

**MOVE STRUCTURES AND THE USE OF
HEDGES AND BOOSTERS IN THE
DISCUSSION SECTIONS OF TOURISM AND
PHARMACOLOGY RESEARCH ARTICLES**



NUR ZAFIRAH BINTI RAZALI

UMS
UNIVERSITI MALAYSIA SABAH

**CENTRE FOR THE PROMOTION OF
KNOWLEDGE AND LANGUAGE LEARNING
UNIVERSITI MALAYSIA SABAH
2023**

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UIMS

**THESIS SUBMITTED IN FULFILLMENT OF
THE REQUIREMENT FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY**

**CENTRE FOR THE PROMOTION OF
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NUR ZAFIRAH BINTI RAZALI
DU1811004T

Dicahkan Oleh,

 **ANITA BINTI ARSAD**
PUSTAKAWAN KANAN
UNIVERSITI MALAYSIA SABAH

(Tandatangan Pustakawan)

Tarikh : 18 SEPTEMBER 2023


(Dr. Loi Chek Kim)
Penyelia

DECLARATION

I hereby declare that the material in this thesis is my own except for quotations, equations, summaries, and references, which have been duly acknowledged.

12 May 2023



Nur Zafirah binti Razali
DU1811004T



UMMS
UNIVERSITI MALAYSIA SABAH

CERTIFICATION

NAME : **NUR ZAFIRAH BINTI RAZALI**
MATRIC NO. : **DU1811004T**
TITLE : **MOVE STRUCTURES AND THE USE OF HEDGES AND BOOSTERS IN THE DISCUSSION SECTIONS OF TOURISM AND PHARMACOLOGY RESEARCH ARTICLES**
DEGREE : **DOCTOR OF PHILOSOPHY IN HUMANITIES**
FIELD : **ENGLISH LANGUAGE STUDIES**
VIVA DATE : **12 MAY 2023**



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ABSTRACT

The ability of authors to alternate interpretations and cautiously analyse data is associated with effective academic writing, and a research article's (RA) acceptance or rejection is contingent on the way the Discussion section of the research article is written. The current study utilises Yang and Allison's (2003) model, along with Hyland's (1998a) and Hinkel's (2005) taxonomies, to investigate how authors in Tourism and Pharmacology organise discussions in the respective research articles. The study employs move analysis to examine the use of hedges and boosters in discussing research results. In this regard, the current study employed a mixed method through an exploratory sequential research design, particularly by using content analysis and quantitative analysis to analyse the data in the Discussion sections of 20 Tourism and 20 Pharmacology research articles in terms of the number of sentences employing the moves outlined in Yang and Allison's (2003), the frequencies of hedges and boosters found in the corpora, and the percentages of both datasets. Interviews were also conducted with specialist informants from Tourism and Pharmacology fields to supplement the data obtained in the study. The findings indicated that both Tourism and Pharmacology authors reported and commented on research results interrelatedly; however, a major difference was observed in terms of how the results were commented on such that Pharmacology authors were more likely to compare research results with the literature compared to their Tourism counterparts. Besides, the findings also revealed that both Tourism and Pharmacology authors utilised more hedges than boosters when discussing research results to avoid overclaiming the results and maintain a degree of certainty or uncertainty. The findings of this study offer valuable insights for future academic authors and students, helping them develop strategies for proficiently discussing research results and employing appropriate hedging and boosting devices in academic writing, particularly in the context of research articles (RAs).

