
The Introductions in Medical Research Articles

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1. INTRODUCTION

Although Introductions may not be the section to which expert readers first turn their attention, they nevertheless have to be there in most journals and they play a strong role in capturing readers' attention. So it is essential that the writer learn how to produce the kind of text that will impress editors and attract readers' attention.

Eight professors at the Faculty of Medicine of the University of Malaya were requested to state the order of difficulty of the sections in the writing of an article. Three of the professors stated that they found the introduction the most difficult section to write and one was of the opinion that it was the second most difficult to write after the title. The difficulties that were mentioned were how to start the article when one has been immersed in the subject of research, how to make the article sound interesting and worth reading, how to describe the relevant available information pertaining to the topic from many different types of journals, how to arrange and write it in a readable manner, and finally how to highlight the important aspects of the study in a clear and concise way.

This paper attempts to look at the "moves" and language of introductions and to present a model for introductions in medical articles. It also suggests ways of helping students to cope with the writing of introductions. The term 'move' will be the same as that used by Swales in his analysis of introductions. It has been defined by McKinlay (1983) as 'a semantic unit which is related to the writer's purpose' (Coulthard, 1986:131). It could consist of a single sentence or more but is usually not more

than a paragraph long.

A number of writers have applied the moves analysis to the different sections of academic articles. Swales' (1981) four- move model and his modified (1990) three- move model for the analysis of introductions have been used by some writers in the analysis of introductions in different disciplines (Peng, 1987, Swales and Najjar, 1987, Crookes, 1986) Peng's analysis of data revealed that Swales' model was applicable to it whereas Crookes' concluded that results seem to agree that there are four basic units but that only in the shorter introductions is the four-move schema given by Swales found. In more complex introductions a variety of alternative arrangements is possible, involving repeated use of moves two and three

From the work done by the above and other writers on genre analysis, counter-examples to Swales' moves and steps have been cited. Swales' models (1981 and 1990), which examine the introductions of articles and their general structure, are limited in that his conclusions are generalized to apply to articles from various disciplines. Articles from different disciplines will tend to vary in their subject area, length, complexity and other aspects. Some introductions examined deviated considerably from his four- and three- move schema thereby calling into question the system's descriptive adequacy. Some of the terms used in the models appear to be unclear despite Swales' explanations. Their limitations with regard to the sequences in which the moves might appear and the fact that some moves may be optional do not permit easy application of the system to other corpus.

Other writers have examined linguistic features in academic articles and attempted to relate the frequencies of grammatical forms to the type of text examined and its rhetorical purpose. West (1980) looked at nominalization occurrence and scientific rhetorical divisions and showed that differences existed between the different sections with regard to the frequency of that-nominals. Tarone (1981) examined the relative frequency of the passive and the active form in astrophysics papers and the rhetorical reasons for the choice. Wingard (1981) observed differences in the use of verbs according to rhetorical functions in six medical texts. Oster (1981) gave an account of tense in reporting past literature and proposed that there are conditions which determine when one of the three tenses, the present perfect, the present tense and the past tense, is chosen to report past literature. Woods (1982) in his study of Chemistry articles observed a consistent

rhetorical structure and came up with a model of rhetorical structure and linguistic rhetorical structure for Chemistry articles. Adams Smith (1984) investigated authors's comment in medical research papers in different categories of articles and found that the author's comment is expressed by verbal and nonverbal modals and attitudinal markers. Most of these studies examine the function and distribution of selected linguistic features across all the different sections in an article and do not focus specifically on particular sections.

