A Corpus-based Analysis of Rhetorical Moves and P-frames in an Omani Learner Corpus of Research Project Abstracts

Priya Mathew [1], **Lee McCallum** [2]

[1] Middle East College, Oman

[2] The University of Edinburgh, UK

ABSTRACT

Background: Rhetorical moves have long been studied in several disciplinary texts, including research articles and their part-genres. A solid base of literature has emerged in this respect, informing current writing pedagogy for novice writers. However, one part-genre which has been rarely studied is student project abstracts.

Purpose: To explore the extent rhetorical moves are realised through the linguistic unit of phrase frames (p-frames) in final year Capstone project abstracts.

Method: Using two faculty-informed analytical frameworks, the paper explores the use of rhetorical moves and p-frames in corpora of Social and Physical Science student abstracts. The moves and the p-frames (if any) used to realise them were identified in order to understand how students organised this part-genre and to gauge their formulaicity.

Results: Amongst the key findings was that Omani students did not perform all the rhetorical moves recommended by the faculty. Moreover, they added spontaneous moves of their own to the abstracts. When performing rhetorical moves, they used very few p-frames, indicating that their approach did not rely on formulaic language of this nature.

Conclusion: Pedagogical implications for the Omani context and for broader EAP contexts are discussed.

KEYWORDS

Abstract writing, learner corpus research, rhetorical moves, P-frames

INTRODUCTION

The prevalence of multi-word sequences (MWS) in natural language and, more recently, mapping of these continuous and discontinuous word strings to specific rhetorical functions within academic genres has gained increased research attention (e.g., see Golparvar & Barabadi, 2020; Lu et al. 2018, 2021a, 2021b). The pedagogical implications of these findings are that students can be made aware of these sequences and, consequently, increase the fluency and quality of their writing in disciplinary genres (Coxhead & Byrd, 2007). These implications are particularly relevant in EFL contexts such as the Middle East and specifically countries such as Oman, where some Higher Education Institutions (HEIs) are affiliated with universities in the West, and the medium of instruction and assessment is English[1]. Consequently, students' written coursework needs to meet disciplinary requirements, departmental and institutional expectations, and the standards of external examiners representing these universities. In Oman, most students

---

[1]   Ministry of Higher Education, Research & Innovation (2023). *Private HEIs in Oman*. https://www.moheri.gov.om/InnerPage.aspx?id=9767b8ed-876e-4dfc-9707-c2c3e337c078

who enter tertiary education from Arabic medium schools require a one-year preparatory programme to improve their language proficiency to reach the minimum standard of an IELTS Band 5 prescribed by the Ministry of Higher Education, Innovation and Research (Al Jardhani, 2017). Given that there is no strict entrance threshold, students still struggle with their writing skills after completing their preparatory programme.

Research into student genres in other contexts has revealed disciplinary variation in the organization and the linguistic resources used to realize a range of specific communicative functions of genres. The findings of such research will benefit thousands of students, such as those in the Omani tertiary education system. Yet there is scarcely any attempt to uncover the disciplinary writing needs of students in this context.

This study attempts to address this gap by studying a part-genre, the abstract, in the Capstone project reports submitted by students in the final year of their undergraduate study. The organization of the abstract, as well as the phraseology of student writing will be examined in this study. For this purpose, two sub-corpora of student abstracts from the broad disciplinary groups of Social and Physical Sciences were created. These were taken from a one-million-word corpus of proficient student writing from five disciplines (Business, Computing and Civil, Mechanical and Electronics Engineering) from one HEI in Oman. The rhetorical moves (Swales, 2004) within these abstracts were marked up, and any multi-word sequences in the form of phrase frames (p-frames) used to realise the identified rhetorical moves were recorded and analysed. This study will be a valuable starting point for understanding how Omani students organise this genre in terms of rhetorical structure and language used.

LITERATURE REVIEW

Relationships between Genre Analysis, Rhetorical Moves and Multi-Word Sequences

Genre remains a contested term in academic writing research and is elusive and hard to define. This elusive nature has opened up different schools of thought on what genres are and how they should be analysed (Nesi & Gardner, 2012). However, at the heart of understanding genre lie two central underpinnings.

The first of these underpinnings is the idea that genres are abstractions, focusing not only on the texts themselves but on the conventional ways of creating them (Nesi & Gardner, 2012). This first underpinning is credited to Swales (1990, p. 45-46), who defined a genre as "a class of communicative events". These events consist of the discourse of the texts,

the participants (writers/readers), and the environment under which the text is produced by writers and received by readers. There is an appreciation for the text's underlying historical and cultural associations. This first key underpinning allows us to appreciate that written texts are complex communicative events influenced by social, historical and cultural factors.