ABSTRAK

STRUKTUR PERGERAKAN DAN PENGGUNAAN 'HEDGES' DAN 'BOOSTERS' DALAM BAHAGIAN PERBINCANGAN ARTIKEL PENYELIDIKAN PELANCONGAN DAN FARMAKOLOGI

Keupayaan penulis untuk membuat tafsiran alternatif dan menganalisis data dengan teliti adalah berkaitan dengan penulisan akademik yang berkesan, dan penerimaan atau penolakan artikel bergantung kepada bagaimana bahagian Perbincangan artikel penyelidikan ditulis. Dengan menggunakan model bahagian Perbincangan artikel penyelidikan oleh Yang dan Allison (2003) serta taksonomi 'hedges' dan 'boosters' oleh Hyland (1998a) dan Hinkel (2005), kajian ini mengkaji bagaimana penulis jurnal Pelancongan dan Farmakologi menyusun perbincangan mereka dalam bahagian Perbincangan artikel penyelidikan Pelancongan dan Farmakologi melalui analisis langkah serta bagaimana para penulis menggunakan 'hedges' dan 'boosters' dalam membincangkan dapatan kajian. Oleh itu, kajian semasa menggunakan kaedah bercampur melalui reka bentuk penyelidikan berjujukan eksplorasi dengan mengambil pendekatan analisis kandungan dan analisis kuantitatif untuk menganalisis data dalam bahagian Perbincangan 20 artikel penyelidikan Pelancongan dan Farmakologi dari segi bilangan ayat yang menggunakan langkah-langkah yang digariskan dalam model Yang dan Allison (2003), kekerapan 'hedges' dan 'boosters' yang terdapat dalam korpus dan peratusan kedua-dua set data tersebut. Temu bual juga telah dijalankan dengan informan pakar dari bidang Pelancongan dan bidang Farmakologi untuk menambah data yang diperolehi dalam kajian ini. Hasil kajian mendedahkan bahawa kedua-dua penulis jurnal Pelancongan dan Farmakologi melaporkan dan mengulas dapatan kajian secara saling berkaitan. Walau bagaimanapun, perbezaan besar diperhatikan dari segi bagaimana dapatan kajian tersebut diulas di mana penulis jurnal Farmakologi lebih cenderung untuk membandingkan dapatan kajian dengan literatur berbanding dengan penulis jurnal Pelancongan. Hasil kajian juga mendapati bahawa kedua-dua penulis jurnal Pelancongan dan Farmakologi menggunakan lebih banyak 'hedges' daripada 'boosters' dalam membincangkan dapatan kajian untuk mengelakkan 'overclaim' dan mengekalkan tahap kepastian atau ketidakpastian mereka. Hasil kajian ini dijangka dapat membantu penulis akademik akan datang serta para pelajar dalam menggunakan strategi untuk menulis perbincangan serta menggunakan 'hedges' dan 'boosters' dalam penulisan ilmiah mereka, terutamanya dalam artikel penyelidikan.

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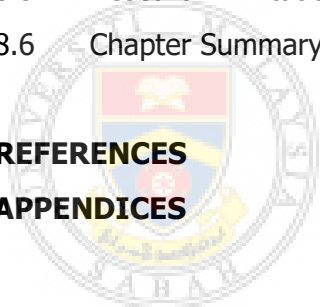
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LIST OF ACRONYMS

CARS	-	Create A Research Space
EAP	-	English for Academic Purposes
ESP	-	English for Specific Purposes
EFL	-	English as a Foreign Language
ESL	-	English as a Second Language
IMRD	-	Introduction-Methodology-Results-Discussion
RAs	-	Research Articles
NS	-	Native Speakers
NNS	-	Non-Native Speakers



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CHAPTER 1

INTRODUCTION

1.1 Background of the Study

In the recent decades, research articles (hereinafter RAs) have piqued the interest of many scholars in discourse studies. As an indicator of academic achievement (Azirah, 2005), RAs help in the extension of knowledge in a particular area as well as establishing the personal reputation of an author alongside legitimating claims and disciplines (Hyland, 1996; Peacock, 2002). Dobakhti (2016) asserted that RAs are a highly appreciated genre in the sharing of information in academic communities, which makes it a challenging task for authors because the authors not only need to establish the importance of their studies but also to be familiar with the conventions of their discourse communities as well as being capable of applying such knowledge in their writing. As writing is deemed a purposeful socially situated practice written for an audience known as the discourse community, the audience is fairly capable of refuting the authors' claims if their expectations are not met (Candlin, 2000; Hüttner et al., 2009; Hyland, 2000b). This is where the roles of genre analysts take place.