2. THE CORPUS

The corpus for this paper consists of twenty articles selected at random from seven different medical journals published from 1990 to 1993. The journals are

- 1 *Journal of the Royal Society of Medicine*
- 2 *Journal of the Royal College of Surgeons of Edinburgh*
- 3 *The Australian and New Zealand Journal of Surgery*
- 4 *The Medical Journal of Malaysia*
- 5 *American Journal of Diseases of Children*
- 6 *Journal of Obstetrics and Gynaecology*
- 7 *The British Journal of Surgery*

The readership consists of the following in corresponding order:

1. All types of specialists - physicians, surgeons, psychiatrists
2. Fellows of the college- other surgeons
3. Surgeons from Australasia
4. Medical practitioners, non-specialists in Malaysia
5. Child specialists
6. Obstetricians and gynaecologists
7. Other surgeons

3. ANALYSIS OF DATA

3.1 The length

The number of words found in the introductions in the twenty articles ranges from 15 to 393 words, the average being 156.6 words.

3.2 The moves

There appears to be three main moves in the introduction.

3.2.1 Move 1

The first one that will be described is usually found at the beginning of the introduction. In all but one of the articles examined, the introduction begins by setting the scene for the rest of the article to follow. This move is very important to the writer as it is in this move that he tries to establish how his research fits into an important area of research and that it is of some significance. In some cases the writer does not try to convince the reader of the work's importance. This is presumably because the reader, being an expert in the field, would know that it is important. This move contains facts that the readers must know if they are to fully understand the discussion that follows. The writer sets the scene for his research in one of the following ways:

3.2.1.1 Demand for treatment

'Demand for treatment' is found in only one article, before the writer proceeds to describe the problem that this has given rise to. The example is given below

The demand for hormone replacement therapy by women in the United Kingdom increases but many patients continue to report difficulty in obtaining treatment from their general practitioners and seek advice elsewhere by self-referral. Others, concerned about the adequacy of monitoring that their GPs are able to offer request referral to a specialist clinic (Garnett, 1991:128).

3.2.1.2 Emphasizing importance

'Emphasizing importance' is found in eight of the articles examined. It is always found at the beginning of the introduction and is an attempt by the writer to highlight the significance of the study. An example is given below

Splenic abscess is an unusual and obscure clinical entity as evidenced by the absence of reports from a recent review of 540 intra-abdominal abscesses (Walia, 1990:154).

3.2.1.3 Providing background information

'Providing background information' is present in three articles. It is found at the beginning of the introduction. An example is given below

In 1982 an arthrography service was set up at the Coventry and Warwickshire Hospital, which specializes in orthopaedics and trauma (Evans, 1991:133).

3.2.1.4 Description of a disease

'Description of a disease' is quite commonly found in the articles examined. It is present in eight articles. It can appear at the beginning of the introduction or if 'emphasizing importance' is found, appears after this. An example is given below

Carotid body tumours are rare neoplasms. They arise in the specialized tissue of the carotid body and are therefore also referred to as chemodectomas (Keating, 1990:172).

3.2.1.5 Description of treatment

'Description of treatment' is present in six articles. This usually appears after 'description of a disease'. An example is given below

The different forms of dilatation which are available include digital dilatation, dilatation with rigid instruments and balloon dilatation, previously introduced endoscopically (Banerjee, 1991:136).

3.2.1.6 Reference to previous research

'Reference to previous research' is found in seven articles at various points in the introduction. It can be used to support a statement made by the writer regarding a disease or a kind of treatment or to show that the present study is required. An example is given below

In a recent definitive study of venous anatomy involving detailed dissection and radiography of cadavers, Taylor et al. revealed a vast network of valveless, oscillating veins in the face, scalp and many areas of the neck (Meagher, 1991:903).

3.2.2 Move 2

The second main move is usually found in the middle of the introduction and is found in thirteen of the twenty articles. This is similar to the second move in Swales' 1990 model. It concerns a problem which has spurred the writer into carrying out the present research. This move is realised in the following ways

3.2.2.1 Inadequate facilities for treatment

'Inadequate facilities for treatment' is found in three articles. An example is given below

Consequently, the few menopause clinics which exist are vastly oversubscribed with a potential deterioration in the level of care offered (Garnett, 1991:128)

3.2.2.2 Failure/limitation of treatment

'Failure/limitation of treatment' is present in five articles. It is found when the writer describes a treatment which has failed in the past or which has been found to be inadequate in some way. An example is given below