The second underpinning originates from Martin (1997, p.13), who views genre as "a system of staged goal-oriented social processes through which social subjects in a given culture live their lives". Nesi and Gardner (2012, p. 24) help contextualise and firm-up our appreciation for these social, cultural and epistemological lenses by highlighting how the same genre (e.g., Essay, Case Study) can serve different purposes and how they can manifest variation across disciplines and levels of study.

Many scholars have attempted to obtain an initial understanding of genres by operationalising the underpinnings above and examining how genres differ in terms of meaning-making through (i) their use of rhetorical moves and (ii) the way these rhetorical moves are realised through patterns of formulaic sequences of language known as multi-word sequences (MWSs). The following sections outline this line of genre analysis by synthesising the body of genre knowledge built up when studying expert professional and student writing.

Connecting Rhetorical Moves with their Multi-Word Sequences

Swales (2004, pp. 228-229) defines a rhetorical move as a "discoursal or rhetorical unit that performs a coherent communicative function in a written or spoken discourse". Moves are analysed in terms of their purpose (e.g., introducing a topic; stating research gaps in the literature) but are also increasingly analysed linguistically to establish the role that stretches of formulaic language or multi-word sequences (MWSs) play in helping the writer communicate particular moves to readers (Swales, 1990).

It has long been established that natural language comprises high levels of multi-word sequences (Pawley & Syder, 1983). Different terms have referred to these multi-word sequences, but one of the most popular terms is 'lexical bundle' (Biber et al. 1999). Lexical bundles are multi-word sequences of varying length, structure and function which occur with more than the expected frequency in a corpus of texts and meet specified dispersion thresholds. They have been the focus of much attention in the study of genres, particularly research articles (e.g., Kanoksilapatham, 2013) and their part-genres (e.g. introductions (Cortes, 2013); literature reviews (Soler-Monreal, 2015); methods sections (Cotos et al., 2017), results and discussions sections (Le & Harrington, 2015), and research article abstracts (Omidian et al., 2018)). A similar but less frequent focus on lexical bun-

dles has also appeared in studies of student research genres (e.g., see Durrant & Mathews-Aydinli, 2011; Durrant, 2017).

Broadly, this work has helped highlight how particular part-genres are characterized by particular rhetorical moves which are realised by particular lexical bundles. For example, in research article introductions, the rhetorical move of 'Presenting the present work' and 'outlining the structure of the paper', can be partly realised by the underlined lexical bundle in the following sentence: "_The remainder of the paper is organized as follows_: Section 2 contains a brief description …" (Cortes, 2013, p. 38). Similarly, Durrant and Mathews-Aydinli (2011) compared essays written by MA Social Science students from the British Academic Written English (BAWE) corpus with journal articles written in Social Science disciplines to reveal that student writing contains less formulaicity when performing rhetorical moves but higher frequencies of 'Text + verb' constructions (e.g. 'Text + will' for more explicit signposting as in _The next section will focus on…_).

While this bundle-focused work has paid dividends in revealing patterns of moves and formulas in research articles, another strand of work has emerged as equally important. Over the last five years, studies have started to focus on a different type of multi-word sequence, that of the phrase-frame (p-frame henceforth). P-frames are a type of semi-fixed multi-word sequence comprising of fixed words which contain fixed words and usually one open variable slot (e.g., 'the * of the) where the * indicates the variable slot (Stubbs, 2007). Various studies have focused on these p-frames for several reasons: their prevalence in academic discourse allowing writers to manifest variability in expression (Gray & Biber, 2013), and their importance in helping learners identify larger patterns and constructions (Lu et al., 2021). Moreover, scholars have studied how research articles and their part-genres have used these p-frames to realise rhetorical moves.

Focus on P-Frames

Some studies (e.g., Golparvar & Barabadi, 2020; Lu et al., 2021a, 2021b) have focused on p-frames in research articles part-genres such as introductions and discussion sections. For example, Lu et al (2021a, 2021b) adopted this focus with

a corpus of Social Science RA introductions. Collectively, their studies have found that a number of five and six-word p-frames were used to realise rhetorical moves in introductions from Social Science disciplines (e.g. the p-frame "little is known * the" where the slot, denoted by the asterisk (*) is filled by 'of' or 'about' and was used to realise the 'indicating a research gap' move).

However, a striking omission in this p-frame focused work is the absence of studies focusing on abstracts as a part-genre, both in expert and student domains. The sections that follow outline how the study of abstracts, both written by researchers and students, has been largely carried out in a more manual and less systematic manner which has not always paid due attention to multi-word sequences. We believe that addressing this oversight can yield insights into the language and structure of abstracts, and particularly student produced abstracts which remain a much-occluded part-genre.

