". Variations in the introduction show that skilled genre users used the elements in the genre more creatively than their novice counterparts.

In the termination, variations occurred in relation to time factor, and inviting questions. According to one chairman, experienced presenters usually took more time - instead of fifteen minutes for presentation and five minutes Q&A, he could take nineteen minutes for presentation and one minute for Q&A or take all the twenty minutes for presentation leaving no time for Q&A. In the termination of many skilled presenters' OPs, Move T.1 (Time check) by the chairman was not found. Many skilled presenters' time was not checked by the chairmen. If what the chairman commented on how most experts use time was true, the absence of Move T.1 (Time Check) in experts' OPs could not be because experts knew their limits but because time constraints were not imposed on them. This claim was strengthened by an expert who was found to subtly 'check his own time' by saying "Because I have to leave + I will go straight to the conclusion I+" (Pr32).

It was found that only 16 % of the novices invited questions (T.5C) but 20% experts did. The greater number of experts inviting questions could be due to their more secure position and therefore their greater confidence. Conversely, fewer novices invited questions due to their unstable position and perhaps lack of confidence. The norm on inviting questions was to invite them at the very end of the termination, but skilled genre users invited questions much earlier (Pr53) and did so more than once (Pr66) ("I like interaction"). Pr53 invited question at move B.7 (Discussing the result) of the OP by saying: "You may ask questions later."

Let us now turn to variations in style. *Style* can be defined as 'deviations from the norms' (Osgwood no date, in DeVito 1966). If we take this definition of *style*, we could perhaps work out the experts' styles by observing how they deviate from those of the novices'. The norms of the style can be described as, to use Bhatia's (1993:15) term, 'more or less similar'. According to him, this is due to the fact that the tendency is greater for users of a certain genre in the same professional and academic context to "structure a particular genre more or less the same way" (Bhatia, 1993:15) compared to those in different genres even in the same context. What deviates from these norms then, could perhaps be considered as the *styles* of the experts in the genre of EOPs.

In EOPs, deviations in the intent or purpose and in the form of the novices and experts give their discourse its style. The novices were found to be straightforward in their expressions and to follow strictly all conventional 'rules' (introduce topic, give outline, stop on time, etc.). The experts on the other hand were found to 'relax' on the 'rules' because normally the chairman would be least likely to embarrass them in front of their audience and

impose, for example the time constraint. An expert was found to be more senior, more experienced and therefore more 'competent' in handling the genre. Thus he could afford to be more creative in handling the genre elements. He could make expressions more creative, and more effective. He could afford to express his preview briefly when his novice counterparts had to express it in detail to achieve the same end. Finally, he felt more confident than a novice to offer to answer the audience's questions. Bhatia states that "the members of the professional or academic community have greater knowledge of the conventional purpose(s), construction and use of specific genres than those who are non-specialists" (1993:15). That is why, Bhatia continues:

> expert genre writers often appear to be more creative in the use of genres they are most familiar with than those who are outside the specialist community. Obviously, one needs to be familiar with the conventions of the genre before one can exploit them for special effects (1993:15).

Variations as a result of "constraints on allowable contributions" (Bhatia, 1993:16) result in blurred genres (Geertz, 1993a) and according to Geertz, the existence of blurred genres or the "jumbling of varieties of discourse" (p. 20) has made it difficult to 'label authors' or to 'classify works' but that does not mean 'we no longer have conventions of interpretation' (p. 21). In the genre of EOPs, the interpretations were made richer due to the existence of these variations. Geertz looks at blurred genres as a 'refiguration of social thought' (p. 21). This interpretation is necessary because genres change (Johns, 1994). This 'refiguration of social thought' perhaps keeps reshaping the genre. An expert starts with something, and if the element he initiates survives time and change it stays in the genre, otherwise it is forgotten. The new element would perhaps stay as long as there are users of it, like a fashion.

EXEMPLARS, PROTOTYPES AND GENERIC FEATURES

Exemplars, prototypes and generic features are the fourth (i.e., the last) batch of factors found in the summary of the definition of genre. It is usual for a genre to have its own exemplars to be used as a starting point in evaluating instances of the said genre since exemplars are outstandingly good or representative versions which illustrate the typical features of the genre. Swales indicates that "If all high probability expectations are realised, the exemplar will be viewed as prototypical by the parent discourse community" (1990: 58). 'Prototype' refers to the original version from which imitations and improved or representative versions are generated. In order for an EOP to be considered as exemplary or prototypical, it must have the 'generic features' - the defining features or the features that rightfully belong to this particular genre because it is *engineering* OPs and not *biomedical* OPs.

In the previous chapter, Floats 4 (Sub-moves) and 5 (Engineering Rhetoric) (Table 2), along with visual metatexts have been discussed as some of the defining characteristics of EOPs. We will explain how these defining characteristics relate to the generic features of EOPs.

In order to determine the 'generic features' of EOPs, its genre characteristics need to be compared to at least two types of genre characteristics - first to 'academic genres' and second to RAs. The genre of EOPs is compared with that of academic ones to find out if the former is a legitimate academic and professional genre. It is compared with the genre of RAs because RAs especially differ from OPs due to transmission - an RA is written and an OP is oral. From such comparison, information on the generic sequence of the

communicative elements, the generic purpose, social setting, variability, and complexity level are gathered. Based on these generic features, the characteristics of exemplars and prototypes of EOPs can be worked out.

The first type of comparison is to compare the characteristics of the genre of EOPs with those of academic genres. This is to determine the generic features of EOPs. Johns's discussion is useful here. Johns has worked out six 'general features of academic style' (1994: 23-24) by quoting at least Purves (1991 in Johns) and Elbow (1992 in Johns). According to her an academic discourse is explicit, it announces the thesis as early as possible, it provides maps or signposts, it takes a certain distance from the audience, its novice-expert differences can be identified and its argumentation is 'rubber gloved'. It has been argued that EOPs have these characteristics, thus they also belong to the 'generic features' of EOPs:

EOPs were explicit and 'rubber-gloved'. Perhaps the explicitness of the engineering discipline which deals with real things rather than abstract ones needs no explanation, but that of the delivery of the EOPs does. The presenters were observed to strive for accuracy in many aspects of the presentations. To cite two examples, they used examples (Sub-float 4.3) and they defined (Sub-float 4.2) their terms for the audience (Table 2). In the sixty-eight analysed OPs there were 145 instances of examples (Sub-float 4.3) and ninety-eight definitions (Sub-float 4.2). One OP had as many as seven examples. Another OP had as many as eight definitions. One SI's explanation on instances of examples and definitions did indicate that they proved the presenters' attempts to strive for explicitness: Examples and illustrations make

explanation more explicit and definition makes it more precise: "Precision may be called for. People often precisely define terms in common engineering usage to avoid getting side-tracked into arguments about what they do or do not mean" (LOUGH NSBro). This also proves that EOPs were 'rubber-gloved' or not 'polemic, at least not among the uninitiated' (Johns, 1994). To avoid being polemical or controversial, terms were defined, examples were given, strict conventions were followed.

Purves advises academic genre users to "announce (the) thesis/purpose as early as possible" (in Johns, 1994:92). This early announcement of thesis also existed in the EOPs. There was topic development in EOPs. The norm was to state the preview of structure before the first move of the body of the OP (Table 1). Except for Pr64, a skilled genre user who has been pointed out earlier as one who delayed his preview, none of the presenters announced the preview late. May be not as late as in the case of Finnish writers of economics texts (Mauranen, 1993). .

Elbow (in Johns 1994) names maps or signposts as one criterion of academic discourse. This has been discussed in great length in relation to the metalanguage in EOPs. It has been explained how the visuals could be classified as metalanguage and thus one of the maps or signposts. In biomedicine, the visuals thus the metalanguage or maps or signposts are slides (Dubois, 1980a) but in EOPs were overhead transparencies.

The engineering Prs distanced themselves in the delivery of the OPs or adopted the 'author-evacuated' style pointed out by Geertz (1988 in Johns, 1994). Johns points out that keeping a distance with the audience is one criterion of an academic genre. The communicator should not show too much intimacy with the audience (Johns, 1994:24). Thompson (1994) reports on the

lecturer's stance towards the audience in the academic lecture introductions she analysed. She indicates that RAs are faced with "hostile readership of peers and superiors" (1994:181) and therefore the writer has to establish a defence in his research territory; the academic lectures are faced with novices who are relatively uncritical, thus the speaker needs to create a framework to support the audience, especially those which prepare the audience for "the lecture to come" (Thompson, p. 181). The stance of the presenters in EOPs was not as 'supportive' as in the case of the academic lectures as they are faced with as critical 'peers and superiors' as those in the RAs and in the biomedical slide talks (Dubois, 1980a). As a result, the stance in EOPs is similar to that of the latter and they did not sound intimate to the audience.

The EOPs display "a set of social and authority relations" (Elbow, 1991: 146 in Johns, 1994: 24). In the previous section, novice-expert variations in terms of purpose, form and style have been discussed. Another novice-expert style variation that has not been discussed is novice-expert identity in relation to legal audience dealt with in the previous chapter. In essence this is about variations as a result of the 'social and authority relations', or expressed in more detail:

> There are subtle differences between the discourse of people who are established in the profession and those who are not – particularly those with tenure. Certain liberties, risks, tones and stances are taken by established insiders that are not usually taken by the uninitiated (Elbow, 1991: 139 in Johns 1994: 22).

Instances of experts taking more risks than their novice counterparts can be traced in EOPs. Two examples are from Pr29 and Pr43 who were both experts.

Pr29 could afford to be insistent in his claims:

OK, what are the requirements for success + Well whatever enterprise you are in + you got to make things better + faster + or cheaper or you got to make services better + faster + cheaper |+ You'll see that from the academic point of view many of the industries are pretty inefficient |+

Pr 43 dared to be vocal in his comments:

Caption 1:
I graduated before most of you were born |+ Some people ... make jokes about old and new – anything the Americans call old the European call new + also the Chinese in Malaysia say + anything after 1934 is considered old |+ ...

Caption 2:
We do not want to buy just because we are stuck + just because it's high-tech + just because it's new + Just because somebody else has ...

Caption 3: It does not involve either Malaysia or US + we better talk about it |+

Caption 4: There are two kinds of engineers – good and other +

Sentences like those from Pr29 did not emerge from a novice because these expressions demonstrate not only expertise (first sentence) but also confidence (second sentence) and authority (third sentence). Daring and vocal tones as those coming from Pr43 (first to fourth captions) did not emerge from OPs delivered by a novice because such expressions entail a certain amount of risk which may put the speaker at a danger of being taken action against by legal audiences. Thus novices are less willing to be exposed to such legal preoccupations. (For an example of a novice's OP, see Appendix E).

The second type of comparison to be made in order to determine the generic features of EOPs is to compare the characteristics of the genre of EOPs with those of RAs. Articles, either in the form of RAs (Swales 1990:11; Peng 1987:81) or JAs (Dubois 1980a:140) are one of the aspects of written discourse that are popular among researchers and therefore they are fairly well

described (Swales 1990; Dubois 1980a:140). So comparing speeches with JAs or RAs is 'inevitable' (Dubois 1980a: 141).

This could also be done with the genre of EOPs because differences between EOPs and RAs highlight some 'generic' features and their similarities explain the traditional lack of treatment of oral discourse.

One aspect of comparison between RAs and EOPs is in terms of the IMRAD structure that RAs normally have and the structure of EOPs. Biomedical speeches (Dubois, 1980a) and student seminars (Weissberg, 1993) are found to have the IMRAD structure but it was not found in EOPs. According to Dubois (1991) non experimental research reports lack the IMRAD structure and writers instead rely on *previewing the structure*. Dubois (personal correspondence 1994) pointed out "I found it (preview) was done in, ... physics, in non experimental articles, the ones which cannot have the predictable structure of experimental reports." Interestingly it is also found in the EOPs. In other words there was *outline* or *previewing the structure* in EOPs instead of the IMRAD structure. Thus we can conclude that the EOPs had the structure of written research reports but not necessarily that of IMRAD.

To generate the generic features, the structure of EOPs is best compared with RAs which adopt *Swalean moves*. Important generic features of the genre of EOP can be seen by comparing the communicative elements and the sequence of the elements of the structure. The generic features of the communicative elements of EOPs could be highlighted when they are compared with Nwogu's (1991) moves since he has adopted *Swalean moves*. Nwogu reported that the maximal *moves* in his corpus are as follows with the highlighting (bold italics) of the key words added:

1. A brief statement which functions to provide some *background* to the problem
2. An indication of the main *research problem*
3. An indication of the *limitations of previous efforts* at resolving the problem (this information is contained in very few texts)
4. An indication of the *researchers* who conducted the study and what they set out to achieve
5. An indication of some of the positive *results* obtained
6. An indication of some of the *methods* used in the collection of data
7. A description of the *methods* used in the experiments
8. Some discussions and explanations of specific research *outcomes*
9. A statement of the main *conclusions* of the research report and its implications to the target audience (1991:115).

All these elements were found to occur in EOPs (see Figure 5 below) although they were presented differently:

Figure 5

The Communicative Moves of EOPs

- Background information (Move B.1)
- Main problem (Move B.2)
- Announce solution (Move B.3)
- Method of arriving at solution (Moves B.4 and SB.4)
- Description of solution (Move B.5)
- Piloting or simulating the solution (Move B6) and their results (Move B7)

Nwogu's *background* information (1) is undoubtedly similar to Move B.1, his main *problem* (2) similar to Move B.2, his *results* (5) and *outcomes* (8) similar to Move B.7. Nwogu's *limitations of previous efforts* (3) and an indication of the *researchers* who conducted the study (4) occurred at a low percentage in EOPs, and were not reported in Table 1. Although the *methods* in EOPs (Move B.4 and SB.4) were for arriving at the solution and Nwogu's *method* (6) was for data collection there was some kind of similarity since both are 'methods'. Nwogu's ninth communicative element, *statement of the main conclusions* (9) was absent in EOPs

presumably because of the 'prospective' rather than the 'retrospective' nature of speeches (Dubois, 1980a). While there was occurrence of *results* in both Nwogu's [(5) and (8)] communicative elements and in EOPs [Move B.7], they seemed to be different kind of outcomes. In Nwogu's case the outcomes might be related to his 'conclusion' which are 'retrospective' in nature but those in the case of EOPs are results of 'simulations' or 'pilot studies' perhaps because they are 'prospective' (Dubois, 1980a) in nature or the 'prefatory stage' of the 'public knowledge' (Ziman, 1968: 2 in Dubois) being presented.

One last difference is that there was no *simulation* (Sub-move B.6) in Nwogu's data and, as explained earlier, the *method* and *results* of EOPs do not refer to those which occur in RAs. In RAs, like in Nwogu's data, *method* refers to the method used to collect the data but in EOPs, the *methods* refer to those used to work out the solution. In RAs, *results* refer to the results of the research but in EOPs, they refer to those of simulations. There were summaries in EOPs, but there were no conclusions because of the 'prospective' nature of EOPs.

Thus we could first of all consider piloting or simulating to be a generic feature of EOPs.

The second generic feature would be the 'problem-solution' nature of EOPs in harmony with Olsen's and Huckin's (1990) observation. This problem-solving nature was obvious if we consider that, of the six communicative elements reported in Figure 5, there were in actuality only three major ones i.e., the first three [background information (Move B.1), main problem (Move B.2) and announce solution (Move B.3)]. The remaining communicative elements were explanations of the solution - the method by which

the solution was arrived at (Move B.4/SB.4), the description of it (Move B.5) and its piloting process and its results (Move B.6, B.7).

The third generic feature is the absence of conclusion which signals that the described solution can always be improved further. This 'prospective' nature is strengthened by the occurrence of Move T. 3 (Looking forward) reported in Table 1. An example of its sub move (T. 3B) is from Pr48: "We've got to improve the overall performance of the system +".

As a result of the comparison between the structure of EOPs and that of RAs which adopt *Swalean moves*, we are able to describe the generic sequence of the communicative elements of EOPs. The sequence of the communicative elements or the moves in EOPs, as presented in Table 1 were quite constant and describable. It did not show any 'robust preferred order' (Swales, 1990:145), perhaps not as clear linear sequence as Dubois's (1980a) but is more linear than Thompson's (1994).

According to Thompson, her corpus exhibits an unpredictable sequence of communicative factors because of their pedagogical status which carry more idiosyncrasies. According to Thompson, biomedical speeches are aimed at the speaker's peers and rivals thus putting greater pressure to demonstrate their mastery in the conventionalised rhetorical structure and as a result the structure is more predictable. On the other hand the academic lectures are aimed at the speaker's academic inferiors for the interest of "pedagogic process" (Thompson, 1994: 182) and are not under the pressure to demonstrate their mastery in the conventionalised rhetorical structure thus resulting in greater variations in the latter case.

Authors of RAs are 'defensive' because they face 'hostile readership of peers' (Swales, 1990: 142) thus need to keep to the conventions more strictly. Dubois's (1980a) corpus on the other hand, is quite strict in the conventions because the stated talks are 'publicly performed research process genres' (Swales, 1990) and because the slide talks are on experimental research. One informant (PEMAS NSJ) described EOPs as "community-style events" which means that EOPs are of the same social status with biomedical speeches, but because the EOPs were of the varied topical nature, and they were not necessarily experimental in nature, their sequence was not found to be as linear as that of Dubois's.

By comparing the structure of EOPs and that of RAs which adopt *Swalean moves*, we are able to describe the generic purpose of EOPs. But before we do this, the relationship between transmission and EOPs has to be established. The feature of a discourse is shaped a lot by its transmission (i.e., whether it is oral or written). RAs are written but EOPs are oral. Thus the genre of EOPs showed more differences than similarities with RAs, in harmony with Swales's observation that if "oral presentations constitute a genre of their own" (1990:177), they are different from RA in terms of their purpose, social setting, and language modality. Dubois (1980a: 144) compared JAs with the biomedical slide talks and found that they are different in terms of their "quantity, quality and information stage of the scientific content" and in terms of the level and tone of the register. The differences between RAs and EOPs as a result of transmission can be described in terms of purpose, social setting, variability and lower complexity level.