With external beam therapy alone, high radiation dose to the tumour bed cannot be achieved without producing considerable long-term effects to the breast (Davidson, 1990:175)

3.2.2.3 Lack of literature

'Lack of literature' is found in only four articles. It states that there is insufficient research material in the area discussed. An example is given below

Most of these data were obtained from retrospective studies (Oakshott and Hunt, 1989) of limited value to current obstetric practice, and these complications and harmful effects may not be so common when only a single anticonvulsant drug is used (Nakane et al, 1980; Lindout et al, 1984) (Hunter, 1990:484)

3.2.2.4 Lack of knowledge of treatment

'Lack of knowledge of treatment' appears in only two articles. It specifies that the extent of a treatment is not yet known. One of the examples is given below

Wound infection has been reduced by the advent of prophylactic antibiotics but their role in the prevention of anastomotic dehiscence is not so clear (Duthie, 1990:169).

3.2.3 Move 3

The third main move is usually found at the end of the introduction. It is found in all but one of the articles examined. In this move the writer gives a brief mention of the present study and may describe the method of management or treatment of a disease that the writer believes should be brought to the readers' attention. It may outline the method of investigation used and why that particular method was chosen. This move is realised in three of the following different ways

3.2.3.1 Purpose of the study

'Purpose of the study' is found in six articles. It states the aims of the research and why it is being carried out. An example is given below

This study was undertaken to determine the effect of fasting on diabetics, and the control of their diabetes during the fasting month and to evaluate dietary alterations that could influence the diabetic control (Mafauzy, 1990:14).

3.2.3.2 Introducing present research

'Introducing present research' is a common move found in eleven articles. It briefly describes what the present research is about. An example is given below

This paper is a retrospective analysis of one surgeon's (P.B.) mastoid surgery over a 6-year period (1983-9) (Blake, 1991:914).

3.2.3.3 Extension of previous research

'Extension of previous research' appears in only two articles. It concerns the application of a technique to a different area or

situation from that already carried out in the past. An example is given below

This paper describes our experience at wire-guided balloon dilatation of colorectal strictures, which we have termed balloon coloplasty (Banerjee, 1991 136).

From the above findings, the following model for introductions in medical articles is proposed. The three main moves will be referred to as the 3 Ps which are Stating the PREMISE, Stating the PROBLEM and Stating the PROPOSAL.

The 3 Ps model for Introductions in medical articles

Stating the PREMISE

1. Demand for treatment (A1)
2. Emphasizing importance (A2, 5, 6, 7, 15, 16 and 18)
3. Providing background information (A3, 12 and 14)
4. Description of a disease (A4, 6, 9, 11, 15, 16, 19 and 20)
5. Reference to previous research (A4, 8, 10, 12, 16, 17 and 18)
6. Description of treatment (A4, 5, 10, 16, 17 and 20)

Stating the PROBLEM.

1. Inadequate facilities for treatment (A1, 2 and 6)
2. Failure/limitation of treatment (A4, 10, 16, 19 and 20)
3. Lack of literature (A5, 7, 14 and 18)
4. Lack of knowledge of treatment (A8 and 12)

Stating the PROPOSAL:

1. Purpose of the study (A1, 12, 14, 16, 17 and 18)
2. Introducing present research (A2, 3, 7, 8, 9, 10, 13, 15, 16, 19 and 20)
3. Extension of previous research (A4 and 17)

Table 1 shows the occurrence of the 3 Ps in the articles examined.