The analysis and identification of genres in terms of movement structures and/or discursal features (e.g., hedging, boosting, stance, reporting verbs, evaluation, appraisal, and engagement) is conducted through genre studies, which is one method of describing the discourse community's norms. With RAs becoming the gateway for researchers from different discourse communities to exchange knowledge, the growth in published RAs has turned RAs into a high-status genre to be examined in various academic writing-oriented studies (Al-Shujairi, 2021). Accordingly, numerous past studies have examined the general characteristics of RAs of either the whole article or one section of the article within the framework of IMRD (Introduction, Method, Results, and Discussion) in various disciplines, for instance, RAs in Medicine (Nwogu, 1997), RAs in Applied Linguistics (Yang & Allison, 2003),

RAs in Biochemistry (Kanoksilapatham, 2005), Abstract section in Linguistics (Lorés, 2004), Abstract section in Civil Engineering (Kanoksilapatham, 2013), Abstract section in Medical (Juan & Tao, 2013), Introduction section in Applied Linguistics (Ozturk, 2007), Introduction section in Forestry (Joseph et al., 2014), Methodology section in Management (Lim, 2006), Results section in Sociology and Organic Chemistry (Bruce, 2009), Results section in Applied Linguistics and Education (Lim, 2010), Discussion section in History, Sociology, and Political Science (Holmes, 1997), Discussion section in Dentistry and Applied Linguistics (Basturkmen, 2012), and Discussion section in Physics, Language and Linguistics, Environmental Science, Biology, Business, Law, and Public and Social Administration (Peacock, 2002). Others have also concentrated on the discursual features of RAs, for instance, hedges (Hyland, 1996 & 1998b; Loi & Lim, 2019; Mur-Dueñas, 2021; Rabab'ah, 2013), boosters (Dobakhti, 2013; Peacock, 2006), reporting verbs (Jafarigohar & Mohammadkhani, 2015; Thompson & Ye, 1991), stance (Baratta, 2009; Biber, 2006; Cheng & Unsworth, 2016), evaluation (Hunston, 1994; Hunston & Thompson, 2000), and engagement (Hyland, 2002; Taki & Jafarpour, 2012).

Despite the large number of studies on the generic and discursual features of RAs as a whole or a certain section(s) of RAs, the present study only focuses on the Discussion section of RAs. As stated by previous researchers, the significant features of academic writing consist of establishing research, evaluating the evidence, and drawing conclusions from the data (Basturkmen, 2012; Dobakhti, 2016; Jalilifar, 2011). In the context of this study, these features are invaluable related to writing the Discussion section of RAs. Writing the Discussion section of an RA is commonly expected to be organised in a way that is defined by rhetorical moves so that it can be read, understood, and interpreted easily. It is a section where authors place their ideas about the findings of their research and interpret their studies. In other words, it is the section where authors strengthen, generalise, and make sense of the outcomes of their research for the benefit of those in their field or other communities (Basturkmen, 2012; Weissberg & Buker, 1990). As stated by Basturkmen (2012), the Discussion section plays a significant role in RAs because, in this section, authors stake claims about how their results contribute to disciplinary knowledge and the knowledge in general. Besides, the Discussion section of a research article is

significant in a sense that the focus of the article shifts from “inside out,” which is from the research results to their broad importance (Swales, 1990: 173).