The generic purpose of EOPs is generally similar to the purpose of biomedical meetings which, according to Dubois, acts as a "convocation of the INVISIBLE COLLEGE (Polanyi 1958), in which one submits one's latest data for the scrutiny of other 'faculty members' " (1980a: 143). However, if we compare the inclination of EOPs with that of biomedical speeches we will find that the former is more commercial than the latter. Thus commerciality is a generic purpose of EOPs.

When we compare the structure of EOPs and that of RAs which adopt *Swalean moves*, we are also able to describe the generic social setting of EOPs. While the introduction and the conclusion of RAs have positional brackets (Dubois, personal correspondence, 1996), they do not have spoken 'bracketing phases' (Goffman, 1981: 175). EOPs had spoken bracketing phases like all other speeches. This has been pointed out earlier as being connected to the non-technical elements. These bracketing phases, i.e. the Introduction and the Termination found in Table 1, are due to the audience phenomenon. While the audience of a written discourse is imaginary at the time the text is composed, the audience of a spoken discourse is real.

In the body of the EOPs, the occurrence of two types of rhetorical devices, i.e. engineering and general rhetorical devices (Table 2), is also attributed to this audience phenomenon. General rhetorical devices consist of rhetorical question (Sub-float 3.2), rhetorical statement (Sub-float 3.4), aside (Sub-float 3.3), use of *let/allow me* (Sub-float 3.5); summary (Sub-float 6.1), and reiterating action to be taken (Sub-Float 6.2). Engineering rhetorical devices are the use of *simple* (Sub-float 5.1) instances of definitions (Sub-float 4.2), example/illustration (sub-float 4.3), and

backing up arguments with background principles and concepts (sub-float 4.4). Since aside (3.3), *Let/Allow me* (3.5), *simple* (5.1), definitions (4.2) have been explained in relation to the sociology traits of the presenters, they will not be explained again here.

A rhetorical question (3.2) is a question asked not to get an answer but to enable the presenter to answer it him/herself, for instance from Pr29: "What does that mean? Well, it means...". This also acted as a device to involve the audience more than a statement does.

A rhetorical statement is a statement that answers the 'question' as in the rhetorical question, but the 'question' was not asked, for instance (from Pr57):"I am sure that everyone is well aware of the evolution of power electronic until today +". Similar to these was also the use of 'let/allow me' (Float 3.5) as in Pr35: "Now + allow me to introduce the product..." and later "Now + let's look carefully again !+".

Summary (6.1) and reiterating action to be taken (6.2) occurred more in longer EOPs than in shorter ones. Most of them appeared in EOPs which ran from twenty-five to thirty minutes and those from thirty to forty-five minutes. In terms of the place of the conference, they were those delivered at Bukit Jambul, and Petaling Jaya, Malaysia. An instance of Float 6.1 and 6.2 from the same presenter (Pr66) are:

(6.1): After he explained in great length why operators have to be involved he said: "So only the operators have the information that you need to achieve succeeding quality + two better than one !+ Their ideas are worth listening to + especially if you train them to have good ideas + and that's part of your job now !+" In a way it is like an extended 'concluding statement' (Float 5.3) dealt with earlier; (6.2): "Get serious about operator involvement !+ That's what you're going to do !+" The duration of Pr 66 is 20-30 minutes and his OP was delivered at Bukit Jambul.

The engineering rhetorical devices to be discussed here -- example/illustration (4.3) and background principles and concepts (4.4), were found to be related in that they both assist the audience in understanding the concept presented in the EOPs.

Let us first deal with Sub-float 4.3 (example/ illustration). As stated earlier, a visual pointer signals the presence of illustration. This is done by directing the audience's attention to the visuals being used. As a more extended definition of an illustration given earlier, it is the whole process of showing the audience what can be represented diagramatically or graphically in diagrams, charts etc., based on an explanation from an SI who agrees that an illustration "does tend to have visual connotations" (LOUGH NSBro).

To give an example (Sub-float 4.3), is to give the audience a sample or similar case as in Pr34 who says:

As stated before what is suitable for one company may not be suitable for another + For example if you talk about facts and technology and so on for example if my company is operating a batch operation you know () OK and I do design and I do manufacturing as well CAD CAM technology perhaps is suitable for the sort of operation +| But if you operate jobbing shop + then CAD CAM may not be suitable () |+

However, the same SI (LOUGH NSBro) also thinks that the words *example* and *illustration* can be used interchangeably, as in "an illustration of this" and "an example of this."

Background principles and concepts (4.4) are back-up background information to enable the audience to understand the new concept being explained, as in Pr27: "And in robotics + we use () system and scara type robot which also may or may not want vision systems |+" and in Pr49 "The principle for this TQM will be full success by understanding the fulfilment of the customer + especially those Japanese companies they consider the customer is a

king l+" This definition has been agreed by the SIs. An SI explained that "background principles and concepts are always there to assist the understanding of the audience whereas definitions are sometimes given to avoid an argument." In a written discourse most of these rhetorical devices would be sources of repetition that would need to be edited, but in an OP, the presence of real audiences call for their use.

The general as well as the engineering rhetorical devices thus found to have existed because of the presenters' concern for the audience. This is connected to the effect of audience phenomenon discussed in Chapter 2. In addition, by using such rhetorical devices, the presenter asked for an active response or at least an involvement of the audience. This confirms what has been dealt with in Chapter 5 in connection to Murphy and Candlin's (1979) contention that monologues have interactive features.

As mentioned earlier, due to the experimental nature of biomedical slide talks, the sequence of the communicative elements is more standardised than that of EOPs. In addition, biomedical circumstances, according to Dubois (personal correspondence, 1996), are also highly standardised: All speakers use slides, "almost all presenters leave the lectern and approach the screen in order to point out significant parts of the slides with the aid of a power pointer" etc. (Dubois, 1983: 323).

On the contrary, the setting of EOPs was not standardised and this forced the presenters to respond to the circumstances by making decision on what Nesi and Skelton (1987: 9-10) termed as 'logistical decisions' - whether to sit or stand (Appendix C: Question 67); whether to use podium or not(Appendix C: Question 68) and where to position themselves (whether they can be seen, whether

they are obscuring the overhead screen) and what pointer they use (Appendix C: Question 69).

When speaking to a group of people, Woodal (1989) advises speakers to stand and not to hide behind the podium so that they could use gestures as much as possible. This norm was verified in the EOPs. The 'good' presenters, NS and NNS alike, were unanimous, in saying that they preferred to stand when making their OPs. This neatly coincided with what took place in actual presentations as none of the presenters sat when presenting.

On the other hand, many presenters were found to use podiums. Through questionnaires, they explained that they wanted to use podiums for different reasons. Majority of the respondents (85%) preferred to deliver their OPs without podium. While 100% of the NS preferred not to use podium, only 67% of the NNS presenters did. All the respondents who preferred to use podium (15% of the respondents or 33% of the NNSs) were found to be NNSs. One NNS SI did say that he preferred to use the podium provided that he has full control of the visual equipment. This means he would forgo the podium if the podium made him unable to have full control of the visual equipment. Thus we can say that although some NNS presenters do not entirely avoid the podium, the tendency was to do so and to stand when presenting.

The 'good' speakers were also asked what kind of pointer they preferred. Responses varied from hand to rod or pen to laser or light to none. They had their own reasons for their preference. One presenter (LOUGH NSG) preferred not to use any because "visuals should be clear without need", others (Hus, Af) preferred rod or pen and gave no reason. One SI (PEMAS NSJ) preferred hand so that he "does not appear clinical or academic", but many others

(PEMAS NNB, PEMAS NNLL) preferred laser or light because it "will not obstruct the view of the audience", the "presenter can move more freely", s/he "can point wherever the presenter prefers" and "will not show if shakes". The SIs' rationale for choice of pointers, although also to safeguard the presenter's own position, ultimately are for the audience's benefit. Thus, the generic social setting of EOPs can be described as less standardised than those of the biomedical speeches. At the same time with the presence of face-to face audience they are audience-friendly.

The generic variability of EOPs can also be described on the basis of a comparison between the structure of EOPs and that of RAs which adopt *Swalean moves*. Variability can be seen clearly in terms of the presenters' register (Dubois, 1980a) or language modality (Swales, 1990) which could be due to time constraints and knowledge on the conventions. Dubois stated that the JAs are "uniformly written in one register (scientific) and one tone (formal)," but the speeches are delivered in a "continuum of inter speaker tonal variation," from quite formal to quite informal (1980a:144-145).

Similar instance was observed in EOPs. Some presenters were formal others informal, depending on the circumstances that happen in real-time. One example is in the introduction. Pr54, an NS presenter, may sound formal at the beginning: "Thank you very much" (to the chairman) but after that continued "Well + good afternoon ..." which is informal. Another NS Presenter, Pr66 was very informal from the very beginning: "OK + well, this'll be a change in phase em + ...". Since as Dubois (1980a: 145) explained, tone of a speech is "the speaker's individual assessment of match of situation and linguistic features, i.e. a personal rather than a social response," we can

expect to see variability in terms of the register of EOPs. As in the case of biomedical speakers who are usually formal in the introduction and informal when commenting slides (Dubois, 1980a), the presenters in EOPs were usually formal in the introduction and in the termination but were usually informal when talking about the visual aids as they ad-libbed here to add elements of 'fresh talk' (Goffman, 1981).

Variability could be caused by time constraint, i.e., the timeboundness of EOPs. The writer of an RA has more time to control the genre than a presenter who might have prepared beforehand but had to make continuous spontaneous decisions, as the OP approached the end. This real-time, once-only OP left the presenter no time to 'monitor or edit' the ephemeral nature (Thompson, 1994:182) of the word uttered.

In addition, as has already been pointed out in Chapter 5, the unavailability of models for others to follow has contributed to the variability of the conventions of oral discourse. Such reasons coincide with what has been discussed earlier as the DC members' implicit acquisition of the conventions of EOPs. Because the schema of the engineering presenters were not explicitly or deliberately studied, the engineering DC members were not conscious of the existence of these conventions. In other words they did not have access to the conventionalised models in the same manner as the lecturers in Thompson's (1994) corpus. Thus variability in terms of formality and other spontaneous expressions were left to individual presenters to decide.

Finally as a result of our comparison between the structure of EOPs and that of RAs which adopt *Swalean moves*, we are able to describe the complexity level of EOPs. Lower complexity level

can be seen especially in the quantity and the quality or information stage of the content of the EOPs. The lower quality level or information stage or the exploratory nature of EOPs strengthens the absence of retrospective conclusions as in RAs, explained earlier. Dubois's description of biomedical speeches where: "The *persona's* research ideas flow smoothly from the body of knowledge represented in the literature search; the PERSON" 'meets with unexpected results, has trouble with materials...' (1980a: 143-144) is also true for EOPs. In fact this takes place not only in biomedical speeches and EOPs but also in any academic or professional 'discourse community-event'.

A quick comparison between the quantity of content of an article in the conference or seminar proceeding and that of its OP, revealed that the content of the OP is an abridged form of the former. Thus in OPs, we heard presenters referring the audience to the article: (Pr68) "I think that's more or less self explanatory + I'm sure you've already read the notes I+". Thus the substance of an EOP agreed with Dubois's (1980a: 142) description that "The speech does not customarily contain sufficient material for an article." Such lower quantity of content in EOPs can be interpreted as clearly a pragmatic response to especially time limitations, for instance in the use of "self explanatory" (Pr68) which means the presenter did not have to explain and take more time in the OP.

To work out the characteristics of the exemplars and prototypes of EOPs, perhaps we could begin with the features of an academic genre, then continue with emerging generic features such as in terms of the sequence of the communicative elements, the purpose, the social setting, variability and complexity level - those discussed in the preceding paragraphs. Thus the generic features of the genre of EOPs are summarised in Figure 6 below:

Figure 6

The Generic Features of the Genre of EOPs

1. Features of academic discourse:
-Explicit and rubber-gloved (not polemic)
-Topic development (preview or outline)
-Maps and signposts (metalinguistics, concluding statement)
-Distanced stance from the audience
-Noticeable novice-expert styles

2. Other features:
-Preview of the structure
-Piloting or simulating stage
-Problem solution in nature
-Fairly conventionalised sequence
-Commercial inclination evident
-Audience friendly delivery
-Variation in the language formality of spontaneous expressions
-Lower quantity than the content of an RA
-More prospective than the content of an RA

3. Engineering rhetorical devices for audience-friendliness:
- Use of *simple*
- Definitions
- Example/illustration
- Arguments backed up with background principles and concepts

An exemplary EOP should contain all these generic features, although a prototype does not have to. However, the more 'generic features' an EOP has, the more prototypical it is. 'Creative' versions of the experts start from this prototypical version. Genre expectations of the DC members, the answers to the third RQ, which are discussed in the following chapter, are measured from this prototypical version.

Chapter 8

THE GENRE AND THE GENRE EXPECTATIONS OF EOPs

The genre of the EOPs has been discussed in the previous two chapters. To be able to compare the genre and the genre expectations we will need to discuss the DC members' genre expectations which will provide the data for the third RQ (What are the DC members' beliefs concerning 'good' or 'bad' OPs in engineering?).

However, before we do this, let us discuss why we need to compare the genre and the genre expectations of EOPs.

First of all, the genre expectations were the DC members' timeless criteria of 'good' or 'bad' OPs. Even though the responses were gathered at the time the DC members attended actual occasions, the responses were in the form of their more ideal perceptions of the genre.

A discussion on genre per se involves only time bound factors and does not provide us with the SIs' 'ideal' picture of the genre. On the other hand, a discussion on 'genre expectations' per se involves only timeless factors which could be as impractical or inaccurate as the results of 'how-to' sources being discussed in Chapter 3.

A discussion on 'genre' and 'genre expectations' involves a process of comparison between the timeless (ideal picture with no constraints) and the time bound factors (what actually took place due to production constraints). This enables us to see, not what is 'new' in the data as discussed in the previous two chapters but

what is 'practical' for our guidelines to teach the students. This also enables us to avoid falling into the trap of thinking that the 'perfect' picture of the expectations did necessarily materialise thus avoid a stereotyped understanding of either the genre or the genre expectations.

Moreover, by comparing the genre and the genre expectations of EOPs, similarities and discrepancies between them could be revealed to uncover the reasons for the presenters' inability to meet the DC members' expectations. From this comparison, the degree of stability thus the degree of invariability of factors such as the generic features dealt with in the previous chapter, can be worked out. This invariability could then be interpreted in connection with the prestige status of the features.

Let us now discuss the DC members' genre expectations. Responses on the DC members' beliefs concerning 'good' or 'bad' OPs in engineering were gathered from three types of SIs - the audience, the presenters whom the audience had no comment on (called 'average' presenters) and the presenters whom the audience rated as 'good' (called 'good' presenters). The 'good'-'average' presenters were determined based on the rating of the audience but the 'expert'-'novice' was based on their seniority. This was because an audience did not necessarily rate an expert as 'good' since the real-time rating was very much influenced by time bound factors. The percentage of presenters rated as 'good' was thirty but that of the expert was forty-four. The questions forwarded to them were generally similar but only the presenters, in particular those 'good' presenters were asked questions on the techniques of making OPs.

At this point the relationship between *good* and *other* presenters pointed out earlier needs to be clarified. Since *good* presenters were determined by the members of the audience, those voted into this category consisted of three categories -- experts, absolute beginners and experienced presenters. Of these categories, absolute beginners were the least in number and the experts the most. The labels *average, other* and *novices* given to non-expert presenters were similar in that all categories refer to both average and absolute beginners. The latter was not given a separate label because there were very few of them.

In eliciting the DC's beliefs concerning 'good' or 'bad' OPs in engineering, various terms were used in separate sections in the questionnaires to maximise responses - *standardised rules* (or *conventions*) (Appendix C: Question 43), DC members' *expectations, strengths and weaknesses* of EOPs (Appendix C: Questions 39, 48) and *criteria of 'good' or 'bad'* OPs (Appendix C: Questions 51, 62). The responses were categorised as the *genre expectations* which are related to the schemata of the genre of EOPs which in turn provided the criteria of 'good' or 'bad' OPs, and the engineering DC members' list of DOs and don'ts of EOPs. The responses gathered from these questionnaire sections were compared with the result of actual genre of EOPs dealt with in the previous chapter. In other words the similarities and discrepancies of the *genre* and the *genre expectations*, are derived by comparing the SIs' descriptions of 'good' EOPs (derived from interview and questionnaire responses and called the *verbal* version), with the results of the analysis of actual presentations dealt with in the previous two chapters (called the *actual* version).

When the *actual* and the *verbal* versions were compared, some similarities and discrepancies did occur.

Let us first discuss the similarities of these two versions which included the need for the presenter to be as perfect and as prepared as possible; the delivery to be audience friendly; and the obligatory conventions to be followed.

In terms of the 'perfectness' of the presenters, the SIs expressed their preference for a presenter with either wide experience, or high reputation, or with expertise, or professionalism, or at least with knowledge of the content of the topic. In the *actual* version it was normal to witness large groups of members of the audience leaving the seminar room when novice and NNS presenters were performing in the conference that took place in the UK, presumably because they wanted to attend either topics of their choice or presenters with "knowledge of content" or one with "in-depth knowledge of the subject" (SIs). The audience of meetings held in Malaysia stayed presumably because of the cultural difference in that Asians do not show their reactions although they feel the dislike.

Thus 'novice' and 'NNS' presenters carried with them a negative connotation, a stigma attached to them. This coincides with the similar trend of NNS and novice presenters, who tend to announce the title of their OPs, discussed in the previous chapter. Although undeniably not all novice and NNS presenters perform 'poorly', the general or immediate preconceived stigma attached to them were such and they would have a long way to go to acquire the 'perfect' attributes such as reputation and expertise, to enable them to gain the general audience's confidence and interest in their OPs.