Table 1: The 3 Ps in 20 medical articles

Writer of article	Premise	Problem	Proposal
1. T Garnett <i>et al</i>	+	+	+
2. CSJ Probert <i>et al</i>	+	+	+
3. SE Evans <i>et al</i>	+	-	+
4. AK Banerjee <i>et al</i>	+	+	+
5. AR Cope <i>et al</i>	+	+	+
6. HS Walia <i>et al</i>	+	+	+
7. IMC Macintyre <i>et al</i>	+	+	+
8. GS Duthie <i>et al</i>	+	+	+
9. JF Keating <i>et al</i>	+		+
10. NGP Davidson <i>et al</i>	+	+	+
11. AY Izzidien <i>et al</i>	+	-	-
12. AP Meagher <i>et al</i>	+	+	+
13. P Blake <i>et al</i>	-	-	+
14. M Mafauzy <i>et al</i>	+	+	+
15. SC Ng <i>et al</i>	+	-	+
16. K Kemper <i>et al</i>	+	+	+
17. S Lurie <i>et al</i>	+	-	+
18. RW Hunter <i>et al</i>	+	+	+
19. AL Widdison <i>et al</i>	+	+	+
20. D O'Leary <i>et al</i>	+	+	+

Introductions in Medical Research Articles

The order in which the moves appear is as follows (A:article):

- A1 PREMISE PROBLEM PROPOSAL
- A2 PROBLEM PREMISE PROPOSAL
- A3 PREMISE PROPOSAL
- A4 PREMISE PROBLEM PREMISE PROPOSAL
- A5 PREMISE PROBLEM PREMISE PROPOSAL
- A6 PREMISE PROBLEM PROPOSAL
- A7 PREMISE PROBLEM PROPOSAL
- A8 PREMISE PROBLEM PREMISE PROPOSAL
- A9 PREMISE PROPOSAL
- A10 PREMISE PROBLEM PROPOSAL
- A11 PREMISE
- A12 PREMISE PROBLEM PROPOSAL
- A13 PROPOSAL
- A14 PREMISE PROBLEM PROPOSAL
- A15 PREMISE PROPOSAL
- A16 PREMISE PROBLEM PROPOSAL
- A17 PREMISE PROPOSAL
- A18 PREMISE PROBLEM PROPOSAL
- A19 PREMISE PROBLEM PROPOSAL
- A20 PREMISE PROBLEM PREMISE PROBLEM PROPOSAL

Nine articles have all three moves in the order of PREMISE-PROBLEM-PROPOSAL.

Three articles have all three moves with recycling of move 1, PREMISE-PROBLEM-PREMISE-PROPOSAL.

One article has all three moves with recycling of moves 1 and 2, PREMISE-PROBLEM-PREMISE-PROBLEM-PROPOSAL.

One article has all three moves in the order of PROBLEM-PREMISE-PROPOSAL.

Four articles have only two moves in the order of PREMISE-PROPOSAL.

One article has only one move, PREMISE

One article has only one move, PROPOSAL.

The above findings reveal that Introductions usually begin with 'Stating the PREMISE' followed by 'Stating the PROBLEM'. The PROBLEM with the PREMISE gives rise to the PROPOSAL which usually states how the writer of the article intends to solve the PROBLEM. 'Stating the PROBLEM' is absent in seven articles. The absence of this move could arise from the absence of a review of previous research in move 1 'Stating the PREMISE' and the novelty of the research area.

Recycling of moves 1 and 2 occur in four articles. Recycling of move 1 could occur in the form of 'description of treatment' when the writer gives a description of an alternative treatment to the one which has failed, before he proceeds to give a brief mention of the present study. Recycling of this move could also be in the form of 'reference to previous work' relevant to the PROBLEM mentioned earlier and which may suggest a solution to the PROBLEM. Recycling of move 2 in the example found in one of the articles takes the form of an additional problem to the one already mentioned earlier.

The realisations of the three main moves do not always appear in a fixed sequence. Some are more commonly found than others and they are all optional. The three main moves always appear in the following order when they are present: Stating the PREMISE- Stating the PROBLEM- Stating the PROPOSAL when they are all present. When one of them is absent, the order of the other two is still maintained.

3.3 The language of introductions

An examination of the language found in the moves mentioned above revealed that certain grammatical constructions and lexis are favoured in each of the moves in the introduction.