Approaches to Studying Abstracts as a Part Genre

Although abstracts have been less studied than other part-genres, it is important to study this part-genre because they represent a succinct and efficient way of communicating the main details of a study. They enable readers to grasp these key details efficiently and/or help them decide to read the study in its entirety, effectively 'selling' the study to readers (Pho, 2008; Swales & Feak, 2009). Student abstracts in Capstone projects are critical for academic and workplace success since they provide examiners and employers with a first impression of the quality of the candidate's work. Job-seeking fresh-graduates might not have substantial work experience; and this lack is usually partially compensated by the quality of the capstone project. The abstracts are particularly important because busy employers usually only have time to read the abstracts to evaluate the quality of the candidate's work.

In early abstract studies, researchers focused on determining a rhetorical move framework which typifies the abstract as a specific part-genre. The frameworks used or adapted include those presented in Table 1, which are based on mixed profiles of disciplines, including applied linguistics.

Table 1
Move Inventories

Move Framework	Hyland (2000)	Dos Santos (1996)
1	Introduction	Situating research
2	Purpose	Presenting research
3	Method	Describing methodology
4	Product	Summarizing findings
5	Conclusion	Discussing the research

Key findings from studies using these frameworks have pointed to different disciplines using variations of the move frameworks highlighted in Table 1 (e.g., see Amnuai, 2019; Can et al., 2016; Darabad, 2016; Doro, 2013; Dos Santos, 1996; Pho, 2008; Saeew & Tangkiengsirisin, 2014; Saboori & Hashemi, 2013; Tseng, 2011). For example, Pho (2008) analyzed the rhetorical organization, the linguistic realization of moves and authorial stance in 30 abstracts from three journals in two disciplines: applied linguistics and educational technology. Pho (2008) found three moves were dominant: presenting the study, describing the methodology and summarising findings. In a study of 60 civil engineering abstracts from the highest-ranking journals, Kanoksilapatham (2013) found that the abstracts generally contained a set of up to five moves, forming a common structural organisation. These moves were: Background, Purpose, Methodology, Results and Discussion. Move variations were also found in terms of move frequency and move sequences.

In the same year, Saboori and Hashemi (2013) analysed 63 abstracts against Hyland's (2000) framework: 21 abstracts from applied linguistics (AL), applied economics (AE), and mechanical engineering (ME). Across the three disciplines, Saboori and Hashemi (2013) found some commonalities in the moves employed, but there were different move patterns within the same discipline, and differences in the number of moves employed in different disciplines (ME abstracts mostly consisted of 3 moves while AL and AE abstracts contained 4). The findings of this study suggest that disciplinary variation is likely in abstracts written by experts. It also seems likely that there will be disciplinary variation in abstracts written by students.

Studies have also made judgements about a move's status as obligatory/conventional or optional. Studies which have taken this approach include Pho (2008) who considered that 60% of abstracts had to contain the move in order for it to be considered obligatory or conventional. Most studies which have adopted this threshold have found that the status of moves varies across disciplines, with little consensus on whether they are conventional or optional moves.

In addition to focusing on rhetorical moves, some of the studies above have also carried out follow-up qualitative analyses of lexico-grammatical features, such as voice and tense. In this respect, *some* concrete patterns emerge. For example, Kanoksilapatham (2013) found that the background move was realised through the use of present tense verbs, while the methodology move was realised through past tense verbs and the passive voice. Similar findings have also been reported in other studies (e.g., Pho, 2008; Tseng, 2011). It is striking to note here that the linguistic analyses summarised above have tended to be manual, with no input from the kinds of corpus linguistics techniques we have seen used in the analysis of other part-genres. However, there has been one study, Yoon and Casal (2020), examining the

relationship between rhetorical moves and p-frames in applied linguistics conference abstracts. Yoon and Casal used a predetermined abstract framework which was a modified version of the framework used for the study of research article introductions, as opposed to the frameworks presented in Table 1. They examined abstracts from the American Association of Applied Linguistics (AAAL) conference. In their analysis, they found that there was varying strength of relationship between moves and p-frames, with many p-frames occurring across different rhetorical moves. However, they did find that p-frames frequently occurred in Move 3: Occupying a niche, Step 1: Announcing the aim). For example, when announcing their aim, writers often used the p-frame '"the present study * to" with the * filled by aims, attempts or aimed.