In terms of the presenters' preparation, the SIs indicated that they wanted to hear from a presenter who had taken the trouble to prepare well for the OP so that he would be one who was well versed, totally familiar with the content of the topic, the flow of the presentation, the sequence of the visuals, and was extremely well prepared in all aspects of OPs. It was also indicated that aspects of preparation such as choosing a genuine topic and preparing suitable visual aids should usually be carried out. However, the final preparation i.e., the rehearsal or practice, was indicated as often being neglected by presenters. The SIs (PEMAS NSK&D; PEMAS NNB) advised that presenters should polish the flow of the materials, get the correct timing of the OP, improve on the visuals and anticipate questions at the preparatory stage or, they will deliver hesitant, dull and boring OPs.

In the *actual* version, at least one presenter was observed to be hesitant in his OP and in his questionnaire he admitted that he did not rehearse himself. One member of the audience commented on him (in the questionnaire) as not being familiar with his own material. A total of 82% of the 'good' presenters admitted that they did rehearse. This showed that rehearsal was necessary, as one SI put it: "correct timing and clear slides are evidence of rehearsals" and another SI (PEMAS NSJ) insisted that presenters should practise "at least once".

Audience friendliness seemed significant in both the *verbal* and the *visual* versions of the genre of EOPs -- in terms of style, rhetorical devices, manner of delivery, the substantiality and the technical complexity of the content and the topic chosen. Being audience friendly here refers to the presenters' attempt to please

and to assist the members of the audience in comprehending their OPs.

To be audience friendly, the level of the authenticity of the content should be high but the level of the complexity and substantiality should vary according to the delivery circumstances (SIs). Authenticity to the SIs, refers to whether the OP reports on something new, interesting, real, genuine, useful along with accurate and convincing facts that most of the members of the audience in the engineering meetings wanted to know. The experts' topics were observed to be authentic by our definition since they were found to contain new insights (e.g. new directions) for the DC. The novices' topics however, as discussed in Chapter 6, had to be analytically more applied to be considered as authentic and acceptable.

The technical complexity and the substantiality of the content to be presented, should take especially time limit into consideration (SIs). More than 70% of the OPs *actually* being analysed were twenty minutes or less. In relation to time constraint, Hawkins and Sorgi (1985) warn that an OP that is too long gives a bad reputation. Expert SIs indicated that if substantiality bores the audience, presenters are to leave the presentation to deal with 'a handful of points only' (PEMAS NSJ, NNLL).

In terms of technical complexity, while technical terms existed in the *actual* version unavoidably because of the technical intended audience, to be audience friendly their occurrence was presumably minimised. The occurrence of sub-float 5.1 (*Simple* in Table 2), proved the presenters' aim for simplicity. The SIs advised presenters not to include too many technical terms and not to

include complicated formulas. In order to be audience friendly presenters had to "gauge technicality to the level of the audience" (PEMAS NSJ). High technicality like mathematical analysis, was to be avoided in OPs although it could be included in the paper. Such an advice confirms the necessity of observing the different functions of oral (for reinforcement) and written (to record details) discourses discussed in Chapter 2. Thus the presenters had to face the circumstantial factors or "the rhetorical demands of contexts" (Johns 1993a:93) in order to decide on the substantiality and the technical complexity of the OPs.

The use of rhetorical devices was also found to be a form of audience friendly style. As has already been explained in Chapters 6 and 7, both types of rhetorical devices - the general and the engineering rhetorical devices were present. They were used by the presenters to get a rapport with the audience. For example, simplicity was one of the objectives to be achieved through rhetorical devices (Table 2: *Simple*), to neutralise the members of the audience that have been identified as academicians, politicians, business, technical men, etc. This has also been observed by Hawkins and Sorgi (1985) who indicated that the members of the audience of an OP do not necessarily consist of specialists of the field although they are not denying instances of specialists being present.

In the *verbal* version (Appendix C: Question 66), the SIs unanimously indicated that extemporaneous mode of delivery was considered as audience friendly. The responses indicated that the audience preferred to be talked to rather than to be read to. In the *actual* OPs being analysed, although four presenters (i.e., 6%) did read in the case of both NSs (Pr47, Pr68) and NNSs (Pr23, Pr63),

such instances were fewer in number than those who presented extemporaneously.

One SI (PEMAS NSJ) wrote: "the conventions of the particular audience must be observed ... unless they are being challenged constructively". In the *actual* version, as discussed in the previous chapter, there were conventions being followed. Thus the *verbal* and the *actual* versions of the genre of EOPs recognise the need to follow obligatory conventions -- in terms of rules (Appendix C: Question 43) and structure (Appendix C: Question 54).

'Perfect' timing (Appendix C: Question 42) is an example of a convention in terms of rule. 'Perfect' timing has been indicated by the SIs as a must; the NS and NNS SIs were unanimous in their agreement that presenters had to stop within the time limit and in the *actual* version it was observed that time limits were imposed onto the presenters except onto a number of *skilled* presenters as already explained.

In terms of the structure of the OPs, in the *verbal* version, the responses indicated that an OP should have a prepared layout or structure such as the Introduction-Body-Conclusion format which corresponds to the findings in the *actual* version already discussed in Chapter 6. The SIs' responses indicated that what they included in the introduction-body-conclusion sections in both the *verbal* and the *actual* versions were similar perhaps due to the interdisciplinary nature of EOPs. An interview with the SIs revealed that basically the conventions of OPs in the engineering field is the same across faculties (mechanical, electrical etc.) and contexts (academic or professional) and that when there is a seminar or conference, OPs will cover all departments in the engineering faculty or faculties.

Let us now discuss the discrepancies of the results gathered through *verbal* and *actual* versions. There were no discrepancies between the actual and the verbal versions found to be due to the SIs' inaccuracy of information in the responses. There were however, some discrepancies due to psychological and statistical reasons.

Discrepancies due to statistical reasons are connected to the structure of the OPs being analysed reported in Table 1 which reported only elements with high frequency. Thus some elements reported by the SIs did not exist in Table 1. One example is in terms of the structure of the OPs, where 'algorithms' in the SIs' verbal descriptions was similar to 'highlighting mathematical calculations or algorithm" in the *actual* version but was not reported in Table 1 because of its low percentage.

Several obvious discrepancies between the genre and the genre expectations of EOPs did occur because of unavoidable constraints or psychological reasons. The psychological reasons, put in Johns's term are the "rhetorical demands of context" (1993a: 93) such as those connected to commercial inclination or interest, spontaneous rating connected to time bound circumstances, and the question of whether delivery or content is more important.

In terms of commercial inclination, the SIs were found avoiding any comment on it in the *verbal* version although this element did occur in the actual OPs being analysed. The SIs did not say in the questionnaires nor in the interviews whether it was to be avoided or to be encouraged but from other sources such as from the chairman's comments already discussed in the previous chapter, it has been pointed out that it was not favourable. Thus the discrepancy between the verbal and the actual versions could

be due to the unfavourable stigma attached to commercial inclination.

The second psychological factor that causes the discrepancies between the actual and the verbal versions is the spontaneous rating of the audience in *actual* OPs. This spontaneous rating is shaped by real-time or time bound circumstances or constraints. In other words the SIs' ratings of OPs analysed in the *actual* version did not show the 'perfect' criteria that they expressed in their 'expectations' in the *verbal* version. Presenters did not always behave in practice as they rated in theory. For instance popular attributes of a 'good' OP indicated by the SIs in the verbal version are informative, technical approach, good slides, humorous, charismatic, persuasive, expressive, impressive, show sample product, etc.

However, it was observed that any of these features could spark the audience's interest when that particular feature did not occur in other OPs in the same session or conference or seminar. For example, the audience had been hearing OPs with low technicality level, suddenly one OP took a technical approach and this was liked by the SIs, although the general advice of experts in this DC was to keep the technical level low.

Two other examples concern voice quality and visual aids. The SIs who had been hearing presenters with soft voice, rated a presenter with loud and clear voice as 'good' although other aspects of his OP may not be that 'good'. In the same manner, an SI who had been seeing black and white transparencies, rated a presenter who showed colourful slides as 'good'.

Perhaps when the presenters rehearsed themselves, they were more conservative, more influenced by the rules and

conventions but when they had to make spontaneous decisions when delivering the OPs, the 'time bound factors' decided the final version of the OPs. As Dubois (1980a) points out real-time presentations are more determined by 'personal choice' than 'external social pressures'. Here the latter refers to the conventions and the former refers to the pragmatic decisions made by the presenters due to real-time constraints. What Dubois is saying is that in actual OPs, presenters tend to free themselves from conventions, except perhaps the most stable ones.

Interestingly, not only the presenters, but also the audience was seen to be affected by the psychological features of *actual* OPs. Thus we notice that the SIs' reasons especially in the case of the high technicality were unpredictable. In other instances, such as in the case of voice quality and visual aids the audience's rating was more lenient than their questionnaire responses. Thus actual circumstances did not reach the norms in the expectations of presenters who should be 'perfect' and have 'perfect' qualities.

Discrepancies between the *actual* and the *verbal* versions were also found in the SIs' decision on whether content or delivery was more important (Appendix C: Question 50). In the *verbal* version, most (45%) of the respondents, NS and NNS alike, thought that delivery was more important, although 33% of them thought that both were important and 22% of them thought that the content was more important. However, other indications revealed that in *actuality* they considered content to be more important than delivery.

For instance their 'best paper award' was observed to be more popular than 'best presentation award'. From the SIs' responses it was found that both awards gave most emphasis to the

authenticity of the content. The DC members were not keen on improving their 'presentation techniques' as they were mainly concerned with the content of the OP and the delivery part was always taken for granted. One proof was the little indication of the DC members' attempt to acquire delivery skills of their OPs consciously outside academic contexts.

From the institutional background of the 'good' presenters (Appendix C: Questions 46, 47) who had given at least one lecture on how to deliver a technical presentation we knew that they performed such activities for their students' degree requirements. Moreover, more SIs (69%) described their training in OPs as structured than the open one (31%) in both NNS and NS SIs. Structured training took place in academic settings but open training took place outside. The former involved incorporating presentation exercises into degree courses or workshops and requiring students to make OPs and giving them feedback. The latter (Appendix C: Question 44) refers to instances of following guidelines issued by conference organisers, chairman of sessions (if any) and reading published materials on the techniques of making OPs. Moreover, 100% of the 'good' speaker SIs, NS and NNS alike, indicated that they did not join any professional speech clubs (Appendix C: Question 52).) Of all the 'good' presenters only one indicated that he was trained by a professional consultant.

Moreover, in relation to acculturation (McKenna, 1987), an important process in the acquisition of presentation skills, even though most of the SIs (75%) believed that there was an attempt to pass down the conventions to the novices (Appendix C: Question 45), 4% of the respondents surprisingly indicated either 'there was no such attempt yet' or 'no one had been determining such

conditions'. It is perhaps interesting to note that only the NS SIs thought that there was no attempt because 100% of the NNSs thought that there was attempt. This could be because there did occur such attempts in the NNS contexts but generally fewer attempts made in the NS contexts.

The two instances of denial of the existence of conscious acculturation indicated that the attempt could be covert and they were not aware that such a thing existed. As explained in the previous chapter, the SIs proved to be leaving their acquisition of conventions to natural (e.g. observing others present) rather than conscious or deliberate learning (e.g. attending speech course), which proved the lack of concern for delivery and more concern for content, although the *verbal* version indicated otherwise.

As a result of such discrepancies, other discrepancies occurred in relation to who determined the conventions (Appendix C: Question 44). In the *verbal* version, a majority (22%) of the SIs chose themselves, followed by peers (21%), followed by superiors (18.4%) and finally followed by senior members (17%) and organisers (17%) as those who determined the conventions. Not many respondents indicated that their superiors or senior members or the organisers of their conferences had much hand in determining the directions their novices should follow. In the same manner, the novices did not feel that it was the experts who determined the trend of style in the convention.

In the *actual* version however, it has been shown in the previous chapter, that the novices followed the styles of the experts, especially those of NS ones. In the same manner as the novices, the NNS presenters were also not aware imitating the styles of the NS presenters. This underlines the fact that the

engineering DC members were so concerned with the content of their OPs that, at least in their mind, they believed that any other matters were left for themselves to determine. Johns pointed out that "(w)riters and readers in science are not concerned with variation (or style) in texts but with using texts as vehicles to report their research, with efficiency and rapid publication" (1993a: 93). Since the engineering DC members were mainly concerned with the content of the OPs, conventions had to be inherited naturally. Thus it is not surprising to come across one SI who regards this whole set of questions as a "funny point of view" (LOUGHNS8).

Thus the SIs' indication in the *verbal* version that delivery was more important than the content could be due to stereotyped genre expectations which did not come from the SIs themselves but were put into their minds by their speech trainers, or authors of speech materials. In reality, perhaps because of the nature of their problem-solving discipline, they gave more priority to content and less to delivery.

Inconsistencies between the genre and the genre expectations of EOPs emerged due to delivery constraints which are psychological in nature. These constraints which are related to those already pointed in Chapter 2, could be in the form of time constraint and the presence of real audience. Two examples are the substantiality of the OPs being adjusted to the time constraint and the complexity of the OPs to the level of the audience.

An example of the effect of audience which lowers the level of complexity was on the presenters' voice quality. The voice quality of the presenters was found to be much affected by the audience. NS presenters (Pr9, Pr4, Pr6, Pr1) presenting at

Loughborough, were found to have greater speed, softer, milder articulation, compared to NS (Pr66, Pr53) presenters speaking at Bukit Jambul, Lembah Pantai (Pr43, Pr65) and Petaling Jaya (Pr68). This could be caused by the speakers' analysis of the audience. At Loughborough the audience consisted of mostly NSs thus they could use local articulation and greater delivery speed which were the normal and relaxed style to them, but those in other places consisted mostly of NNs thus the need for a more distinct articulation and slower speed, i.e., international variety. Local variety here does not refer to the regional variety with its heavy accents but to the variety normally spoken by NSs to an NS audience. Although the SIs ideally preferred the international variety, their perception of the audience naturally shaped the actual delivery.

Other constraints or the time-bound elements that demand adjustments of the rhetorical devices used by the presenters which could be in the form of intention or purpose, risk, tolerance or acceptability, etc., will be discussed more later in relation to variability and invariability of the elements in EOPs.

As said earlier, from the similarities and differences between genre and genre expectations, variant and invariant elements of a genre could be pointed out for pedagogical and research purposes. According to Johns (1993a) more research should be done to identify both variant and invariant elements of the same genre. In terms of both research and pedagogy, Johns extends the warnings of modern theorists not to "treat authentic texts either in research or pedagogy as static over time and across situations" (1993a:91). She recommends genres as " 'passing theories' held by the interactants" and as theories that, "within a

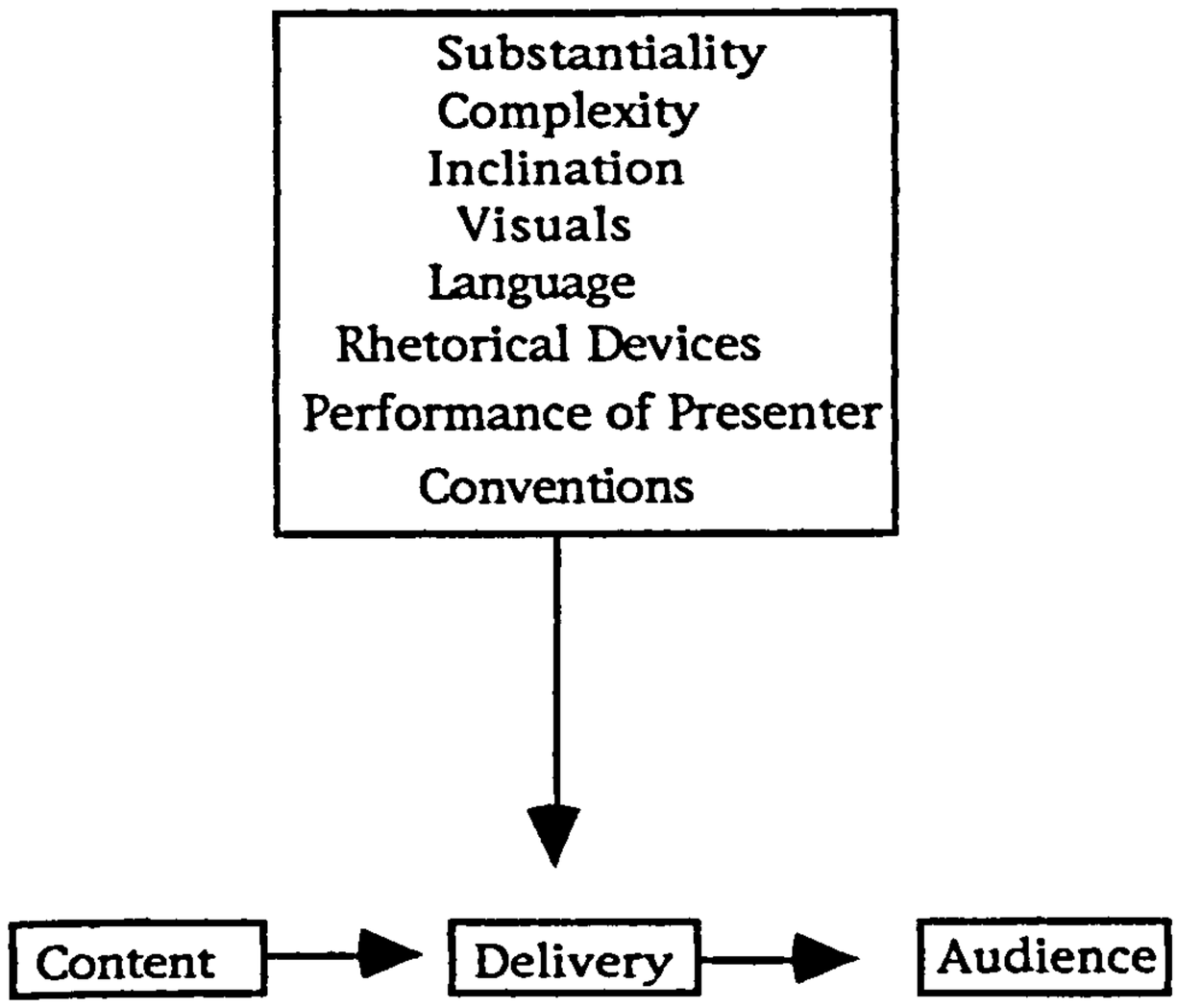
given situation, 'take concrete form'" (p. 91). Thus according to Johns agreeing with Kent (1993a: 127 in Johns), although a genre is a "passing theory" and it "never remains fixed" (p. 91) it takes concrete forms in specific authentic settings at a reasonable span of time. An identification of invariant elements of the same genre however, will assist research and pedagogical decisions on what to begin researching and teaching respectively.