3.3.1 Stating the PREMISE

3.3.1.1 Emphasizing importance

In this move, the writer attempts to establish the importance of his research by indicating that his research can contribute to an area that is of interest to others in his field or that it is of some significance. He may also emphasize the rarity of his research area. He does this by using the present perfect, for example, 'has become', the simple present tense, for example, 'remain' and the progressive passive, for example, 'is being increasingly

used' Words like 'rare', 'unusual' and 'obscure' are also used. In addition, the writer uses the superlative 'most' and the word 'major' to indicate importance.

The writer's attitude is expressed through the choice of these words and through the use of evaluative adjectives such as 'popular' as he attempts to persuade the reader to place a high value on his claims.

A noun phrase is made the theme in all the following examples as the writer foregrounds the element that he wants to focus on, for example, 'nissen fundoplication', 'wound infection and anastomotic leakage' and 'carotid tumours'

Examples of this move

1. Nissen fundoplication has become the most popular surgical procedure for the treatment of gastrooesophageal reflux (Macintyre, 1990:159)
2. Wound infection and anastomotic leakage remain the major causes of morbidity after colorectal surgery (Duthie, 1990:169).
3. Carotid body tumours are rare neoplasms (Keating, 1990:172).
4. Local tumour excision and radical radiotherapy for early carcinoma of the breast is being increasingly used as an alternative to mastectomy (Davidson, 1990:175).
5. Splenic abscess is an unusual and obscure clinical entity as evidenced by the absence of reports from a recent review of 540 intra-abdominal abscesses (Walia, 1990:154)

3.3.1.2 Description of disease/treatment

The simple present tense, the copula and the active voice are found when the writer describes a disease or a technique for treatment. In almost all the examples given below, the writer foregrounds the elements that are being described. A noun phrase is made the theme of the sentence, for example, 'splenic abscess', 'the digital forms of dilatation which are available' and 'cystic lymphangioma'

Examples of this move

1. The digital forms of dilatation which are available include digital dilatation, dilatation with rigid instruments and balloon

dilatation, previously introduced endoscopically (Banerjee, 1991:136)

2. Splenic abscess follows an infection, haematological disorders, trauma or surgery (Walia, 1990:154)
3. Cystic lymphangioma is a benign endothelial-lined cystic tumour of the lymphatic system (Izzidien, 1990:178).

3.3.1.3 Providing background information

In this move the writer uses the past passive, for example, 'was set up' as what he is describing took place in the past. The writer provides the readers with a brief history of the place where the operations which he will proceed to describe took place or the reason why the study was carried out or just provide the readers with information that will help them understand the rest of the article better

Examples of this move

1. In 1982 an arthrography service was set up at Coventry and Warwickshire Hospital, which specializes in orthopaedics and trauma (Evans, 1991:133).
2. Every year during the 9th month of the Muslim calendar- the month of Ramadan- a Muslim is required to fast every day from the beginning of dawn until dusk. In Malaysia, the average duration of fasting is 13.5 hours and during this period, a person is required to abstain from any oral intake including medications. While Islam does not provide for its followers with serious illness not to fast, most Muslim diabetics would choose to fast (Mafauzy, 1990:14).

3.3.1.4 Reference to previous research

References are included in the introduction to emphasize that the topic being discussed is an interesting, controversial and current one. References are always cited in the numerals in sentence-final position and listed in full with the names and initials of all authors at the end of the article in numerical order. Either the simple passive, for example, 'was first introduced' or the simple past, for example, 'revealed', is used. The name of the author is sometimes mentioned in which case either the active, for example, 'Taylor et al revealed', or

the passive voice, for example, 'Balloon dilatation was first introduced by Gruntzig', was used.

The writer of a medical text rarely creates a new field. Rather his role is to augment or modify the existing body of texts in the field. His goal in general is to write to an audience assumed to be familiar with the existing body of texts (Ard, 1985: 7)

Examples of this move are given below

1. Balloon dilatation was first introduced by Gruntzig for the treatment of arterial strictures in 1976 and has been successfully used in the treatment of strictures elsewhere in the gastrointestinal tract including the oesophagus, pylorus, bile ducts, ileum colon and rectum (Banerjee, 1991: 136).
2. In a recent definitive study of venous anatomy involving detailed dissection and radiography of cadavers, Taylor et al revealed a vast network of valveless, oscillating veins in the face, scalp and many areas of the neck (Meagher, 1991: 903).