Many studies have also concentrated on the significant roles of the Discussion section in various RA disciplines. For example, in the Discussion section of Applied Linguistics RAs, authors strategically make variations in their engagement tactics on the functional components of academic conflict to activate positive evaluation of the readers towards the new knowledge through stance-taking (Cheng & Unsworth, 2016). Within the same discipline, writing the Discussion section of qualitative research is believed to be a demanding task because the generic structures of the Discussion section of qualitative RAs are both different and similar to the structures identified in those with empirical RAs since both methods have an influence on the conventions and norms within a disciplinary discourse (Dobakhti, 2016).

Besides, the Discussion section has been used as an argument to prove knowledge claims in Physics RAs and laboratory reports (Parkinson, 2011). While such argument can lead the reader from the proof of the data to the proof of the claim, the claim cannot be inspected solely by inspecting the data but rather by explaining the cause of data elements, the reason for why experimental work is performed, and the required conditions for a functional experiment (Parkinson, 2011). Finally, the comparison between the Discussion sections of Dentistry and Applied Linguistics RAs has shown that although the rhetorical organisation of RA sections in different disciplines can be similar, subtle differences across disciplines can still be detected upon close examination at the step and sub-step levels rather than at the move level (Basturkmen, 2012). Given the variations in terms of how researchers conducted studies on the Discussion section of RAs, the present study, however, focuses on the move structures and the rhetorical steps employed for the Discussion section of RAs in particular. Furthermore, the use of hedges and boosters in the Discussion section of RAs is also the highlight of this study.

In general, scientific writing is often incorporated with mitigating devices and expressions that carry the attitudes of the authors as well as the development of professional communication skills such as the expressions of doubt and certainty, which is fundamental to the rhetorical and interactive character of academic writing

(Farrokhi & Emami, 2008; Hyland, 1998a; Jalilifar, 2011; Swales, 2004). In literature, these expressions are referred to as hedges and boosters respectively (Holmes, 1984 & 1990). By definition, hedges and boosters are communicative strategies meant for respectively reducing or increasing the force of statements (Hyland, 1998a). Hyland (1998a) also added that while hedges denote a claim that weakens through an explicit qualification of the authors' commitment (e.g., might, possible, perhaps), boosters contrastively allow authors to express conviction and maintain a proposition confidently while representing a strong claim about a situation (e.g. obviously, clearly, of course). According to Hyland (1998a), hedges and boosters are significant in the sense that academics are likely to accept the research claims of the authors by bringing conviction with caution into balance. As such, the academics will either invest statements to which reliable knowledge is assured or with tentativeness by which uncertainty or appropriate social interactions can be reflected (Hyland, 1998a).

Due to these reasons, numerous studies have been conducted on the use of hedges and boosters in RAs, including in the Discussion section context. For example, Persian authors and researchers who write in English are attributed to lack of awareness of the conventional English rules rhetoric and have limited knowledge of academic English as well as a few exposures to pragmatic and sociolinguistic rules of English, which consequently influenced their use of hedging and boosting devices in Applied Linguistics and Psychology RAs (Jalilifar, 2011). Meanwhile, authors of Medical and Applied Linguistics RAs are more likely to use boosters in the Discussion section because boosting acts as a mediator that mediates the relationship between the authors' argument and their discourse communities (NamazianDost, 2017). Besides, it has also been evidenced that Malay authors use fewer hedges in the Discussion section of Educational RAs than those who write in English, which is most likely because English is a remarkably hedging culture (Loi & Lim, 2019).

The Discussion section is indeed one of the significant RA sections to be investigated, especially in terms of its context of use. There are numerous studies on the Discussion section of RAs concerning move structures and the use of hedges and boosters across many disciplines—both soft and hard disciplines—such as Applied Linguistics, Physics, Education, and Medical (Cheng & Unsworth, 2016; NamazianDost, 2017; Loi & Lim, 2019; Parkinson, 2011). Nevertheless, to the

researcher's best knowledge, no studies in this context have focused on Tourism and Pharmacology, which are considered soft and hard disciplines, respectively. In general, within the disciplinary distinction, reference to the 'hard' and 'soft' disciplines is rather prevalent. Kuhn (1976) was the first to coin this description when examining the characteristics of physical sciences, and this notion was later extended by Biglan (1973). According to Biglan (1973), soft disciplines encompass disciplines that are considered non-pragmatic, whereas hard disciplines encompass disciplines that are "characterised by the existence of paradigms that specify appropriate problems for the study and the appropriate methods to be used" (Biglan, 1973: 195). In other words, Biglan (1973) characterised hard disciplines as those that are frequently perceived as difficult subjects to be studied compared to soft disciplines.