Since the genre of EOPs was explored in authentic settings (i.e., actual meetings) of a specific discipline (engineering), and it was a fairly recent endeavour, the variant and invariant elements could be worked out. In order to work out these elements, we need to simplify OPs into categories that concern the DC members most. Based on the comparison between genre and genre expectations, *content* and *delivery* proved to be the factors that the DC members showed most concern about.

If an OP can be classified into delivery and content, certain constraints were found to be affecting the delivery more than the content. From the preceding comparison between genre and genre expectation, the content of an OP proved to be the substance to be communicated, based on research or actual application that was real and authentic. The delivery on the other hand proved to be the process of sending across this content to the audience. This can be summarised in Figure 7:

Figure 7

Constraints Affecting the Delivery of EOPs



To be acceptable to the audience at the delivery stage, as discussed earlier, the content had to be adjusted to suit time-bound constraints. Substantiality, complexity, inclination, visuals, language, rhetorical devices, performance and conventions proved to be most affected by these constraints but the authenticity of the content proved to be least affected (See Figure 7).

Johns explains: "texts in a certain genre categories vary extensively in a variety of ways depending upon the rhetorical demands of contexts; however, within other genres, there is less variation, though it still exists" (1993a:91-93). In her call for more research to be done, Johns defines an *invariant element* as "relative stable ... among texts that experts identify as being from the same genre, i.e., having the same name within communities for whom the text is central to their work" (1993a:92). She defines *variant*

elements as "elements (that) tend to vary as a genre is realised" (p. 92). Based on the preceding definitions, elements that are most affected by time-bound constraints in EOPs were considered variables and those least affected as invariables.

This means that except for the authenticity of the content of EOPs, all the other elements are unstable. That was why perhaps, at the delivery stage, the authenticity of the content proved to be more easily realised than the rest of the factors.

Johns' definitions of variant and invariant elements cited earlier could perhaps be expanded to trace invariant qualities found in variant elements and variant qualities that can be traced in invariant elements (Table 10):

Table 10

Invariant Qualities in Variant Elements and
Variant Qualities in Invariant Elements

Column 1 ELEMENTS STUDIED	Column 2 INVARIANT QUALITIES	Column 3 VARIANT QUALITIES	Column 4 CONSTRAINTS
Content	Authenticity	Substantiality, Technical complexity	Time, Audience
Interest	Academic interest	Commercial interest	Intention
Visuals	Overhead, Prop	Computer, High-tech or up-to-date visuals	Risk
Language	International (NS) English variety	NS (local) English variety, Inter language/ NNS variety	Audience NS-NNS status, Experience, Rehearsal

Table 10 -- Continued

Rhetoric	Engineering Rhetoric	General Public speaking rhetoric	Technical audience, Acceptability,
Conventions	Obligatory elements	Optional elements	Tolerance, Acceptability, Prestige

This investigation shows that content as a whole (first column) proved to be stable thus invariant but only its authenticity (second column) proved to be invariant because as discussed earlier, it is not something that will change as a result of delivery constraints. For instance, the authenticity of a topic stays authentic regardless of the amount of time given to deliver it and regardless of whether there is enough audience to hear the presentation. The rest of its elements, i.e., substantiality and complexity (third column), as discussed earlier, proved to be variants due to their time-bound constraints (fourth column) -- time and audience.

The rest of the elements presented in Table 8 i.e., other than *content* (first column), proved to be variants and change with contexts because they are related to delivery (Figure 10). Each of these elements however, had both the variant and invariant qualities (Table 10).

Academic inclination (Table 10: second column) proved to be more invariant than commercial one (third column), perhaps because the earlier shows less personal or vested interest (or intention -- fourth column) than the latter.

The use of visual aids (first column) could be interpreted as a variant element because it changed with situation. However, of all the visuals used, computer and high-tech visuals (third column)

have shown to have more variant characteristics than OHP (first column) presumably because it has less risk (fourth column) as was demonstrated in one case (Pr47) already discussed in the previous chapter. OHP on the other hand, not only was the type of visual aid used by most presenters, but also spelt out as the preferred visual aid by the SIs through their questionnaires (Appendix C: Question 30).

The preceding discussions clarifies that language as a whole (first column) was variant and constraints such as audience, NS-NNS status, experience and rehearsal (fourth column) affected the actual language used in the delivery of the OPs. The decision on which language variety to be used by the presenters rested on the shoulder of the presenters themselves. If they (i.e., the presenters) perceived the audience to be less specialised in the area they talked about, they lowered down the use of technical jargons; Skilled or expert presenters used more creative expressions than their novice or inexperienced presenters. Presenters who admitted having rehearsed their OPs performed more smoothly. Presenters who perceived the members of the audience consisted of more NNSs spoke distinctly and took moderate speed.

It was also proved that the most obvious difference between NS presenters speaking to other NS audience and those presenting to majority NNS audience was in the greater speed of the former. Perhaps this was one of the reasons why one NS SI commented:

> Many non-native speakers are difficult to follow i.e. understand. The pace of delivery can often send the audience to sleep. The problem is not that the speaker is non-native, the problem arises when pronunciation and delivery are lacking in confidence. The same can be true of a native speaker.

Although low speed and lacking in confidence could also be true of a NS presenter, it was pointed out to be more true in NNS

presenters. Perhaps with more experience and patient rehearsal (fourth column) a NNS presenter could reach near native proficiency although this attempt has to go on for life. Of the two NS varieties, the local NS variety (third column) was found to be more variant than the international English variety (second column) which is described as aimed at the "typical audience member" as advised by Membert (1968:35). Since this NS international variety (second column) is the more invariant variety, it should be enough for a NNS presenter's model.

As discussed in Chapter 6 and 7, two types of rhetorical devices were used by the presenters - the general and the engineering rhetorical devices. Of the two types of rhetorical devices, engineering rhetorical devices (second column) proved to be more invariant than general public speaking rhetorical devices (third column).

To show that the engineering rhetoric is more invariable than general rhetoric, the scores for the two types of rhetorical devices illustrated in Table 5 (Chapter 6) are duplicated below in Table 11:

Table 11

Engineering Versus General Rhetorical Devices

Rhetorical Devices	Percentage adopted by NNS presenters	Percentage adopted by NS presenters	Total
General Rhetorical devices			
3.1 OK	38	54	92

Table 11 -- *Continued*

3.2 Rhetorical Question	60	50	110
3.3 Aside	60	79	139
3.4 Rhetorical Statement	62	58	121
3.5 Let/Allow me	14	25	39
6.1 Summary	17	17	34
6.2 Action to be taken	10	21	31

Rhetorical Devices	Percentage adopted by NNS presenters	Percentage adopted by NS presenters	Total
Engineering Rhetorical devices			
4.1 Commerciality/ Confidentiality	5	13	18
4.2 Definition	45	75	120
4.3 Example/ Illustration	76	79	155
4.4 Highlighting background principles and concepts	67	75	142
5.1 Simple	31	58	89
5.2 Metastatement	71	92	163

	Table 11 -- *Continued*		
5.3 Concluding Statement	55	85	140

The first column of Table 11 contains the labels of the two types of rhetorical devices (i.e., engineering and general rhetorical devices). The second and the third columns contain the percentages of NNS and NS presenters adopting the elements of the two types of rhetorical devices. The total of the scores have been worked out to be included in the fourth column of this table.

From Table 11, we could see that Aside (Sub-float 3.3) emerged as the element with the highest frequency of occurrence for general rhetoric and metastatement (Sub-float 5.2) the element with highest frequency of occurrence for engineering rhetoric. The total scores of these elements are 139 for aside and 163 for metastatement. From here we can see that the total score for the most common engineering rhetorical device is higher than that for the general rhetoric.

At the opposite end, action to be taken (Sub-float 6.2) emerged as the element with the lowest frequency of occurrence for general rhetoric and commerciality/ confidentiality (Sub-float 4.1) the lowest for engineering rhetoric. However as discussed earlier, the presenters were found to avoid expressing commerciality and, it was in fact a taboo to state confidential elements. For these reasons, although it has the lowest score, it is not taken into consideration for this purpose. Instead, *Simple* (Sub-float 5.1) the element with the second lowest frequency of occurrence for engineering rhetoric is regarded as the more valid

one. The total scores of Sub-float 6.2 (Action to be taken) is thirty-one and that for Sub-float 5.1 (Simple) is eighty-nine. This means the lowest scores in general rhetorical element (Action to be taken) is lower than that for the engineering rhetorical element (Simple).

From these examples, we could see quite clearly that the tendency for an engineering rhetorical element to be affected by time-bound elements such as technical audience and acceptability (fourth column on Table 10), is less than that of general rhetorical one. For instance, more engineering rhetorical elements dominate EOPs presumably because of the technicality of the field, thus the audience and the low instances of occurrence of an element [(such as in the case of Sub-float 4.1 (commerciality/ confidentiality)] is due to the lack of acceptability of the practice connected to it. Thus, except for the unacceptable mentioning of commerciality/ confidentiality, the engineering rhetorical elements are more invariable than the general rhetorical elements.

Conventions as a whole (second column on Table 10) are a variant because a genre changes but in the data of this research, some features within the conventions emerged as more invariant than others. Generally we can say that invariability lies in features identified as congruent in NS and NNS presenters and those as generic pointed out in the previous chapter; those which showed similarities between the verbal and the actual versions and those that had obligatory (second column on Table 10) rather than optional (third column on Table 10) tendencies.

Two of such congruent features which emerged as sub-moves presented in Table 6 (Chapter 6) were thanking the chairman (I.1B) and stressing the need for future works (T.3B). These have been discussed in the previous chapter.

One element in the convention that had generic features and thus had invariant characteristics which emerged in different contexts was the presenters' adherence to the preview of the structure (I. 3A and I. 3B). This element has been discussed as belonging to the academic discourse genre which includes that of EOPs. It has been identified as a 'good' criterion of EOPs by the SIs and had been found to recur quite stably in the OPs being analysed.

Conventional elements which showed similarities between the SIs' verbal prescriptions and actual OPs being analysed, as said earlier, are in terms of time, rules, and structure. A fairly conventionalised structure was identified as a generic feature of EOPs, thus invariable as a whole. One rule that proved to be invariant refers to the taboo in mentioning any information considered as confidential. This taboo and the time constraint emerged as obligatory rather than an optional convention, and thus was invariant.

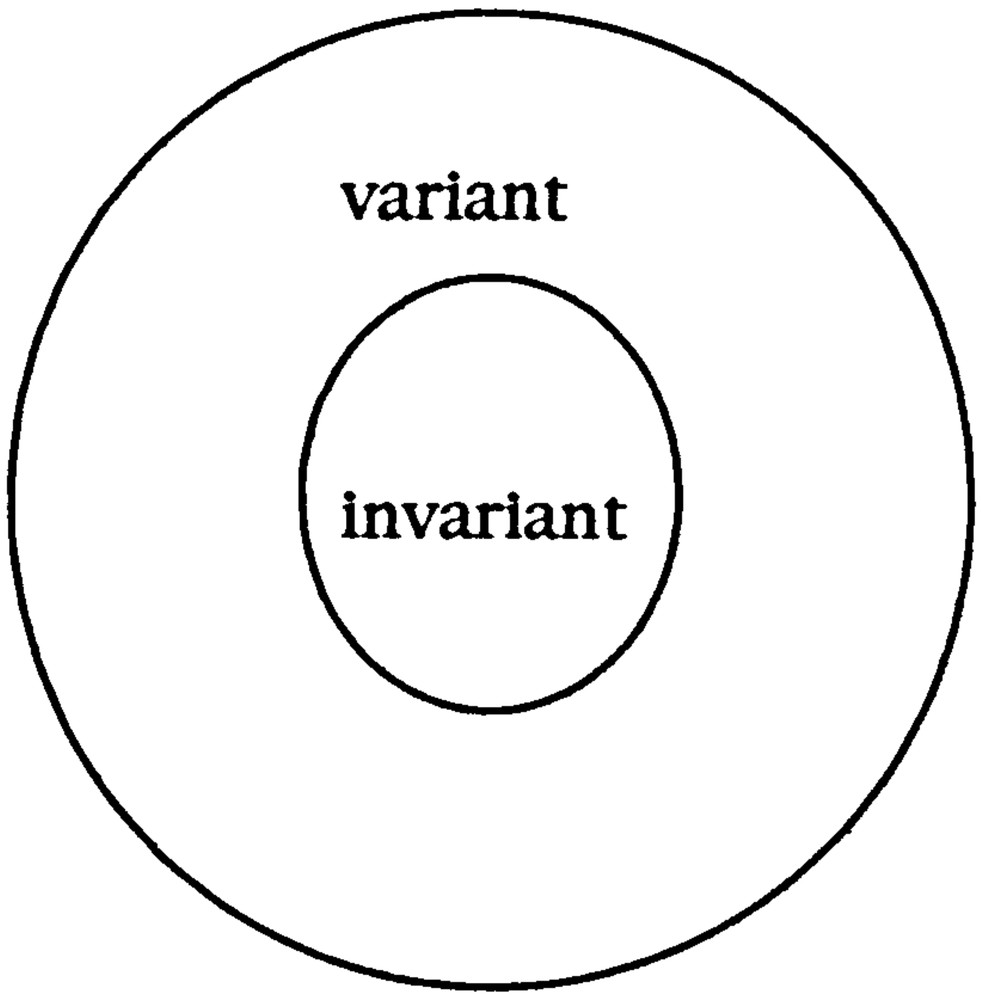
In order for a convention or genre to achieve its communicative goal, there should be an overlap between the 'recipient's expectations' and the speakers' 'socially recognised intentions' in order for the communicative purpose to become recognisable (Bhatia, personal correspondence, 1994). However, this allows only a minimum *successful* achievement of the communicative purpose. According to Bhatia (personal correspondence 1995), in the context of EOPs, the implication of the word *successful* in the definition of the word *genre*, depends on the degree of merit of the OPs. As explained earlier, real-time or time-bound influence were unpredictable. An eccentric OP could still be admired and considered as having merits. Holding the occurrence of cases constant however, OPs with high merits are presumably

those which satisfy the DC members' expectations and more pragmatically those which have elements which have the tendency to be invariant rather than variants. Thus a presenter who meets expectations in terms of one aspect but not in another is considered as only successful at a minimum level.

The existence of invariant characteristics in variant factors proves the mobile nature of the elements in the genre of EOPs. Mobility causes change. Johns (1994: 22) quoted Miller (1984:163) in telling us that genres "change, evolve, and decay." If the variant and invariant elements could be represented diagrammatically in Figure 8, changes in a genre could be described as taking place especially in the variant territory:

Figure 8

The Territories of Variant and Invariant Elements in EOPs



Based on the characteristics of the two types of elements discussed earlier, first of all we can say that an element enters into the genre through the variant territory. The elements in the invariant territory are the more stable version of the genre thus the core and could stay in the genre longer than the variant ones. Because of the stability of these elements, it is into this core that most obvious changes take place - the struggle of a variant feature or characteristic to become invariant.

In our discussions on permitted variations involving experts and novices discussed in the previous chapter, it was found that a change was either initiated by a NS presenter or an expert. NNS presenters were not found initiating any change in the genre of EOPs. This was proven by the negligible (8%) typical NNS style which was unavoidable because the elements were due to the interference of their L1 in their acquisition of English, otherwise perhaps there would have been no 'typical' NNS style at all. Moreover, there would be very little or no possibility of NS presenters adopting it. Instead, changes initiated by NS presenters were found to be followed by NNS presenters. Such changes presumably take place in the variant territory.

Johns (1994: 24) reports an instance of 'real scientists and experts' 'trying' other variations of genres 'to suit their purposes' and resulted in "blurred genres" (Geetz, 1993a) which are unpredictable. But if these 'blurred genres' are accepted and followed they could enter not only the variant but also the invariant territories, since changes initiated by an expert user are normally followed by novices. The theoretical topics that were popular among the experts set directions especially for the novices to follow. The experts' 'relaxed' and creative styles would most

probably be followed by novices. When novices acquire the expertise and status of experts they will eventually be able to, for instance, express their title more subtly (Sub-move I. 2B), give their preview more briefly (Sub-move I.3A) and escape the chairmen's imposition of time check (Sub-move T.1).

If an element can survive the constraints of contexts, it becomes more stable and invariable. However, this will not happen to all of them. For instance the English proficiency of NS novice presenters can become invariable but the proficiency of NNS novice presenters will not. A NNS novice presenter will never reach the same level of English proficiency as another NS novice presenter. In other words elements in a genre change but some aspects of the change will be possible others not. Those which can not move up to the invariant status will either stay as variants or will decay when forgotten by the DC members, become unpopular or will be replaced by new ones. For instance if the function of a visual is superseded by another visual, it will either be obsolete or forgotten (as in the case of chalk and blackboard) and will cease to attain the invariable status. An element with invariable status can stay as invariable for a long time (such as in the present case of the OHP) until a more useful and more stable one replaces it. Meanwhile presenters keep trying other up-to-date visuals and the same cycle is repeated.