3.3.2 Stating the PROBLEM

The language of the functions found in this move is quite similar enabling one description to be sufficient for all four functions.

What appears to stand out is that adjuncts such as 'consequently', 'however', 'despite' and 'although' are used to show that the work that had been done earlier is inadequate. Negative words such as 'none', 'few', 'little', 'no' and 'difficult' are found to emphasize this inadequacy. The writer suggests that some problem is unsolved or some solution is unacceptable, thereby preparing the readers for his proposal as to how the problem should be solved.

The following are examples of this move

1. Consequently the few menopause clinics which exist are vastly oversubscribed with a potential deterioration in the level of care offered (Garnett, 1991: 128).
2. Other authors have attempted to quantify the value of accident flying squads in trauma, but none has performed a similar objective evaluation of their role in medical emergencies for the last ten years (Cope, 1991: 144).

3. Despite this, remarkably little is known about how the operation works or about its efficacy in the long term (Macintyre, 1990:159)
4. No proper study on the effects of fasting in diabetes is available at present (Mafauzy, 1990:14)

3.3.3 Stating the PROPOSAL

3.3.3.1 Purpose of the study

The writer indicates the purpose of his study by using a preposition followed by a verb, for example, 'to determine', 'to see' and 'to show'. Either the active or the passive voice is used.

The following are examples of this move:

1. We examined a series of 150 patients referred to our Menopause Clinic to determine how and why they came to be referred, and the perceived attitudes of their GPs towards referral and hormone replacement therapy (Garnett, 1991:128)
2. The present review was designed to see whether arthrography had any useful impact on the management of meniscal injuries in the knee and, indirectly, saving of resources (Evans, 1991:133)
3. As the use of free flaps to reconstruct tissue defects is increasing, we undertook this study to show the pattern of venous drainage of free flaps performed following ipsilateral radical neck dissection (Meagher, 1991:903)

3.3.3.2 Introducing present research

In this move the writer uses either the simple present tense, for example, 'describes' or the present perfect, for example, 'have conducted' to introduce his work to the readers. The active or passive voice is used for this purpose.

The following are examples of this move:

1. We report here an audit in which patients have been followed prospectively for a period of 5-15 years after Nissen fundoplication to assess the long-term symptomatic result (Macintyre, 1990:159)

2. We have conducted a survey of the current practice of bowel preparation amongst general surgeons in Wales and the south-west of England (Duthie, 1990:169).
3. This article reviews our experience of six cases of carotid body tumours and then discusses some important features of this unusual and interesting neoplasm (Keating, 1990:172).
4. This study evaluates the cosmic results of 80 breast carcinoma patients treated with wide local excision, external beam radiotherapy and iridium-192 boost (Davidson, 1990:175).

3.3.3.3 Extension of previous research

The writer uses the simple present tense, for example, 'describes' to inform the readers that his work is a continuation of work which has been done in the past. He may be using the same treatment for a different condition or he may be doing the same experiment as has been done before but in a different setting or situation

Examples of this move are given below

- 1 This paper describes our experience at wire-guided balloon dilatation of colorectal strictures, which we have termed balloon coloplasty (Banerjee, 1991:136).
2. Nifedipine is the drug of choice in the treatment of severe pregnancy induced hypertension in our department (Lurie,1990:492).

An examination of all the moves in the PROPOSAL showed that eight contained the third person pronoun 'we' and the remaining eleven had the deictics 'the' or 'this' 'We' and the active voice are used by the writers to describe their own work and their unique procedural choice, for example, 'We have studied patients' views...', and 'We have conducted a survey' The deictic and the active voice are used in describing what the study is all about, for example, 'This paper describes.' and 'This article reviews.'