Other than 'hard and soft disciplines,' this description has also been referred to as 'hard and soft sciences.' Shapin (2022) stated that there have been arguments around the definitional margins of such a description; however, most applications consider the natural sciences hard (e.g., physics and mathematics) and the social or human sciences soft (e.g., psychology and sociology). Based on the characterisation above, the researcher concurs that "a distinction between the 'hard' and 'soft' scientific disciplines is a modern commonplace, widely invoked to contrast the natural and the social sciences and to distribute value accordingly" (Shapin, 2022: 287). Notwithstanding the skirmishes around the notion of soft and hard disciplines, the current study characterises Tourism as a soft discipline and Pharmacology as a hard discipline. Therefore, move structures and the use of hedges and boosters in Tourism and Pharmacology RA discussions are the subject of investigation in this study.

1.2 Problem Statements

Generally, the main purposes of conducting research are to prove a theory, to act as means to understand various issues in a field of study, and to contribute to the body of knowledge in the given field. Therefore, one of the ways to inform the action of research is through research articles (RAs). According to Basturkmen (2012), RAs are formulated carefully, and they are expressed in a way that is appealing to their respective research communities. As such, authors make use of the persuasive

practices of their discipline, encoding ideas, employing justifications, and framing arguments in ways that will convince their potential readers as well as making claims by the knowledge that the readers are likely to object their claims and have rhetorical expectations towards the study (Hyland, 2008). In the context of the current study, these actions are particularly related to the Discussion section of RAs, which is one of the important sections of RAs because this section is where authors show the contribution of knowledge of their research findings to the available literature.

In examining rhetorical structures in the Discussion section of RAs, past researchers had proposed various frameworks and move models, which have been used by many genre-based studies today. For instance, Hopkins and Dudley-Evans (1988) established a detailed eleven-move model to describe how the Discussion sections in Irrigation and Drainage RAs were organised. The moves comprise (i) background information, (ii) statement of results, (iii) (un)expected outcome, (iv) reference to previous research (comparison), (v) explanation of (un)expected results, (vi) exemplification, (vii) deduction, (viii) hypothesis, (ix) reference to previous research (support), (x) recommendation, and (xi) justification. According to Hopkins and Dudley-Evans (1988), only the *statement of results* move was obligatory, while the rest were optional. Additionally, Swales (1990) proposed an eight-move model, comprising moves such as (i) background information, (ii) statement of results, (iii) (un)expected outcome, (iv) reference to previous research, (v) explanation, (vi) exemplification, (vii) deduction and hypothesis, and (viii) recommendation.

Later, Dudley-Evans (1994) modified his previous work and established another model for the Discussion section, comprising nine moves that include (i) information move, (ii) statement of results, (iii) findings, (iv) (un)expected outcome, (v) reference to previous research, (vi) explanation, (vii) claim, (viii) limitation, and (ix) recommendation. Meanwhile, Holmes (1997) modified Hopkins and Dudley-Evans' (1988) move model to analyse the Discussion sections of History, Political Science, and Sociology RAs. This modification includes moves such as (i) background information, (ii) statement of results, (iii) (un)expected outcome, (iv) reference to previous research, (v) explanation of unsatisfactory result, (vi) generalisation, (vii) recommendation, (viii) outlining parallel or subsequent development. However, according to Holmes (1997), no obligatory move was found in the corpora. Peacock