

## **Analysis of the Discussion section of Research Articles in the field of Psychology**

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### **ABSTRACT**

Over the past two decades, applied linguists and language teachers have shown a great deal of interest in genre-centered approaches, mainly because of pedagogical concerns. This has been due to the need to help non-natives readers enhance their ability to understand academic and scientific texts. The main aim of this work was to describe the communicative moves in Discussion sections of Psychology Research Articles. Eight articles from this discipline were analyzed in terms of Dudley-Evans' 1994 model. The findings suggest that there is a similar structure between Psychology Research Articles and those of natural sciences. This data may assist English for Specific Purposes (ESP) teachers to develop materials and to guide students in their reading process.

**Keywords:** communicative move - genre centered approach – English for Specific Purposes

### **1. INTRODUCTION**

In the last twenty years, genre has become a popular tool for analyzing non-literary discourse as well as for developing L1 and L2 instruction (Hyon, 1996). In general terms, a genre is mainly characterized or distinguished from another genre by its communicative purpose which, in turn, shapes and influences vocabulary choices and organizational patterns. The most widely known and useful definition of genre to date is that provided by Swales (1990, p.58):

A genre comprises a class of communicative events, the members of which share some set of communicative purposes. These purposes are recognized by the expert members of the parent discourse community, and thereby constitute the rationale for the genre. This rationale shapes the schematic structure of the discourse and influences and constrains choice of content and style. Communicative purpose is both a privileged criterion and one that operates to keep the scope of the genre as here conceived focused on comparable rhetorical action. In addition to purpose, exemplars of genre exhibit various patterns of similarity in terms of structure, style, content and intended audience.

Genre analysis has become of growing interest because it offers a system for observing the repeated communicative functions that are present in genres and the linguistic features of these functions. Thus, it has turn into one of the major influences on the current practices in

the teaching and learning of languages, in general, and in the teaching and learning of ESP, in particular (Bhatia, 2005). “ESP ...is a linguistic approach applying theories of functional grammar and discourse and concentrating on the lexico-grammatical and rhetorical realization of the communicative purposes embodied in a genre...with an additional interest in organizational patterns at the discourse level” (Flowerdew, in Johns, 2002, p.91). A central issue in ESP has been to explore the accepted conventions of certain genres as regards how the content is presented, in which order and the rhetorical elements used to achieve its communicative goal.

As regards the pedagogical application, this approach is concerned with the “...teaching of the formal staged qualities of genres...” (Hyon, 1996, p.701) and the particular functions and linguistic features involved in them because the knowledge of these elements can help students understand the text.

Since Swales’ pioneering work (1990) on the analysis of the moves within the Introduction section of Research Articles (RA), many other researchers have studied the Introduction, the Method, the Result or the Discussion section of this genre mainly in the social and natural sciences. Thompson (1993) as well as Brett (1994) studied the Result section in Biochemistry and Sociology articles, respectively. Dudley-Evans (1994) in Biological Sciences, Holmes (1997) in Social Sciences (History, Political Science and Sociology) and Peacock (2002) in Physics, Biology, Environmental Science, Business, Language and Linguistics, Public and Social Administration, and Law studied the moves within the Discussion section. However, to the best of my knowledge no study has been carried out in the field of Psychology concerning the Discussion section of Research Articles. Therefore, as a contribution to these studies, the aim of this work is to analyze the moves in the Discussion section of Research Articles from the field of Psychology.

## 2.METHOD

To study and describe the Discussion section of Research Articles in the field of Psychology, a corpus of eight research articles was collected. Two criteria were taken into account for selecting the corpus. One was that it should include articles published in journals that the students of Psychology attending ESP courses at the National University of San Luis read. The second criterion was that all of them presented the Introduction-Method-Result-Discussion (IMRD) (Swales, 1990) sections and that these were labeled. Four of the articles were downloaded from the on-line version of the Journal of Affective Disorders, two were selected from the Journal of Abnormal Psychology, one from the Journal of Psychotherapy: Practice and Research, and another one from the Journal of American College Health, all four printed magazines were borrowed from the library of the National University of San Luis. All the articles had the four-section structure titled Introduction, Method, Results and Discussion. However, the article from the Journal of American College Health labeled the Discussion section as Comment.

The articles were analyzed following Dudley-Evans's description (1994) of the Discussion section. This author points out that there are three parts to a discussion: Introduction, Evaluation and Conclusion and Future work, each one with their correspondent moves:

The suggested move cycle for the **Introduction** is:

- 1)-Restating the aim
- 2)-Work carried out
- 3)-Summary of the method used
- 4)-Restatement of the relevant theory or previous research,
- 5)-Statement of the main results/findings of the research.

For the **Evaluation**, the main part of the discussion, the moves provided are:

1)-Background information: which presents theoretical background information, the purpose of the investigation, the methodology used, or previous research that is necessary for the understanding of the move.

2)-Statement of results: this move presents a numerical value or refers to a graph or table of the results.

3)-Findings: this move differs from the results in that it refers to an observation arising from the research.

4)-(Un)expected outcome: a comment on the fact that the result is expected or, more frequently, unexpected or surprising.

5)-Reference to previous research: the author makes reference to previous work to compare his results with others' as a support for his claims or explanations.

6)-Explanation: includes reasons for unexpected results.

7)- Claim: the writers make a generalization arising from the results which is their contribution to the ongoing research on the topic.

8)-Limitation: the writer introduces some caveats about the findings, the methodology or the claims made.

9)-Recommendation: suggestions for future lines of research on the topic, or for improvements in the methodology followed in the research reported in the article.