Before we deal with genre change and imitation, similar patterns of the types of sub-moves chosen by certain sub-groups (NS, NNS, expert, novice) is interesting to point out. As discussed in Chapter 6, (related to Tables 7 and 8) the similar patterns (i.e., -++- and +--+) proved the existence of similarities between the sub-moves preferred by expert and those by NS presenters and those

by novice and NNS presenters. Such similarities can especially be witnessed between NNS and novice presenters in terms of genre change and imitation.

In terms of genre change and imitation, NNS presenters were similar to novices in the sense that they imitated others who were more influential, more prestigious and more capable. However, a NS novice may not imitate the more senior members of the DC as strictly as a NNS does, especially a novice NNS. In their attempt to imitate the styles of NS presenters, as stated in Chapter 6, NNS presenters of the EOPs were found to overdo and imitate the more conservative or even obsolete version of the element.

Johns describes her encounter with an instance of NNSs following genres strictly:

> ...as I work with research articles, particularly from a specified international disciplinary community (e.g. agronomy), I find that there are many similarities among articles written in English, i.e., that I can often predict the macro-structures, the types of non-linear text, and even some of the linguistic forms, such as conjunct choice, across published articles, by writers from many cultures and languages found in international agronomy journals. I have my own theories about why this may be true, verified by informal research in Southeast Asia and North Africa: most agronomists writing in journals printed in English are native speakers of other languages. The bilingual experts tell me that they carefully follow as models the previously-written articles in international journals so that they can be guaranteed that they will not be refused publication on the basis of their text format and language (1993a:93).

No wonder that NNS presenters of the EOPs were also found to cling on to the conservative form, style and characteristics of the genre. They were found to take safer/invariant/stable versions. One example is their voice articulation. As pointed out earlier, NSs presenting at Bukit Jambul, Lembah Pantai and Petaling Jaya were found to have more distinct articulation than those presenting at Loughborough because the members of the audience of the latter consisted of mostly NSs but the former mostly NNSs. On the other hand, NNS presenters whether presenting at Loughborough (Pr61,

Pr62) or at any of the three other places (Pr12, Pr57, Pr52) were found to have more distinct articulation compared to their NS counterparts presenting at all the locations. This was judged by the volume used when transcribing them. When transcribing those with mild articulation maximum volume had to be used, those with more distinct articulation needed only minimum volume.

Another example of NNS presenters clinging on to the conservative form, style and characteristics of the genre are the elements they included in their OPs. This tendency can be clearly seen by comparing their rituals, the usual prescribed order of elements that took place in the bracketing phases, i.e., in the introduction and termination as presented in Table 12:

Table 12

NNSs' Strict Adherence to Conventions

Sub-move	Percentage adopted by NNS	Percentage adopted by NS
I. 1A	50	42
I. 1C	60	31
I. 2B	57	27
T. 4B	41	33
T. 5A	57	54
T. 5B	36	33

From the table above, we can see that compared to the NS presenters, more NNS presenters were found to thank the chairman (I.1A), greet the audience (I.1C) and announce the title (I. 2B) in the introduction; More of them summarised the points (T.4B), thanked

the audience (T.5A) and stated that it was the end of the OP (T.5B) in the termination.

Such strict adherence to conventions corresponds to Johns' (1994) observation that genre users who are less confident in using English cling on to the conservative form, style and characteristics more than those who are more confident. According to her, "... bilingual speakers are more conservative about form and style because a stable genre provides some predictability in their second language situation." (Johns 1994: 20).

So strict was the adherence that NNSs (e.g. Pr24) were found to be overdoing their imitation of NSs, as discussed in Chapter 6, for example in terms of their use of *OK* (Sub-float 3.1). For acceptability reasons, NNS presenters tend to imitate the invariant features of the genre and would cling on to these invariant forms. Interestingly, NNS presenters had not imitated NS presenters' *if you like* (Sub-float 2.3) as a filler but it would not be surprising if one day this element is found in EOPs delivered by NNS.

Genre users cling on to the genre characteristics for prestige purposes. According to Weissberg, Dubois's (1980a) speakers in biomedicine follow 'their own speech acts and the narrative style' (1993:27) for prestige. Student seminar presentations in Weissberg's (1993) study had to be delivered extemporaneously for prestige purposes. For the same reason, these student seminar presenters had to avoid the use of 'agentless passive construction,' they had to address 'the audience directly in the first person' and avoid reading aloud or memorising the texts (Weissberg, 1993:31). Thus it was not surprising to find that the presenters of EOPs also clung on to the genre characteristics - the novices imitated the genre of the experts, NNS presenters imitated the styles of NS

presenters, and everyone followed conventions, presumably for acceptability and prestige purposes.

An acceptable element is not necessarily prestigious. For example since the SIs prefer non-commercial inclinations, we can safely say that it is not prestigious to have commercial interest in EOPs although it is acceptable. In the same way, a high level of invariability, generic integrity, prototypicality, would all be measures of acceptability. However, they are not necessarily measures of prestige. NNS presenters clung on to more elements with invariant characteristics, but their style is not considered as prestigious because they imitate NS presenters. Thus a NS style is more prestigious than that of a NNS. Novices, like NNS presenters, follow conventions doggedly by choosing the invariant, generic, and the prototypes, but their versions are not considered as prestigious. The creative styles of the experts however, are prestigious - the most prestigious being the style of an NS expert.

A prestigious feature does not have to occur at a high frequency. Factors which are found in the genre, no matter how insignificant, but are considered as 'undesirable' or belong to 'characteristics of 'bad' EOPs can be considered as 'not prestigious'. The relationship between the recurrence and significant action can be seen more clearly in John's (1994) argument that genre users insist on the use of genre as recognised by the experts in the field because the less secure, more conservative members regard genre as paradigms of shared community values at a point of time, for expressing views about the world.

CONCLUSION

In this section we will discuss the implications of the research results to teaching, inevitable limitations of the research and the directions for future studies.

Swales indicates "Certainly, any kind of descriptive approach to communication is a badly needed input into HRD as it is currently practised and understood" (1994: 15). What Swales is saying is that to an ESP/EST practitioner, results of research that uses a thick descriptive approach (Geertz, 1994) is a welcome input especially to NNSs because they need a lot of input in order to function minimally. A NS practitioner needs this input for his NNS students; A NNS practitioner needs this input for himself and his NNS students. Although only as an initial stage, results of a research such as this one perhaps could assist an ESP practitioner to become an 'insider' rather than 'outsider' with an understanding of the "conceptual structure of the discipline ... also of the conventions of conduct" (Swales, 1984a:19).

Not all qualified ESP practitioners are knowledgeable in all target DCs of all disciplines. Thus the results of this research should be regarded as a beginning for ESP practitioners dealing with engineering spoken discourse to know about its genre. They would however, need to update their knowledge through continuous ethnographic works so as not to perpetuate an obsolete version of the genre.

POTENTIAL TEACHING IMPLICATIONS

Pedagogical suggestion is of two types - one that has been tried and the other that has not been tried. Unfortunately this suggestion is of the second type since as already noted, the OP genre has been largely neglected thus there is no precedent yet. Our purpose then, is to explore how the results of this research might be advantageously utilised -- what are the characteristics of the genre-based approach to the 'teaching' of the genre of EOPs.

Fundamental theories of teaching should rightfully be considered in our exploration. Thus first, we are limiting our application to teaching only one skill -- in the contexts of this research, the productive level (i.e., making OPs). Second, in the light of Selinker's (1987) proposition that "LSP and inter language studies in SLA need each other" (p. 77-85), this proposed approach (an LSP research) takes insights from L1 acquisition theory (SLA theory). Thus Krashen's distinction between *teaching* input (that results in *conscious learning*) and *acquisition* input (that results in *natural acquisition*) pointed out in Chapter 7 should also be taken into consideration. Since the implication of *teaching* input seems similar to the genre based *product* input and *acquisition* to *process* input (Flowerdew, 1993), these genre-based approaches are also taken into consideration. Although genre-based approaches have been criticised because of their tendency to be *prescriptive* (Swales, 1994; Tickoo, 1993; Waters 1994), this balanced approach will be seen as being able to moderate such comments and accommodate all these insights (i.e., acquisition-learning distinction, genre-based *product* or *process* or *product-process* approaches). The necessity of including *both* the *product* as well as the *process* perspectives in genre-based approaches (Hammond, 1987; Kay, 1994) is realised in

this 'balanced approach' to the 'teaching' of the genre of EOPs which take the following characteristics:

1- Sufficient time is to be given to allow acquisition activities;

2- Input for acquisition to be provided (low-anxiety circumstances, rough tuning opportunities maximised) until form (genre, language proficiency) emerges naturally;

3- The focus of the communication is on engineering content and not on form (genre, grammar);

4- Task-based approaches are used to eventually lead students to become ethnorgraphers;

5- Output (making OPs) is allowed to develop on its own and students are not required to perform until they have had a long period of observation and understanding;

6- Classroom is for *acquisition* activities (natural tasks are given but "errors are not corrected unless there is breakdown in communication"; "No grammar is presented in the classroom") (Krashen p. 29);

7- *Learning* activities (talking about language: grammar, genre, rules, structure etc.) are given as homework and used by the facilitator only when form has to be focused;

8- Strive to be made to make the class as affective as possible (low-anxiety situations provided, self-confidence and self-esteem cultivated and maintained).

9- The syllabus used should advise facilitators on how to identify and utilise information on the genre of EOPs:

a)- that should be revealed to the students

b)- that could be regarded as a store of information for the facilitators and is only revealed when absolutely necessary

c)- that which students should find out from the engineering DC members through their ethnographic works, etc.

Some of the terms and concepts found in the preceding list are hereby explained. The concepts surrounding the terms *acquisition* and *learning* may be useful.

Acquisition tasks need comparatively more time than *learning* tasks since learners need to assimilate the skills of making OPs through ethnographic works (finding out things from DC members, watch EOPs, etc.). A lot of observation should well precede the students' actual performance of making OPs. Students are required to observe OPs in authentic or actual engineering seminars or conferences or at least watch taped authentic engineering OPs. Since the classroom is to be turned into 'acquisition' opportunities, 'learning tasks' (e.g., information on conventions) are to be given as homework and are internalised in the classroom (e.g., by putting the information into practice).

Learning tasks on the other hand do not need as much time as acquisition tasks. One of the reasons is that learning tasks are 'concentrated' dozes of 'learning points'. An approach in which 'learning points' are 'taught' in the classroom and/or the learners are required to 'memorise' them is considered as one which gives emphasis on *learning* rather than *natural* acquisition, thus it is a *product* rather than a *process* approach. Acquisition approach is preferred to the learning approach in the 'teaching' of the genre of EOPs because it produces more permanent behavioural changes.

Foley (1991) who agrees with Krashen (1985 in Foley) and Candlin (1984 in Foley) argues that frameworks such as this proposed teaching of the genre of EOPs enables the use of task-based approaches (e.g., ethnographic task, learning task, acquisition

task, etc.). Foley also argues that "it is not the content of the lesson that is the basis for learning but the process of classroom interaction which generates opportunities for learning" (1991: 67). These opportunities refer to the 'rough tuning' mentioned earlier. Such 'rough tuning' according to Foley, provides "bridges between the learner's present competence as a communicator in the first language and the future use of the target language" (p. 70). Here the *target language* refers to the genre of the EOPs in English.

Finally, distinctions made to inputs to be revealed to the students, i.e., those for the facilitators to keep in store and those the students to find out from the DC members are to allow co-ordination between the *learning* and the *acquisition* inputs. For example the input to be revealed to the students, i.e., the 'learning input' or the 'learning point' is given as homework but the internalisation of these inputs take place in the classroom. Facilitators may keep to themselves some information such as the 'prestigious markers' of EOPs (discussed in Chapter 8) but if needed, such information can be revealed to the students. In the same manner, prescriptions are to be reserved, but if desperately needed, practitioners should be able to use their judgement on when to give prescriptions. However, prescriptions in genre-based teaching approaches should be given sparingly. Lastly, ethnographic works will allow a dynamic instead of a static approach.

LIMITATIONS OF THE RESEARCH

The results of this research should be interpreted with some unavoidable limitations in mind. Such limitations include at least in terms of its lack of linguistic focus and its methodological as well as

its technical constraints. Thus those who prefer specialised or focuses treatment of the text such as on the linguistic focus may be disappointed when reading this thesis because, as stated in Chapter 6, this research deals with the more general and holistic treatment of the corpus. Specialised treatment such as linguistic treatment will have to wait till follow-up research is carried out.

In terms of the methods used, one aspect that could be commented is the transcription of the EOPs which could be made more accurate by exploring the possibility of using automated transcription. In this research, since automated mode of transcription (i.e. by using a machine to transcribe) was not yet available, manual transcriptions were used. Thus one can expect the transcriptions to contain unavoidable human errors. However, when automated transcriptions are possible, although verification of the accuracy would have to be done manually, the transcriptions would be more accurate since two parties (the machine and the researcher) are involved, instead of only one (the researcher), if done manually.

As mentioned in Chapter 4, time and technical constraints were unavoidable. Human errors were also unavoidable, although this was minimised by the use of statistical package (SPSS Win). Counting and coding done by the package were automated and therefore accurate. However, errors such as overlooking certain elements was beyond human control. To neutralise the preceding limitations, future research should be welcome efforts.

DIRECTIONS FOR FUTURE STUDIES

Future studies can be viewed from two aspects -- immediate research priorities and longer term projects.

Immediate research priorities are those needed to complete the information to fully utilise the results of this research in the classroom. Five such activities have been identified. The first is a needs analysis of the target population for the teaching of the genre of EOPs. Second is an analysis of the Q&A section of the EOPs and third, the chairmen's contributions to the EOPs being analysed for this research. The fourth research is one which leads to the preparation of a handbook on how to make EOPs meant for the engineering DC members and the fifth is one which leads to the preparation of a text used by students and teachers in the classroom. These projects are immediately needed and therefore should be given the first priority.

Why would a needs analysis of the target population of the genre of EOPs be needed? West (1984) suggests that a needs assessment assists us in deciding what to teach. She agrees with Schutz and Derwing (1981, in West), in saying that needs assessment of the population is to be carried out to 'determine the students' perceptions of what they need to learn' and agrees with Robinson (1980, in West), in saying that this point of view "emphasizes student motivation and a concern for the feelings of the learner" (p. 144). The needs of the target population for the teaching of the genre of EOPs in any institution should be researched.

The Q&A sections and the chairmen's contributions are two research topics related to the genre of EOPs that need immediate attention for any proposed teaching activity relating to EOPs.

Students need to acquire the skill of an effective audience and that of an effective chairman.

Dubois pointed out that NNSs need texts or manuals of public communication materials which are designed for them (1986:77). In relation to the genre of EOPs, such texts or manuals (for professional speaking in engineering) could be produced. This text would be in the 'how-to' form as described in Chapter 3 but this 'how-to' will contain accurate information since it is based on research.

Another immediate project would be one which leads to the preparation of a text on how to conduct teaching of the genre of EOPs needed by students and practitioners, which in principle could be similar to the book by Lynch and Anderson (1992) except for the differences to be pointed out.

Lynch's and Anderson's (1992) *Study Speaking* fills the vacuum of scarcity of speech books based on research. It has a variety of activities which are thematic, it includes tasks for learning activities and for acquisition and it treats speaking as a course by itself. However, this book is different from the proposed text for teaching the genre of EOPs in two aspects.

First, unlike the proposed programme and texts which are specifically designed for engineering students, Lynch's and Anderson's book is not discipline specific. The intended audience, reflected in the content/themes chosen does not belong to any specific discipline (engineering, management, etc.,) but to a wider general purpose academic population.

Second, their book is contrary to the proposed programme and texts in that it does not respect what Krashen (1982) calls the acquisition-learning distinction. As a result acquisition inputs are

dealt with in the class and learning inputs are not dealt with outside the class. In Lynch and Anderson's course, no differentiation is made between these two types of input. Instead, all the inputs are dealt with in the classroom. Seminar skills which are packed with "Useful phrases" (p. 11, 21), and 'Discussion point(s)' (p.13, 19, 24-25), to cite a few, could be regarded as learning inputs which are treated as outside classroom activities which were dealt with in the classroom.

If Krashen's acquisition-learning distinction is observed, learning inputs are for the students to read first and then ask questions in class in relation to their acquisition task in the classroom. However, Lynch and Anderson's 'learning inputs' are presented to the students. Thus the deductive teaching approach is not maintained to achieve the aim to "increase (the students') confidence" (Lynch and Anderson, p. 3). One example is seen in that the teachers are allowed to deliberately "comment on faults or weaknesses" of the students in the task monitoring although earlier, they are encouraged not to "pre-teach the language needed to perform the task" because "people are more likely to learn something when they themselves perceive a need for it." The authors rightfully claim that "language learners will benefit more from the teacher responding to their requests for an item of vocabulary or for a better way of saying something, *once they have themselves tried the task* and have identified their problems with it" (p. 63). Thus although the latter two pieces of advice encourage acquisition and confidence, the faults and weaknesses discussed are detrimental to the same objective.

Avoiding the two factors found in Lynch and Anderson, the proposed text will give practical advice on how to use the research findings in teaching the genre of EOPs to engineering students.