4. PEDAGOGICAL IMPLICATIONS

Academic medical writing is subject to some constraints concerning form and style. The requirements of the journal editor and the

referee who represent the medical community apply to all papers. This leads to a degree of standardization which suggests that they share a common basic schema and similar structures. Students who wish to write articles, in this case medical articles, have clear targets or products in mind. They have to produce texts which conform to certain specifications in terms of the sequencing of information and layout. As a result efficient models for teaching students to read and write academic discourse are needed. The writing class must include some study of models or final products in the form of written texts. Only if the students have had exposure to their target-level texts, thus internalising the model or target, will they have a proper idea of how they should write. At the same time students have to be assisted in the act of writing itself

Work which has been done on academic texts suggests that there is a need for direct teaching of the organization of research papers and their rhetorical structures. It might be inferred from these concerns that knowledge of a text's structure and organization aids comprehension and production of such texts.

The findings of previous studies and the present study reveal that academic writing consists of moves which do not conform to paragraph divisions. Students who are learning how to write an academic text will have to be made aware that there are moves containing information in all the sections including the introduction. The information that they have needs to be divided into these moves and there are ample linguistic clues in the moves and their realisations that lie within the text. Students' knowledge of the vocabulary and grammar will not be sufficient for them to produce a good piece of academic writing.

Students can first be encouraged to look at the moves in their reading of academic texts and then examine the rhetorical functions in the text. Only then can they be made aware of the linguistic features present.

By knowing how information is organized in the introduction, the customary order of the moves and what is expected in the writing of an introduction, the writer can consider what to omit or add and what order to put the elements in. In the process of writing, the writer can examine the overall appearance of the text that they have written and make the changes with the model to assist them, and not just concentrate on the surface features.

A predetermined framework may not permit writers to state

their points as efficiently if there is a mismatch between the requirements of the genre and what needs to be said. This will be because they are trying to fit their ideas into a predetermined pattern. But if the model given to these students is a model which has been derived from their own discipline, then this problem should not arise as the model should be applicable. The model that is given here is only for articles written in the field of medicine and will not be entirely suitable for use in other fields.

DATA

Papers examined.

In *Journal of the Royal Society of Medicine* Vol. 84 No. 3

1. Garnet T., Mitchell A. and Studd J. (1991) 'Patterns of referral to a menopause clinic'
2. Probert C.S.J and Mayberry J.F (1991) 'Inflammatory bowel disease patients' expectations in the 1990s'.
3. Banerjee A.K., Walters T.K., Wilkins R. and Burke M (1991) 'Wire-guided balloon coloplasty a new treatment for colorectal strictures'.
4. Cope A.R., Dove A.F, Kulendrarajah T and Mc Lauchlan C.A.J (1991) 'Are accident flying squads also worthwhile for medical emergencies?'
5. Evans S.E., Chandly J and Aldridge M.J (1991) 'The place of arthrography in the diagnosis and management of meniscal injuries- a 6-year review'

In *Journal of the Royal College of Surgeons of Edinburgh* Vol. 35 No. 3:

6. Walia H.S., Aman S. and Walia H.K. (1990) 'Rational approaches to therapy in splenic abscess'.
7. Macintyre I.M.C. and Goulbourne I.A. (1990) 'Long-term results after Nissen fundoplication a 5-15 year review'
8. Duthie G.S., Forster M.E., Price-Thomas J.M. and Leaper D.J (1990) 'Bowel preparation or not for elective colorectal surgery'.