The **Conclusion and Future work** part provides:

1)- a summary of main results and claim

2)- a recommendation about future work.

Dudley-Evans (1994) considers that the statement of the results or findings, or a claim followed by a reference to previous research are the most important moves.

### 3.RESULTS

The Discussion section of the eight RAs were first analyzed and then compared to Dudley-Evans' (1994) three-part framework to the Discussion section and the move cycles in them.

The **Introduction** of the Discussion section was found only in three Articles:

-two RA Discussion sections began describing the work carried out:

*“In this study, we investigated motivational differences between ...”*

*“We investigated the demographic and clinical characteristics associated to...”*

-one RA introduced the whole discussion by making reference to previous research:

*“Consistent with prior research...”*

In all the other articles the writers began the discussion with the main body of this section, that is to say, the Evaluation of results.

The **Evaluation** part included in all cases the key moves: Statement of Findings, Claim and Reference to previous work. Examples of these are:

*“The current study suggests that individuals...these findings are congruent with...”*

*“Several interesting findings emerged...with relatively good outcomes compared to those observed in recent studies.”*

*“The central findings of this study is that.. Previous data from the National Comorbidity Survey similarly demonstrated...”*

*“Our analysis revealed that.....These findings may indicate that.....This is largely consistent with the findings of prior research...”*

*“...our findings would also support another possibility... such a pattern has been identified in previous research of longitudinal nature...”*

In other cases the writer started the evaluation straightforwardly making reference to previous research to present and compare later on these to his findings, as in:

*“Consistent with prior research...patients high in Neuroticism appear to be predisposed...”*

*“Previous data from the National Comorbidity Survey...”*

The Discussion section of one RA from the Journal of Affective Disorders neither presented the Introduction part nor the key moves at the beginning of the section. Instead it devoted the first three paragraphs to the limitations of the study:

*“Several study limitations will first be acknowledged”.*

This move was also found in three more articles:

*“The current findings must be considered in the context of the following limitations.”*

*“However, logistic regression analysis failed to confirm...”*

*“A larger sample would permit detailed analysis...”*

In one of the RAs the move limitations of the study was at the end of the Discussion section under a separate heading “Limitations” and followed by the “Implications” move also as a separate headline.

The Unexpected Results move was found in four of the RAs with expressions like: *“Contrary to hypothesis,...”*

*“...it also appears inconsistent with research documenting...”.*

The **Conclusion** part of the Discussion section was included in all the RAs and all of them presented a restatement of the main findings and claims and recommendations about future work. In two of the articles (“Adjunctive Psychotherapy for Bipolar Disorder: Effects of changing Treatment Modality” and “Feeling unsupported? An investigation of depressed patients’ perceptions) this part appeared under a separate heading. Some of the expressions found in these moves were:

*“In summary, current results suggests...”*

*“In conclusion, we suggest that study results argue...”*

*“...it appears that both, positive and negative aspects...”*

*“Future studies employing prospective longitudinal...”*

*“Research on the implications.....will also be needed”*

*“...models of illness need to be tested...”*

#### **4.DISCUSSION**

This paper aimed at analyzing the Discussion section of Research Articles from the field of Psychology comparing it to the moves in the Discussion section described by Dudley-Evans (1994) for Biology. The findings show that there is a similar structure between the two sciences, Biology and Psychology, as regards the moves found in the Discussion section. The slight differences found may be described in terms of the order in which the moves are presented in the texts, which would indicate that these depend on the writers preferences for dealing with the information.

The **Introduction** sections was found in three out of the eight articles from the corpus gathered and all of them included the following communicative purposes described by Dudley-Evans (1994) as the most common way of setting the scene for the whole discussion in Biology RAs: restating the aim, description of the work carried out, summary of methods used, restatement of the main theory or previous research and a statement of the main findings/results of the research. However, the statement of the main findings and reference to previous research were the moves most frequently used in this field. Surprisingly, one of the articles began by stating the Limitations of the Study and the three paragraphs devoted to this were followed by the Evaluation part. Probably this might be due to the web-based nature of the study carried out by the researchers who aimed at defining “...boundaries of a spectrum model for the depressive disorder...” and the web-based survey did not guarantee the subjects’ real experiences. The other article with no Introduction part began making reference to previous research and a restatement of the main findings.

The articles analyzed in this study also confirm Dudley-Evans' (1994) description of the **Evaluation** part of RAs in the field of Biology. The most common pattern found in this part was Finding – Claim- Reference to Previous research. As shown and explained in previous studies (Dudley-Evans, 1994) it was easy to differentiate the moves on the basis of linguistic evidence. In many cases the lexical items *...analysis revealed some..* or *...our data suggest that...* indicate a finding, while *...may be related to...* or *...it may be assumed that ...* are signals of claims and *...an issue discussed by various researchers...* or *...are consistent with the findings of prior research...* point out a reference or comparison with previous investigations.

This study has reported the genre analysis of the discussion section of Psychology Research Articles. The findings show that apparently there are well-established conventions within the discourse community of Psychology as regards the way researchers have to make the results of their investigations known because, in spite of the small corpus of the present study, the findings have proved to be of close similarity with those reported for other disciplines. That is, the discussion sections of articles studied presented the moves described by Dudley-Evans (1994) for Biology Research Articles.

Further investigation in Humanities Research Articles using this framework would be needed in order to verify the present finding and to give them a pedagogic utility since knowledge of the genre conventions is of relevance for assisting ESP teachers who teach reading-comprehension to develop reading materials and for helping students develop an understanding of written text (Johns, 1997).

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### **Corpus**

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