What about longer term projects to study related genres or topics? Such studies could be one of the following:

1 Investigation into the genre of EOPs taking place in other than seminars and conferences;

2 Investigation into the genre of theses and dissertation defences in engineering;

3 A study of EOP courses offered in universities and colleges.

As needs and interests vary we cannot predict which will be chosen to be researched first. As the SIs indicated, if we work in a privately owned (usually commercial) institution, the direction of our research is set by our superiors but if we work in a government (usually academic) institution, the direction of our research will be guided by our own interest and perhaps actual student needs. While time will determine what will actually be carried out first, perhaps an investigation into the genre of theses and dissertation defences in engineering based on students' needs, would need to be given priority and, for the Malaysian context, a study of EOP courses offered in universities and colleges might be a second priority after the immediate research projects.

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APPENDIX A

TITLES OF OPs BEING ANALYSED

The numbers that precede each EOP title refer to the Prn or the Pr numbers cited in the thesis. Please note that the spelling follows actual titles in the proceedings:

1. The Design of the Tableware Factory of the Future (design) [Application]

2. Effect of Punch Wear on Blanking (analysis) [Application]

3. Buffer Storage Design in Transfer Lines using Simulated Annealing (design) [Application]

4. The Use of Gestures in Computer Aided Design (method) [Application]

5. PC Based Robot Simulation Applied to Automotive Assembly Cells (method) [Application]

6. Approximate Modelling of Flexible Machining Cells (design) [Application]

7. An Implementation Level Approach for the Identification of Set-up Reduction Techniques (method) [Application]

8. Kuala Lumpur Light Rail Transit System - Choosing the Right Technical Solution (approach) [application]

9. An Information Modelling Methodology Applied to a Manufacturing Environment (method) [Application]

10. Design Rules for Rapid Changeover (design) [Theory]

11. A Knowledge-Based Process Quality Control Planning System for Manufacturability (system) [Theory]

12. An Overview of Kuala Lumpur Urban Transportation System (approach) [Application]

13. An Integrated Urban Transportation System - Opportunities and Prospects (approach) [Application]

14. Soldering PGAs: New Hybrid Challenge (method) [Application]

15. A Modified C-dumped converter for Low-voltage Switched Reluctance Motors (analysis) [Application]

16. Simulation of Broken Rotor Bar in Cage Rotor Induction Motor under Load Condition (method) [Application]

17. Development of an Electrical Surge Simulator (method) [Application]

18. Modelling of Shared Neutral Earthing Resistor for Transformers in Short Circuit Analysis (method) [Application]

19. An Approach Towards CAD of SRMs (method) [Application]

APPENDIX A -- *Continued*

20. A Fast Linear Programming Method for Solving Active Power Rescheduling (method) [Application]

21. Comparison Studies of Switched Reluctance Motor with Induction and Permanent Magnet Motors (analysis) [Application]

22. UHF Band 1 radio receiver frontrend optimization using truth model (method) [Application]

23. Integrated Decision Making Problems for the Operational Control of FMSs (approach) [Application]

24. Why Conventional + - toleranced mechanical drawings are taboo to ISO9000 (approach) [Theory]

25. Conference Opening Ceremony (approach) [Theory]

26. Development of a Low Cost Blumlein High Voltage Generator for Low Voltage Applications (method) [Application]

27. Auto-RF Mechanization (method) [Theory]

28. The Automated Recovery of Aerofoil Profiles on Super Nickel Alloy Turbine Blades (method) [Application]

29. Requirements and Trends in Manufacturing Systems (approach) [Theory]

30. Model Collapse: The Cultural Imperative (approach) [Theory]

31. Process Capability Models for Equipment Selection (model) [Application]

32. Group Technology and Cellular Production (approach) [Theory]

33. Analysis of the Operation and Performance of Flexible Manufacturing Systems (analysis) [Application]

34. A model for integrated manufacture (model) [Theory]

35. Automation of Processing Equipment (method) [Application]

36. Computer Based DC Motor Control (method) [Application]

37. Prospect of Neural Network Application in Power System Operations (approach) [Application]

38. UV and Uv dial curing silicons, process time saver (approach) [Application]

39. Load Shifting and Energy Utilization in a Medium Scale Industry (approach) [Application]

40. Distribution Network Loss Minimization using Islanding Technique (method) [Application]

41. Determination of Air-Borne Electromagnetic Interface (EMI) from an Impulse Generator (method) [Application]

APPENDIX A -- *Continued*

42. An Integrated Public Land Transport System from Singapore (approach) [Application]

43. Two Requirements for Stable Economic Growth (approach) [Theory]

44. Integration and Interfacing using Express Models (method) [Application]

45. Design and application of a paste level sensing controller in die attach process (model) [Application]

46. Detection of Foreign Contaminating Particles in Gas-Insulated Approach (method) [Application]

47. A User Friendly Environment in the Creation of PDES/STEP Based Applications (approach) [Application]

48. Low-cost, high-precision location detection system using edge detection laser sensor on trillium test handler (system) [Application]

49. ISO9000 Standard as a precursor to the implementation of Total Quality Management (approach) [Theory]

50. Auto preventive maintenance management system - An application to eliminate preventive maintenance overdue and improve management and control of preventive maintenance scheduling (system) [Application]

51. Welcome remarks (approach) [Theory]

52. Challenges and opportunities to the Malaysian Electronics Industry-its future positioning in Asia (approach) [Theory]

53. Continuous improvement - Pathway to excellence (approach) [Application]

54. Modelling Product Introduction - A Key Step to Successful Concurrent Engineering Applications (approach) [Application]

55. Computer-aided design (CAD) of PLA-based Asynchronous finite state machines (design) [Theory]

56. Development of High Voltage Solid State Pulse Generator Incorporating Cockcroft-Walton Stack (method) [Application]

57. IGBT Modelling in PSpice for Simulation Purpose (method) [Application]

58. Design of a 300 Watt, Multiple Output Switched Mode DC-DC Converter (design) [Application]

59. Linking diffusion furnaces to a personal computer via software and hardware integration (method) [Application]

60. An Intelligent Schema for Manufacturing Systems Integration (approach) [Application]

61. Turning of Metal Matrix Composites (method) [Application]

APPENDIX A -- *Continued*

62. Object Oriented Feature-based Design (design) [Application]

63. Palm Oil - A Renewable Biofuel for Urban Transport (approach) [Application]

64. The Application of QFD within the Design Process (method) [Application]

65. Robust Control of Static-VAR Compensators in Multi Mode Systems (method) [Application]

66. Total productive maintenance and the future of Malaysian Electronics Industry (approach) [Application]

67. Design for Rapid Prototyping: Developing a Methodology (design) [Application]

68. Kuala Lumpur Light Rail Transit System - K.L.'s First City Centre Viaduct (approach) [Application]

APPENDIX B

INTERVIEW SCHEDULE

Some examples of questions:

A. Importance of OPs

1. Are OPs important?
2. What kind of information is delivered in OPs?
3. Who make OPs?
4. Where are OPs delivered?
5. Who are the audience?

B Communicative purpose of having Seminars/Conferences:

1. Why do you organise Conferences/Seminars ?
2. Why do you make OPs?

C Level of performance of Engineering DC members in giving Oral Presentations:

1. Are you satisfied with your colleague's performance in OP?
2. Why do you say so?
3. Some people claim that the engineering DC members are generally not good at giving speeches. What do you think?
4. Do you normally talk about work when you meet your colleague outside working hours?
5. What do you think of the qualifications of the engineering DC members? What about their academic and professional qualifications? Do you think they are generally well qualified compared to the members of other DC? Do you think this has anything to do with their ability to communicate in OPs?

APPENDIX C

QUESTIONNAIRES FOR THE THREE TYPES OF SIs

The questions are arranged according to two classifications:

A Those that occurred in all the three versions (Questionnaires for the audience, for general speakers and for 'chosen' speakers);
B Those that occurred only in the 'chosen' speaker version.

Spaces after each question have been reduced in this Appendix.

INSTRUCTIONS: Please supply the answers .Where choices are given, circle the number next to your most appropriate answer. You may skip questions which are not applicable to you. If space is not enough please use the back side of the page

A

PERSONAL & INSTITUTIONAL BACKGROUND

Q.1 Name of your Institution:

Q.2 Does your institution carry out any research?

Yes 1; No 2

If yes, describe the type of research done :

If no, describe the type of activities done:

Q.3 Your gender:

Male 1; Female 2

Q.4 Are you a native speaker (NS) of English?

Yes 1; No 2

If No, are you a Malaysian ?

Yes 1; No 2

If No, what is your nationality?

Q.5 Which of the following age groups do you belong to?

20 to 29 years old	1
30 to 39 years old	2
40 to 49 years old	3
50 to 59 years old	4
More than 60 years old	5

Q.6 What is your highest academic degree attained, and please indicate in what field:

Field	
Diploma	1
Bachelor (BA., BS)	2
Master (MA., MS., MBA., M. ED., M. Phil.)	3
Doctorate (PhD. , Ed. D., etc.)	4
Other. (Please specify):	5

APPENDIX C -- *Continued*

Q,7 What is the status of your professional membership?

PE (Professional Engineer)	1
IR. (Engineer)	2
Affiliate Member of.....	3
Other. Please specify	4

Q,8 What is your definition of *oral presentation* ?

Q,9 Based on this definition, have you ever given an oral presentation before?

Yes 1; No 2

If YES, was it on research?

Yes 1; No 2

If YES, which of the following number groups represents the number of times you have delivered oral presentations on research ?

1 - 2	1
3 - 5	2
6 - 9	3
More than 10	4

Q,10 Are you familiar with the following occasions? Rating: Very familiar (3); Familiar (2); Not familiar (1); Never heard of (0)

A	Colloquium	0	1	2	3
B	Seminar	0	1	2	3
C	Symposium	0	1	2	3
D	Conference	0	1	2	3
E	Workshop	0	1	2	3
F	Course	0	1	2	3
G	Meeting	0	1	2	3

Q,11 On which of those occasions (previous question) do you have oral presentations?

A B C D E F G

Q,12 Of these, on which occasion do you have oral presentation on research?

A B C D E F G

Q,13 Which of the following number groups represents the number of times you have delivered oral presentations on non-research?

1 - 2	1
3 - 5	2
6 - 9	3
More than 10	4

APPENDIX C -- *Continued*

Q.14 Which of the following match the descriptions of the content of your non-research presentations? (Explain in more detail please):

Policies 1

Evaluation 2

Practical Applications 3

Government Projects 4

Consultancies 5

Other. Please specify 6.....

EXPOSURE TO PROFESSIONAL SPEAKING

Q.15a Does your institution/ department offer any speaking course/ seminar/ workshop?

Yes 1; No 2

If yes, is it on technical or general speaking?

Technical 1; General 2

If technical, is this where you get guidelines on how to make a technical presentation?

Yes 1; No 2

Q, 15b Whether your department/institution provides such an opportunity or not, how do you normally get guidelines on technical presentations?

Journal articles/Book/manuals/handouts/speech on how to make a good technical presentation 1

Specifications given by the organisers of engineering Seminars/ Conferences/symposiums 2

Own/Discussion with colleagues/ observation of others 3

Other. Please specify: 4

Q.16 Which of the following description(s) match(es) your knowledge on general public speaking:

Have read books/ manuals/ articles/ handouts/ on how to make a good speech 1

Have listened to at least one lecture on public speaking or attended at least one public speaking course 2

Have sought advice from an expert on how to deliver a good speech 3

Have never received any advice whatsoever whether orally or in written form on how to give a good speech 4

APPENDIX C -- *Continued*

TERM USED

Q.17 Have you heard of the following terms before?

Rating: Very often (3); Often (2); Sometimes (1); Never (0).

A	Technical presentation	0	1	2	3
B	Oral Presentation	0	1	2	3
C	Presentation	0	1	2	3
D	Research presentation	0	1	2	3
E	Oral research presentation	0	1	2	3
F	Speech	0	1	2	3
G	Professional speaking	0	1	2	3
H	Public speaking	0	1	2	3
I	Speaking to a group	0	1	2	3
J	Bread and Butter speaking	0	1	2	3
K	Seminar presentations	0	1	2	3
L	Poster presentations	0	1	2	3
M	Progress reports	0	1	2	3
N	Proposals	0	1	2	3

Q.18 Which of these terms (previous question) are used to describe activities which can be called as oral presentations?

A B C D E F G H I J K L M N

Q.19 Which of these terms (question 17) are used to describe oral presentations on research ?

A B C D E F G H I J K L M N

Q.20 Which of these terms (question 17) are used to describe oral presentations on non-research?

A A B C D E F G H I J K L M N

Q.21 Which of these terms (question 17) are used to describe technical activities?

A B C D E F G H I J K L M N

Q.22 Which of these terms (question 17) are used to describe non-technical activities?

A B C D E F G H I J K L M N

Q.23 If you say *presentation* does it automatically mean that it is delivered orally?

Yes 1; No 2

APPENDIX C -- *Continued*

TIMELESS
IMPORTANCE OF ORAL PRESENTATIONS
Q.24 Are those in Engineering expected to give oral presentations?
Yes 1; No 2
If YES, how do you describe the importance of oral presentations on non-research in Engineering?

Very important	3
Important	2
Not very important	1
Not at all important	0

How do you describe the importance of oral presentations on research in Engineering?

Very important	3
Important	2
Not very important	1
Not at all important	0

If important, how important is it in the following situations .Rating: Very Important (3); Important (2);Not very important (1);Not at all important (0):

Oral presentation in the research process (to determine the progress of the research)	0	1	2	3
Oral presentation to the presenter's professional development (to determine professional achievement)	0	1	2	3
Oral presentation to the presenter's monetary gains (in whatever form)	0	1	2	3

Q.25 How often are researchers expected to give oral presentations on their research at seminars or conference?

At least once per year	1
Twice per year	2
More than twice per year	3

IMPORTANCE OF THE SKILL OF MAKING ORAL PRESENTATIONS
Q.26 How important is the skill in making oral presentations to the following groups of people in engineering. Rating: Very Important (3); Important (2); Not very Important (1); Not at al important (0)

Everyone in Engineering	0	1	2	3
Only those registered with engineering professional bodies	0	1	2	3
Only successful professionals in Engineering	0	1	2	3
Only those who make oral presentations in Engineering	0	1	2	3

LANGUAGE USED
Q.27 Which language is used to deliver oral presentations at international seminars/ conferences in your field?

English 1; Malay Language 2; Other languages 3

APPENDIX C -- *Continued*

Q.28 Which language is used to deliver oral presentations at national seminars/ conferences in your field?

English 1; Malay Language 2; Other languages 3

TECHNICAL EQUIPMENT

Q.29 [Audience version: Which of the following visuals are most frequently used in oral presentations at seminars and conferences in your field; General Speaker version: What visual/ technical equipment do you normally use in your presentations?]

Rating: Very Often(3); Often (2);Not very often (1);Never(0):

White Board	0	1	2	3
Flip Chart	0	1	2	3
OHP Transparencies	0	1	2	3
Slides	0	1	2	3
Film	0	1	2	3
Video	0	1	2	3
Physical Objects/props	0	1	2	3
Computer simulations	0	1	2	3
Multi media	0	1	2	3
P.C. Power Point	0	1	2	3
Other. Please specify:	0	1	2	3

Q.30 [Chosen speaker's version: Assuming that there is somebody to man your visuals and all visuals are available. Which of the following visuals do you prefer to use in your technical presentations in engineering, and state whether you prefer to have somebody man the visual(s) you have chosen (Number 1) or man the visual(s) yourself(Number 2)?]

Flip Chart	1	2
OHP transparencies	1	2
Slides	1	2
Video	1	2
Sample models/Physical objects/ props	1	2
Computer simulations	1	2
Multi media	1	2
P.C. Power Point	1	2
Other. Please Specify	1	2

Q.31 (Speaker's version): Do you prefer to use the most up to date technical equipment in your oral presentation or use available visuals?

Use most up-to date technical equipment 1

Use available visuals 2

Q.32 (Speaker's version): Do organisers normally inform you beforehand what technical equipment is available for use?

Yes 1; No 2

If no, should they?

Yes they should 1; No they do not have to 2

APPENDIX C -- *Continued*

COMMUNICATIVE GOAL

Q,33 What is the goal of having seminars/ conferences in your field?

Disseminate information	1
Establish contacts	2
Get recognition	3
Sell services	4
Other. Please Specify	5

Q,34 Does everyone present at the seminar/ conference (presenter, audience, organiser) have this same goal?

Yes 1; No 2

If No, describe their goal:

Disseminate information	1
Establish contacts	2
Get recognition	3
Sell services	4
Other. Please Specify	5

TIME BOUND

EXPECTATIONS ON THE PRESENTER AND THE PRESENTATION / DC's BELIEFS:

Q,35 Audience' version: Choose a topic. Which of the following faculties does the topic belong to?] [Speakers' version: Which of the following faculties does the topic of your paper belong to?]

Write the topic(s) in the space provided:

		Topic
A	Civil Engineering	1
B	Mechanical Engineering	2
C	Chemical & Natural Resources Engineering	3
D	Electrical Engineering	4
E	Other. Please Specify	5

Q,36 Why do you think some papers are presented in a team, some are not?

Q,37 Does the engineering discourse community have a certain kind of expectation on the presenters and the presentations?

Yes 1; No 2

If yes, what are they?

Presentations:

Presenters:

APPENDIX C -- *Continued*

Q,38 [Audience version: Do you think this/these speaker(s) has/have met your profession's expectation?] [Speaker: Do you think you have met your profession's expectation?; Do you think other presenters have met your profession's expectation?]
Yes 1; No 2

Reason(s):

Yes 1; No 2

Reason(s):

Q,39 [Audience version: What do you think is the speakers' strengths and difficulties?] [Speaker version: What do you think your strengths and difficulties are? What do you think other presenters' strengths and difficulties are?]

Strengths:
Difficulties:

QUALIFYING FACTORS
Q,40 Do outsiders have to have some qualifications in order to join the engineering community?
Yes 1; No 2

If YES, which of the following answers describes the qualifications that outsiders should have in order to join the engineering community?