- 9 Keating J.F , Miller G.A. and Keaveny T V (1990) 'Carotid body tumours. report of six cases and a review of management'
10. Davidson N.G P., Khanna S., Windle R., Barrie W W , Agrawal R.K. and Mitchell S. (1990) 'Cosmetic results of early breast carcinoma treated with wide local excision, external beam radiotherapy and iridium-192 boost'
11. Izzidien A.Y , Jawad A.J., Al Rabeeah A., Patel P.J. and Yohanan M.D (1990) 'Cystic hygroma in Saudi Arabian children'

In The Australian and New Zealand Journal of Surgery Vol 61 No. 12

12. Meagher A.P , Sheridan B.F , Jensen M.J., Swift R., Doust B.D , Benn I V. and Nankivell C (1991) 'Venous drainage of free flaps following radical neck dissection'
- 13 Blake P and Morissey G. (1991) 'Canal wall down techniques for managing cholesteatoma'

In The Medical Journal of Malaysia Vol 45 No.1

- 14 Mafauzy M., Wan Mohamed W., Yasmin M Y , Zulkifli A. and Ruhani A.H. (1990) 'A study of the fasting diabetic patients during the month of Ramadan'
15. Ng Sc., Bosco J and Teh A. (1990) 'Chronic lymphocytic leukaemia. a review of seven cases from University Hospital, Kuala Lumpur'

In American Journal of Diseases of Children Vol 146:

- 16 Kemper K. and Babonis T (1992) 'Screening for maternal depression in paediatric clinics'

In Journal of Obstetrics and Gynaecology Vol 10

- 17 Lurie S and Fenakel K. (1990) 'Preliminary observations on treatment with nifedipine of thrombocytopenia and impaired liver function in severe pregnancy induced hypertension'
- 18 Hunter R.W (1990) 'The course and outcome of pregnancy in women with epilepsy- a 6-year prospective study'

In *British Journal of Surgery* Vol 80

- 19 Widdison A.L. and Karanjia N.D (1993) 'Pancreatic infection complicating acute pancreatitis'
- 20 O'Leary D and Johnson A.G (1993) 'Future directions for conservative treatment of gallbladder calculi'.

REFERENCES

- Adams Smith, D E. (1984) 'Medical discourse: Aspects of Author's Comment', *The ESP Journal*, Vol 3 25-36.
- Ard, J (1985) 'Vantage points for the Analysis of Scientific Discourse', *The ESP Journal*, Vol 4 3-19
- Coulthard, M. (ed.) (1986) *Talking About Text*, Discourse Analysis Monograph 13
- Crookes, G. (1984) 'Towards a Validated Analysis of Scientific Text Structure', *Applied Linguistics*, Vol. 7, No. 1
- Dudley-Evans, T. (1986) 'Genre Analysis An Investigation of the Introduction and Discussion Sections of MSc Dissertations' in Coulthard, M. (ed.) (1986) *Talking About Text*, Discourse Analysis Monograph 13
- Dudley-Evans, T (ed.) (1987) *ELR Journal*, Vol 1
- Peng, J (1987) 'Organisational Features in Chemistry Engineering Research Articles' in Dudley Evans (ed) (1987) *ELR Journal*, Vol 1
- Oster, S. (1981) 'The Use of Tenses in "Reporting Past Literature" in EST' in Selinker, L.; Tarone, E. and Hanzeli, V (ed.) *English for Academic and Technical Purposes*, Newbury House Publishers.
- Pettinari, C (1983) 'The Function of a Grammatical Alternation in Fourteen Surgical Reports', *Applied Linguistics* 4 55-74.
- Selinker, L., Tarone, E. and Hanzeli, V. (1981) *English for Academic and Technical Purposes*, Newbury House Publishers.
- Swales, J.M. (1990) *Genre Analysis*, Cambridge University Press.
- West, G K. (1980) 'That-Nominal Constructions in Traditional Rhetorical Divisions of Scientific Research Papers', *TESOL QUARTERLY*, Vol 14, No. 4.

- Williams, R. and Swales, J (ed.) (1984) *Common Ground*, Pergamon Press.
- Wingard, P (1981) 'Some Verb Forms and Functions in Six Medical Texts' in Selinker, L, Tarone, E. and Hanzeli, V (ed.) (1981) *English for Academic and Technical Purposes*, Newbury House Publishers.
- Wood, A.S. (1982) 'An Examination of the Rhetorical Structures of Authentic Chemistry Texts', *Applied Linguistics*, Vol 3, No. 2.