Experience on the job as training	1
PE. / IR. qualifying tests	2
Technical interest	3
Obligation (for recognition, promotion, moral responsibility).	4
Payment of membership fee	5
Other. Please specify:	6

Q,41 Do presenters have to acquire certain skills/ qualification in order to make an oral presentation?

Yes 1; No 2

If Yes, which of the following answers describe(s) the qualifications that outsiders should have in order to join the engineering community: (Answer can be more than one).

Done research on the field/ deal with in the project concerned	1
Topic of paper in harmony with theme of seminar/conference	2
Accepted by seminar/conference organisers	3
Confident to present	4
Have certificate/degree in engineering	5
Other. Specify	6

APPENDIX C -- *Continued*

CONVENTIONS
Q,42 Do the presenters normally have to end their presentation within a given length of time?

Yes 1; No 2

If Yes, what is the most typical length of presentations in seminars or conferences in your field:

Less than 30 minutes 1
30 -45 minutes 2
More than one hour 3

Q,43 Do all the oral presenters have to meet certain standardised rules?

Yes 1; No 2

If Yes, what are they?

AUTHORITIES
Q,44 Who determine(s) the skills to be acquired by new presenters?
Senior members of engineering community 1
Superiors 2
Organisers 3
Peers 4
Themselves 5
Other. Please specify 6

Q,45 How do the Engineering discourse community members attempt to pass down their standardised presentation rules to the juniors?

Additional Information:

B

BACKGROUND
Q,46 Which of the following describe your professionality in making oral presentations in engineering? (Answer can be more than one):

Won Best Presentation Award at least once 1

Given at least one lecture/presentation /speech/talk on how to make technical presentations 2

Wrote at least one manual/article/book on how to make technical presentations 3

Other. Please specify. 4

APPENDIX C -- *Continued*

Q.47 Was the oral presentation (that won the award/ rated as the best of the day) connected to at least one research that you have done?

Yes 1; No 2

If Yes,

a. What stage was the research at?

Proposal 1
Progress 2
Completed 3
Other. Specify 4

b. What was the objective of the presentation?

To get funding 1
To report the progress 2
To reveal findings 3
To discuss implications of findings 4
Other. Specify 5

If not on research, what was it on and what was its objective?

Q.48 Describe the strengths of the presentation:

Q.49 (If you wrote/lectured on how to deliver technical presentations, answer these sub-questions, otherwise go to the next question):

a. What motivated you to write such an article /manual/book or give such presentations.

b. What advise did you give your colleagues?

CONTENT VS DELIVERY

Q.50 As a speech specialist in engineering, which one do you think is more important in presentations in engineering - content or delivery?

Content 1; delivery 2

If content, what aspect of content is included?

If delivery, what aspect of delivery is included?

TRUE OR FALSE

Q.51 Indicate whether the following statements are true (T) or false (F):

Technical presentations should contain humour just like other non-technical presentations	T	1;	F	2
A presentation is considered as good if there are many questions asked during the Question & Answer session	T	1;	F	2
A presentation is considered as good if high-tech visuals are used.	T	1;	F	2

APPENDIX C -- *Continued*

PROFESSIONAL SPEECH CLUB

Q.52 Are you a member of any professional speech club ?

Yes 1; No 2

If yes,

a. which club?

b. Do you advise your colleagues in Engineering to join the club?

Yes 1; No 2

c. What makes you say so?

d. What is a better alternative to joining a speech club?

ENGINEERING FIELDS

Q.53 Which engineering fields have you been exposed to in your career ?

Civil Engineering 1

Mechanical Engineering 2

Chemical Engineering and Natural Resources Engineering 3

Electrical Engineering 4

Other. Please specify 5

DIFFERENCES BETWEEN PRESENTATIONS

a. Would there be measurable differences between presentations in the different fields of engineering?

Yes 1; No 2

If yes what are they?

b. Would there be measurable differences between technical presentations based on non-research (practical applications, projects) and those based on research?

Yes 1; No 2

If yes what are they?

c. Would there be measurable differences between technical presentations in seminars and conferences?

Yes 1; No 2

If yes, what are they?

APPENDIX C -- *Continued*

TECHNIQUE OF PRESENTATIONS

Q.54 When you give oral presentations, do you organise your material into:

Introduction	Yes	1;	No	2
Body	Yes	1;	No	2
Conclusion	Yes	1;	No	2

If yes, what are included under the following:

Introduction:

Body:

Conclusion:

Q.55 Which is more difficult to decide, what to put into your talk, or what to leave out?

What to put in	1
What to leave out	2

If what to leave out is more difficult, what guidelines do you use?

Q.56 Which of the following are included in your research presentations?

Methodology of research	yes	1;	No	2
Research findings	Yes	1;	No	2
Implications of findings	Yes	1;	No	2
Sampling procedure	Yes	1;	No	2
Analysis of data	Yes	1;	No	2
Other. Specify	Yes	1;	No	2

Q.57 What do you include in your non-research presentations?

Q.58 Describe the nature of your non-research presentations (e.g. practical applications of research results...)?

Q.59 How many points/ facts do you give your audience in every five minutes of your talk?

0 - 1 points	1
2 - 3 points	2
More than 4 points	3

Q.60 How many points do you give your audience in a long lecture (30 - 45 minutes)?

1 - 2 points	1
3 -4 points	2
5 - 6 points	3
7 - 8 points	4
More than 8 points	5

APPENDIX C -- *Continued*

STATISTICS & NARRATIVES

Q.61 Do you prefer to use statistics in your presentations or narrate your personal experiences, or both?

Use of statistics 1
Use narration of personal experiences 2
Use a combination of statistics and narration of personal experiences 3

If both, which one is predominant, statistics or narration of personal experiences?

Statistics 1; Narration 2

TECHNICAL EQUIPMENT

Q.62 What visual/ technical equipment do you normally use in your presentations?

Q.63 Do you prefer to use the most up to date technical equipment in your presentation or use available visuals?

Use most up-to date technical equipment 1

Use available visuals 2

Q.64 Do organisers normally inform you beforehand what technical equipment is available for use?

Yes 1; No 2

If no, should they?

Yes they should 1; No they do not have to 2

REHEARSAL

Q.65 Do you normally practise/rehearse?

Yes 1; No 2

If yes, what particular aspect of the presentation has motivated the rehearsal?

To meet the specified time 1
To improve the flow of ideas 2
To sharpen the delivery 3

LOGISTICS

Q.66 Which do you prefer, read the presentation or give it extemporaneously?
Read 1; Extemporaneously 2

Q.67 Do you prefer to sit or stand when giving your presentations?

Sit 1; Stand 2

Q.68 Do you prefer to use the podium or not?
Use podium 1; without podium 2

APPENDIX C -- *Continued*

Q.69 What pointer do you prefer? Why ?

TIPS
Q.70 Could you please explain what tips/guidelines you have used, under the following headings, arranged in alphabetical order:
Appearance

Audience:

Audio-visual aids/Technical equipment

Content:

Technicality

Delivery:

Humour:

Introduction/Conclusion

Language:

Pre-presentation preparation:

Questions:

Time management

Voice quality

Other matters

THANK YOU FOR COMPLETING THE QUESTIONNAIRE AND GIVING IT BACK TO ME AT THE SEMINAR.

APPENDIX D

TRANSCRIPTION SYMBOLS USED

To make it different from the written form, the following symbols were used in transcribing the sixty-eight OPs being analysed in this research:

• The + sign follows Strodt-Lopez (1991) :
+ to indicate a short pause;
++ a long pause;
+++ all other longer pauses;

• Following Schegloff and Sacks (1967: 327):

|| to indicate point at which following line interrupts;
( ) to indicate something said but not transcribable;
(word) to indicate probable, but not certain transcription;
- to indicate broken word or repeated

• Used due to practicality:

— to indicate deletions made to keep the presentation text anonymous

| to indicate a falling tone equivalent to a full stop in a written discourse and usually, but not necessarily, the next sentence following this symbol began with a capital letter;

Capital letter beginning a sentence to indicate what seems to be the beginning of a sentence;

(( )) to indicate the researcher's commentary;

((V1T)) to indicate new paragraph: *V* refers to *visual*; 1 indicates the sequence number of the visual and *T* means *Transparency*;

((V2S)) also indicates new paragraph: *S* here refers to *slide*;

Written discourse punctuation such as quotation marks (" "), question mark (?), exclamation mark (!), etc. were used for the same effect.

APPENDIX E

SAMPLE ANALYSED EOP (MOVES) (NNS) (Pr59)

Please note that since this OP was audio taped, the exact occurrence of visuals could not be determined. The dash sigh (-) signifies either the sub-move in question is not reported in Table 1 due to low frequency of occurrence or is irrelevant to be pointed out.

TEXT	SUB-MOVE
Good afternoon	[Sub-move I. 1C greet audience]
ladies and gentlemen |	[Sub-move I. 1B acknowledge audience]
I am --- --- + diffusion process engineering er + Motorola Seremban|	-
The *topic* of my discussion today is er + Linking the diffusion furnace to a personal computer software and hardware improvation | ++	[Sub-move I. 2B announce title]
This is the *outline* of my presentation |+ We'll go through er + Introduction + Current system we have in Seremban er + The problems we face with the current system + The Proposed system + The impact of the change + and also the implication from the other area ++	[Sub-move I. 3B preview detail]
Diffusion is a + process in wafer fabrication where + silicon wafers are + placed into a furnace tube and + heated up at high temperature + with the introduction of gaseous | Typical diffusion are equipment + process | They have a + terminal where we key in the information we need at + what temperature what time what (gas) | The central computer will process the information + and er + to communicate with the controller + they all goes to the information + and + diffusion [sic] the furnace |++	-

	APPENDIX E -- *Continued*
In Seremban *what we have is*- we have er + 16 furnace tube + and 4 diffusion banks + and each bank is controlled by er + digital controller + and er all these controllers are linked to PDP er digital-digital computer + and er at these digital computer + is linked to a serial terminal + from VT 100 terminal where the operator or the user will communicate with the ‖ ++	[Sub-move B. 1F current state/ trend]
The procedure for + diffusion or the diffusion process is + an operator will get + the lock ‖ + she will - + or he will + er check the wafer and the shop order or () + to see whether the wafer is the correct wafers + Then er + he will key in the information into the terminal ++ whatever process is needed for how long and things like that + the wafers are then transferred + to the hose + and + straight away to the furnace + and the operator then + punch the process ‖++	[Sub-move B. 2A circumstances that make the proposed solution necessary]
----------	-
The function of the VT 100 or the serial terminal is + as + er a means of + interfacing with the user where + the main lines there is to transmit the PC and then download and listening to their serial and terminal port with the PDP level ‖ Line one is the serial + data transmission from VT 100 + to PDP level ‖ Every key stroke is converted to ST and sent to the transmit line ‖ And line two is ‖ the information was then sent to the PDP computer to the + VT 100 ++ such as er + this is an example + this is the RC er + those where it represent the co-ordinates on the terminal + and this is the terminal's end‖	

	APPENDIX E -- *Continued*
What is our problem ++ Our *problem* is misprocess | And er + misprocess during er diffusion is + fabs + major problem ++ in almost all fabs in the world | And er misprocess in procedure | There are *two problems* | One is wrong operation + or the tube selected | Let's say it is supposed to run one hour. We accidentally er + process it for two hours |+ that is misprocess |+ + + Let's say it is supposed to run in tube ID's A1 it is run in B1| It is also misprocess | Incorrect parameter | Let's say we are supposed to introduce er oxygen or nitrogen as a carrier gas + suddenly we used another gas | That is also misprocess| Example + let's say we have process sequences A B and C and B is supposed to be 45 minutes | So misprocess occurs when the sequence is AC and B |+ Somehow C was done first + skipping the process | Let's say we do A and then C + without B | That is also misprocess | Repeating the same process + and also wrong time | Let's say 45 minutes + we process it for 60 minutes + is also considered as misprocess |++	[Sub-mobve B. 2D problems faced in current system]
In the process + we have in Seremban + we have + close door ++ depending on device we have from 10 to 20 + diffusion quarters + for each device + or specific device + and er + all these er process has got so many + steps + procedures + which contributes towards opportunities for error | We calculated that the total opportunity for error is 330 | Ways how we can make these things + and er these error + if it occurs + costs + close to hundreds of thousands of dollars + of scrap just + like that | ++	[Sub-move B. 2C rationalise what needs to be done]
So + what we propose is + to replace the VT100 with a PC | So + by that + we just er simulate the VT100 with a PC |	[Sub-move B. 3B major function/characteristic/ use]

	APPENDIX E -- *Continued*
And er by simulating they are er actually doing nothing I It is just the same + except how the PC will start thinking I Previously the VT100 will bend the ... Now the PC will do the thinking + and then + it will + if everything is OK + then it'll ask the PDP to communicate with the controller I	[Sub-move B. 1E compare old and new]
Linking to the PDP level computer was very *difficult* at + the beginning I When we tried to link + we could not understand anything + What was going through the line + from the the VT100 towards the PDP I *So what we did* + we tried to tack the mind using a + physical readers + logic analyser and also a stethoscope I We can borrow forward it + stop it + benefit it ++ and once that is done + we tap the the line + the transmit end line and the receive signal line to a personal computer + to analyse every key stroke which is done here and every string which is sent by having switches + let's say we want to analyse + transmit my + put the switch there and see + if I press A what is transmitted I+ By doing that + we managed to develop a software a simple software to just + imulate or simulate the VT100 using a PC I So we just replace the VT100 with a PC + with the simple software I++	[Sub-move B. 4H Problems of process and solution taken]
That is actually not + er getting rid of problem but + it is just replacing I+ So the *next step* is to have + or add more software features + to the PC + where the PC will + process all the information before + sending the information to the central controller I So what we + incorporated is the software will check the format of the lot number I	[Sub-move B. 4F sequence/ stages of development of system/model]

	APPENDIX E -- *Continued*
Every lot number ll + for our lot number + will have information length l What device I believe this NPN device + what are the P type device or the dial l So from that information we know what process is next l How it should be before the next process occurs + and things like that l	[Sub-move B. 4D rationalising how decisions/ choices are made]
So from then diffusion process stack check + step is checked to prevent a later process from preceding an earlier one l Or the same process from being repeated l And the time difference + let's say from a day's drive in + to emitter Photoresist and a chemical diffusion should take about eight hours + let's say a lot + somehow we get + to the emitter diffusion after a day's struggling is just four hours l So with this software + we check that something is wrong + something is being skipped here + please check l So + the time difference between the current and previous process is compared to minimise the possibility of skipping a process l++ And all the parameters are + keyed in + in the data base in the PC + personal computer l So the operator do not select any l+ They just select what device it is + what process it is + the rest is done by the + personal computer l And the lot number is verified + against ER + the furnace scheme whether that lot + can be processed with that furnace or not + whether that operation is meant for this + device or not l So + that is to prevent using the wrong + furnace scheme or + selecting the wrong preparation l++	[Sub-mobve B. 4F sequence/ stages of development of system/model]
The software is written in Turbo Pascal and er C++ l And er + what we have + right now is + after the implementation of the + new system + we have er + software according to serial port l	[Sub-move B.5G highlight technical configuration/ equipment needed]

	APPENDIX E -- *Continued*
If it is a download operation it will ask for log number operation number and the tube l And if all the information + correct and matches + the device start l+ In to download to the + central computer l Else + it will ask again + or check again, or an engineer or a senior supervisor will have to come and verify everything l+	[Sub-move B. 6C highlight operation or mechanism of the proposed solution -- how it works]
Data of each lot ++ is stored in a data file + as individual record l And a new record is open everything a new lot is started l And er + record which are + which the lot has + completed the process + will be removed l But + whatever data is removed will still be kept in another data base for + SPC log monitoring + after some time if there is problem we we need to refer further + we can go back and retrieve the information we want l The problems encountered is noise er ++ signals in the communication line l	[Sub-move B. 6C highlight operation or mechanism of the proposed solution -- how it works]
If we do not *ground properly* + or + if the body of the computer is not grounded + and if we do not set the polarity and the er + power rate correct + we have a lot of noise signals established + It will be going on between the computer and the signal generator + And er + on and off we have software hang-ups + because of the + software is not optimised + for the skill we already (scale) for early development l Other messages sent out by the + PDP is not recognised by the PC + and also hang-ups happen when we have er + do not have time off + to repeat + so both parties just waste + until one of them time out l	[Sub-move T3C hints on how to implement successfully]

APPENDIX E -- *Continued*

With this implementation + what we have is + we have er + tremendously reduced the opportunities for error during data entry + due to computerised verification of cue and operation + Parameter setting is automatically set by the personal computer I This result in zero misprocess + until er this + point of time + and er + reduces time significantly I And there was er + very minimal hardware modification to the old minimal system I We just replace the VT100 with a PC I and the rest is still the same I And er + the third one is we can track the history of all the lots I+ We can track the history of all the furnace tubes + and also we can easily expand on the device portfolio I	[Sub-move T4B summarise/ reinforce points]
For this project, we can also a use similar methodology to integrate a personal computer to any equipment + utilising a terminal I Any equipment uses a terminal we can easily + within the terminal + with the PC + and by the simple software + to you know make it more user friendly + and er + batch data entry to terminal 2 can be reduced by a single p stroke program keys + to make things easier + and er + real-time data retrieval and computerised SP SPC can be implemented + by measurement the equipment in the terminal port or RIC +++	[Sub-move T.4A Generalise topic]
and er with that I *end* my presentation I	[Sub-move T2A 'conclusion' expression]

Appendix F

SAMPLE ANALYSED EOP (MOVES) (NS) (Pr54)

Please note that the dash sigh (-) signifies either the sub-move in question is not reported in Table 1 due to low frequency of occurrence or is irrelevant to be pointed out.

TEXT	SUB-MOVE
Thank you very much ((Looking at chairman)) |+	Sub-move I.1A Thank chairman
Well + good afternoon +	Sub-move I. 1C Greet audience
ladies and gentlemen |+	Sub-move I. 1B Acknowledge audience
As er + I was already being introduced |+ I am — |+ --- *What I am going to talk to you* today + is we are actually modelling for product introduction |+	- --- Sub-move I. 2C Announce subject
A model is ( ) successfully implementing in the current engineering |+ *((V1S Title with question mark))* The question mark was important because what I am going to present to you today is a-a starting which is-is ( ) ( ) discussion + the work that is influencing	Sub-move I. 2D Comment on title

APPENDIX F -- *Continued*

I am going to get rid of our saying + 'why + we don't talk about modelling + product introduction' Talk about what it is in product introduction that is important + ( ) true in concurrent engineering I+ What needs to be modelled I+ How now we talk of the process of doing that I+ And then very briefly discuss and actually study the use of this method I+ *And then to talk* a little more about the lessons we learnt from that I+ And then *where we are looking to go next* I+	Sub-move I. 3B Preview in detail
I think first of all what could help me + if I could ( ) is to ask what portion of you that are currently involved in research in current engineering I+ ((Someone fixed slide)) Right I+ Thank you very much I+ ((V2S Comparison of CIM & CE)) First of all then + why ++++ think about modelling I+ Why modelling in concurrent engineering I+ What strike us as the amazing similarity + in the literature between *the problems that's er* + *we are facing* the usual face of the manufacturers II say 'We are going to ( )'	Sub-move B. 2B Identify what needs to be done
I know what you need and you are looking at the *literature* of concurrent engineering I+ They were both talking about achieving organisation improvement through lack of communication system and change + and implications of technological and structural change I+ One of the key ++ steps that now we argue er + *literature* is to actually to put forward + successfully introducing since + is to actually be able to model + and have to arrive at some degree of understanding of some of what we are dealing with I+ I know you can ( ) a few people there + but I mean + I ask for the whole idea ( )	Sub-move B.2E Review literature

	APPENDIX F -- *Continued*
If that's the case as since + and if some current engineering shows a similar sort of goal + then ... we could argue + that perhaps modelling + is also *going to provide* + a mechanism + to actually helping to implement the current engineering l+ So that was + if you like the + initiate of the talk and perhaps looking at the ways modelling + product introduction + that you belong to the process + of the system + that concurrent engineering is now going through l+	Sub-move B. 3B Major function/ characteristic/ use
Having got that far + er + the next thing + that we really have to think about + was + ((V3S "*Purposeful Human Activity Systems*")) Well what actually we are trying to model l+ And er + we are trying to find check in work ( ) there + not the system's work l+ *His idea* of simply called 'Purposeful Human Activity System' ( ) ( ) Er + the idea that + er + understanding that could be derived + including we have process + including the structure + within that system l+	Sub-move B.1C Refer to established knowledge in the field
So +++ product introduction for us then + em + *begins with the customer's need* l+ And *finishes with all the information created* + is created *to actually manufacture our product* l+ And in between + something might happen including some dynamics including the process all to do with the system +	Sub-move B. 6C Operation or mechanism of the system; how it works
and somebody actually got to do it + got to settle with the system the people on the toes ( ) So + if we were to understand + what was actually going on with the product introduction + and has from that understanding try and er + ascertain what concurrent engineering needs to improve +	Sub-move B. 3C Major importance/ significance/ necessity

	APPENDIX F -- *Continued*
and what we felt we needed was + some sort of model + of product introduction + the lives of the product activities + the process and the structure + that help us with the process of introduction ((Creaking of door)) +++	Sub-move B. 6C Operation or mechanism of the system;How it works
We use those + then as er + check list + by which we could evaluate the () modelling that we are able to +++ [Aside]] ((V4S)) er + turn to I+ Before that I didn't do that very well but I mean to illustrate it as much as anything I+	Sub-move B. 4D Rationalise how decisions/ choices are made
To compare a-a number of modelling *methodology* which are available with a number of characteristics that we were looking for I+ Em + I just used a very er + amazing technology to make it to actually see ( ) er + ( ) Along the top then + we can see em the element that we are looking for this modelling introduction we came that carries the information for that I+ So in terms of + er + the system components then + we were looking for the system of activity I+ So ( ) methodology to be able to er convey information about that I+	Sub-move B. 4I Highlights methods/ approach
The input from the output + the *element* that are involved in the process + who is doing it + what information we are working on + what do they create + Am + the element that we are doing + such activity + So is it a person + is it computer + Do such perform transitional process and how those themselves are related into the structure I+	Sub-move B. 4E Highlight components/ elements/ details involved in process/ design
At the same time we though + we don't want this model to er + be *incredibly difficult to understand and procreate* I+ Because then it is the more time that we are doing that to implement to current engineering + which is where this work wanted to lead to I+	Sub-move B. 4G Make commentary on results/ principles and concepts

APPENDIX F -- *Continued*

And so we went to this model then to be at a priority hierarchical breakdown + production loss + the complexity of it and we also wanted to get some sort of the measure of some complexity of a number of models that are currently used + We talk about criteria then I+ We set up a number of methodology that are available +	-
[Aside] And + a checklist is by no means er + extensive + I will pre-admit that we are not comparing ( ) but it essentially start em er + (investigation / prevention) modelling +	
We had *problem* to arrive at a few techniques + on which we did a local service in little of those We found that very often they are using very common elements one or another	Sub-move B. 4H Highlight problems
I think you also hit the *problem* that you tend to extract out + of the existing total system that I () talk + I mean + II But on the basis of the sort of investigation () + the one that we really can trust is () + with what we really want is IDEF +	Sub-move B. 4H Highlight problems
Having said that we decided not to use it at *the end of the day* I+ Only er + made minor alterations to it that really fit our purpose I+	Sub-move B. 4G Make commentary on results/ principles and concepts

APPENDIX F -- *Continued*

I don't know how many of you here are familiar with IDEF I+ There's certainly shakes + nos ((many *no*))appeared I+ Em + for those of you who are familiar then + quickly I hope to define the control ideas of IDEF quite too distinguished from many sources relevant I+ And the way that IDEF relates and structure them is very much in its own structure and identity + relationship + it doesn't buy the whole *structure* I+ So weh ((breathed out)) + establish em + our own method + of model now I+ Look at this feature under control ((Looking at the slide)) I+ ((Looking at the audience))	Sub-move B. 5C Highlight structure of work/ model
Having gone that far + er + the next er + stage supposed to go (fantastic) I+ [[Aside]] Today I was very fortunate because I was working very closely with large air (specimen) manufacturer I+ Em + about 300 + 400 people + ( ) So + a fairly sizeable + company + fairly representative I+ I mean we are talking here about ( ) What I'll do is I'll briefly show you the sorts of things that we came up with I+	Sub-move B. 5C (*continued*) Highlight structure of work/ model
Em + ((V5T)) ( ) This is the sort of process ( ) This is the highest level I+ I've removed all the identification we put left here ( ) is a + security ( ) ((Looking at new transparency)) Is that right up? Yes ((said audience)) I+ Yap?	Sub-move B. 5C (*continued*) Highlight structure of work/ model

APPENDIX F -- *Continued*

Em + this is actually ( ) This is some sort of illustration of the size of reproduction of the *model* I+ This is the *model* of the process of the highest we are going to put together I+ This is the highest level + of the hierarchical breakdown I+ So em + we were looking here at somewhat to be fairly way down product introduction process + Fairly detail is on we actually knew about broken sort of ... you were looking at I+ And you're really converting that information into constricted assemblage based on hierarchy here I+ Em + as you can see there and if you often get all the data diagrams er + telling us about matter I+ You can see that this is a very much you will be expecting in the output and information + part of the hierarchy + so + er + number accordingly I+ That's perhaps just a number of systems I+ Just go down for another one I+ ((V6T)) ((Clear throat)) That's taking + ((Fixing transparency)) that block and it's finding it out I+ Once you got to + an activity which is actually just done by one person + you can actually say who did it and notably and that's the project for project engineering ( ) activity I+	Sub-move B. 5C (*continued*) Highlight structure of work/ model
((Breathed in)) And again we are *(level)* that we have done here I think ha ((breather out)) the more that we have is five *levels* of haraki-hierarchy at the end of the day I+	Sub-move B. 5B Highlight level

APPENDIX F -- *Continued*

It *needs adapting* because we look for the part of the product introduction which will stand in + where you usually + fairly all know how you are going to design something + where your information is coming from + what's going to + er + it flows very much the wrong way I+ Can wind get back to the front that was where () passes it + It would not going to be the case I+	Sub-move T. 3B Stress need for future work/ development/ improvement
And so we need some methodology + either this adapted + or-or some manufacturing It would be very easy to cope with the chaos of this conceptual design and very useful + to actually relate information supply to the model you can start putting for lead-time on here + you could always start with 300 people I+ Just instruct er ( )	Sub-move T. 4A Generalise topic/ approach/ application
And *finally* and what many people are looking for this is only one aspect of er + methodology of concurrent engineering implementation within a wider approach I+	Sub-move T. 2A Conclusion expression
Thank you very much +	Sub-move T. 5A Say 'Thank you'
are there any *questions*?	Sub-move T. 5C Invite question

APPENDIX G

SAMPLE ANALYSED EOP (FLOATS/SUB-FLOATS) (NNS) (Pr59)

Please note that since this OP was audio taped, the exact occurrence of visuals could not be determined. The dash sign (-) signifies either the sub-float in question is not reported in Table 2 due to low frequency of occurrence or is irrelevant to be pointed out.

TEXT	SUB-FLOAT
Good afternoon	-
ladies and gentlemen l	-
I am --- --- + diffusion process engineering er + Motorola Serembanl	-
The topic of my discussion today is er + Linking the diffusion furnace to a personal computer software and hardware improvation l ++	-
This is the outline of my presentation l+ We'll go through er + Introduction + Current system we have in Seremban er + The problems we face with the current system + The Proposed system + The impact of the change + and also the implication from the other area ++	Sub-float 5.2 (Metastatement)

APPENDIX G -- *Continued*

Diffusion is a + process in wafer fabrication where + silicon wafers are + placed into a furnace tube and + heated up at high temperature + with the introduction of gases I Typical diffusion are equipment + process I They have a + terminal where we key in the information we need at + what temperature what time what (gas) I The central computer will process the information + and er + to communicate with the controller + they all goes to the information + and + diffusion the furnace I++	Sub-float 4.2 (Definition)
In Seremban what we have is- we have er + 16 furnace tube + and 4 diffusion banks + and each bank is controlled by er + digital controller + and er all these controllers are linked to PDP er digital-digital computer + and er at these digital computer + is linked to a serial terminal + from VT 100 terminal where the operator or the user will communicate with the II ++	Sub-float 1.1 (False Start)

The procedure for + diffusion or the diffusion process is + an operator will get + the lock l + she will - + or he will + er check the wafer and the shop order or () + to see whether the wafer is the correct wafers + Then er + he will key in the information into the terminal ++ whatever process is needed for how long and things like that + the wafers are then transferred + to the hose + and + straight away to the furnace + and the operator then + punch the process l++

The function of the VT 100 or the serial terminal is + as + er a means of + interfacing with the user where + the main lines there is to transmit the PC and then download and listening to their serial and terminal port with the PDP level l Line one is the serial + data transmission from VT 100 + to PDP level l

---

Every key stroke is converted to ST and sent to the transmit line l And line two is l the information was then sent to the PDP computer to the + VT 100 ++ such as er +

---

this is an *example* + this is the RC er + those where it represent the co-ordinates on the terminal + and this is the terminal's end l

Sub-float 4.2 (Definition)

Sub-float 4.2 (Definition)

Sub-float 4.3
(Example/Illustration)

APPENDIX G -- *Continued*

What is our problem ++ Our problem is misprocess I And er + misprocess during er diffusion is + fabs + major problem ++ in almost all fabs in the world I ----------

---

And er misprocess in procedure I There are two problems I One is wrong operation + or the tube selected I Let's say it is supposed to run one hour. We accidentally er + process it for two hours I+ ----------

that is misprocess I+ + + Let's say it is supposed to run in tube ID's A1 it is run in B1I ----------

---

It is also misprocess I Incorrect parameter I Let's say we are supposed to introduce er oxygen or nitrogen as a carrier gas + suddenly we used another gas I----------

That is also misprocessI

Example + let's say we have process sequences A B and C and B is supposed to be 45 minutes I So misprocess occurs when the sequence is AC and B I+ Somehow C was done first + skipping the process I Let's say we do A and then C + without B I ----------

That is also misprocess I Repeating the same process + and also wrong time I Let's say 45 minutes + we process it for 60 minutes + is also considered as misprocess I++

Sub-float 3.2 (Rhetorical Question)

Sub-float 1.1 (False Start)

Sub-float 5.3 (Concluding Statement)

Sub-float 5.3 (Concluding Statement)

Sub-float 5.3 (Concluding Statement)

Sub-float 4.3 (Example/Illustration)

Sub-float 5.3 (Concluding Statement)

In the process + we have in Seremban + we have + close door ++ depending on device we have from 10 to 20 + diffusion quarters + for each device + or specific device + and er + all these er process has got so many + steps + procedures + which contributes towards opportunities for error I We calculated that the total opportunity for error is 330 I Ways how we can make these things + and er these error + if it occurs + costs + close to hundreds of thousands of dollars + of scrap just + like that I ++

	APPENDIX G -- *Continued*
So + what we propose is + to replace the VT100 with a PC I So + by that + we just er simulate the VT100 with a PC I	
And er by simulating they are er actually doing nothing I It is just the same + except how the PC will start thinking I Previously the VT100 will bend the ... Now the PC will do the thinking + and then + it will + if everything is OK + then it'll ask the PDP to communicate with the controller I	-
Linking to the PDP level computer was very difficult at + the beginning I When we tried to link + we could not understand anything + What was going through the line + from the the VT100 towards the PDP I So what we did + we tried to tack the mind using a + physical readers + logic analyser and also a stethoscope I We can borrow forward it + stop it + benefit it ++ and once that is done + we tap the the line + the transmit end line and the receive signal line to a personal computer + to analyse every key stroke which is done here and every string which is sent by having switches + let's say we want to analyse + transmit my + put the switch there and see + if I press A what is transmitted I+ By doing that + we managed to develop a software a simple software to just + imulate or simulate the VT100 using a PC I So we just replace the VT100 with a PC + with the simple software I++	Sub-float 1.1 (False Start)
That is actually not + er getting rid of problem but + it is just replacing I+ So the next step is to have + or add more software features + to the PC + where the PC will + process all the information before + sending the information to the central controller I So what we + incorporated is the software will check the format of the lot number I	-

	APPENDIX G -- *Continued*
Every lot number ll + for our lot number + will have information length l What device I believe this NPN device + what are the P type device or the dial l So from that information we know what process is next l How it should be before the next process occurs + and things like that l	Sub-float 4.4 (Highlighting background principles and concepts)
So from then diffusion process step check + step is checked to prevent a later process from preceding an earlier one l Or the same process from being repeated l And the time difference + *let's say* from a day's drive in + to emitter Photoresist and a chemical diffusion should take about eight hours + let's say a lot + somehow we get + to the emitter diffusion after a day's struggling is just four hours l So with this software + we check that something is wrong + something is being skipped here + please check l So + the time difference between the current and previous process is compared to minimise the possibility of skipping a process l++ And all the parameters are + keyed in + in the data base in the PC + personal computer l So the operator do not select any l+ They just select what device it is + what process it is + the rest is done by the + personal computer l And the lot number is verified + against ER + the furnace scheme whether that lot + can be processed with that furnace or not + whether that operation is meant for this + device or not l So + that is to prevent using the wrong + furnace scheme or + selecting the wrong preparation l++	Sub-float 4.3 Example/Illustration)
The software is written in Turbo Pascal and er C++ l And er + what we have + right now is + after the implementation of the + new system + we have er + software according to serial port l	-

	APPENDIX G -- *Continued*
If it is a download operation it will ask for log number operation number and the tube l And if all the information + correct and matches + the device start l+ In to download to the + central computer l Else + it will ask again + or check again, or an engineer or a senior supervisor will have to come and verify everything l+	-
Data of each lot ++ is stored in a data file + as individual record l And a new record is open everything a new lot is started l And er + record which are + which the lot has + completed the process + will be removed l But + whatever data is removed will still be kept in another data base for + SPC log monitoring + after some time if there is problem we we need to refer further + we can go back and retrieve the information we want l The problems encountered is noise er ++ signals in the communication line l	Sub-float 4.4 (Highlighting background principles and concepts)
If we do not ground properly + or + if the body of the computer is not grounded + and if we do not set the polarity and the er + power rate correct + we have a lot of noise signals established + It will be going on between the computer and the signal generator + And er + on and off we have software hang-ups + because of the + software is not optimised + for the skill we already (scale) for early development l Other messages sent out by the + PDP is not recognised by the PC + and also hang-ups happen when we have er + do not have time off + to repeat + so both parties just waste + until one of them time out l	-

APPENDIX G -- *Continued*

With this implementation + what we have is + we have er + tremendously reduced the opportunities for error during data entry + due to computerised verification of cue and operation + Parameter setting is automatically set by the personal computer I This result in zero misprocess + until er this + point of time + and er + reduces time significantly I And there was er + very minimal hardware modification to the old minimal system I We just replace the VT100 with a PC I and the rest is still the same I And er + the third one is we can track the history of all the lots I+ We can track the history of all the furnace tubes + and also we can easily expand on the device portfolio I	-
For this project, we can also a use similar methodology to integrate a personal computer to any equipment + utilising a terminal I Any equipment uses a terminal we can easily + within the terminal + with the PC + and by the simple software + to you know make it more user friendly + and er + batch data entry to terminal 2 can be reduced by a single p stroke program keys + to make things easier + and er + real-time data retrieval and computerised SP SPC can be implemented + by measurement the equipment in the terminal port or RIC +++	-
and er with that I *end* my presentation I	Sub-float 1.4 (*With that I end*)