The Current Study

The literature base has thus far focused on studying abstracts written either by expert researchers or by doctoral candidates. There is a dearth of literature focusing exclusively on understanding abstracts as part-genres in student writing at undergraduate level. We believe that addressing this oversight can yield insights into the language and structure of abstracts, and particularly student produced abstracts which remain a much-occluded genre. Many of the above studies have focused on comparing 'advanced' student writing with that of expert writing in the form of research articles, and have then made a number of pedagogical suggestions. However, we believe there is a need to first study student writing on its own merits, to determine students' current use of rhetorical moves and formulaic language. This approach will help us understand more about student genres, which are notably different to expert written research articles (Hüttner, 2010).

With these gaps in mind, the current study analyses the written abstracts from a corpus of Omani Undergraduate students who are writing final year Capstone projects. The study analyses the abstracts in terms of their rhetorical moves and related p-frames and explores the extent that these student patterns follow faculty guidance and expected abstract writing guidance. We believe such a study of Omani writing is important because research into rhetorical moves and formulaic language is especially scarce in this genre. Written assessments are high stakes because the academic and social success of these students depend on their ability to turn in high-quality written assignments.

To this end, the study is guided by three research questions:

(1) What types of rhetorical moves do Social Science and Physical Science students perform when writing final year Capstone research project abstracts?

(2) To what extent are these moves realised by using p-frames?

(3) To what extent do the different disciplines follow the explicit rhetorical moves encouraged by their faculties?

METHOD

This study is based on a wider project which compiled the Omani Corpus of Academic Writing (OCAW), a corpus of entire Capstone student projects across five disciplines: Business; Computing; and Civil, Mechanical and Electronics Engineering. In the sections below, we report the compilation of this corpus and the two subcorpora of student abstracts in Physical Science and Social Science disciplines.

The corpus comprised successful student texts scoring grades A (87-90), B (86-74) and C (66-73). The final composition of OCAW is shown in Table 2.

Establishing the OCAW Abstract Corpora and Move Framework

Two sub-corpora of abstracts belonging to Physical Sciences (Computing; Civil, Mechanical, and Electronics Engineering (CCME; 46 texts) and Social Science disciplines (Business; 24 texts) were created (see Table 3). These disciplinary groupings were informed by the procedures followed in the BAWE corpus (Alsop & Nesi, 2009). The abstracts in these two disciplinary groupings varied in terms of word count, as shown in Table 3.

Meetings were held with two senior academics representing each of the five departments to check the degree of alignment with the existing inventories, eliminate inter-rater discrepancies and avoid misinterpretation of moves. During these sessions, the moves that the senior academics expected in the abstracts were identified and documented. The senior academics also selected examples representing each move from samples of student work.

Although most studies examining moves in abstracts use a common framework across disciplinary groupings, we chose to adopt different ones for the Social Science and Physical Science corpora based on our discussions with these senior academics and our own reading of the texts. We annotated the abstracts for moves using these pre-determined inventories (see Tables 4 and 5) and also annotated any spontaneous moves which were not present in these faculty-informed inventories. We chose to follow the moves and their sequencing identified by the faculty rather than other inventories based on research article abstracts across disciplines (e.g. Dos Santos, 1996; Hyland, 2000) for two main reasons: 1) frameworks based on expert writing might not capture the social and communicative purposes of student genres, which are informed by institutional, departmental, faculty, and industry expectations of student writing (Nesi & Gardner, 2012); 2) disciplinary variation is a well-established notion in the literature, so we did not want to use a single, multidisciplinary framework for both Physical and Social Science student abstracts.

Retrieval of P-Frames

Frequency and range thresholds for retrieving multiword units were applied in order to exclude items which may reflect the idiosyncratic choices of individual writers. Previous studies have set frequency cut offs for p-frames at various

Table 2

Composition of the Omani Corpus of Academic Writing

Department	No. of texts	Sample titles
Department of Management Studies	26	Effect of corporate governance on the financial performance of <org name>
Department of Computing	22	Developing Android Mobile Application for the Fisherman of Oman (AMAFO)
Department of Civil Engineering	25	An Experimental Study on Soil by using Geotextiles in Al-saharqia Region
Department of Electronics Engineering	26	IOT Based Heartbeat Monitoring System Using ECG
Department of Mechanical Engineering	13	Design and Fabrication of 3D Printer
Total	112	

Table 3

Composition of the OCAW Abstracts Corpus

Discipline	No. of texts (total word count)	Mean Length	Minimum Length	Maximum Length
Business	24 (4543)	189.08	79	325
Engineering and Computing	46 (11,849)	225.29	85	588

levels and number of occurrences in the corpus, for example 16 pmw (per million words) for 5 grams and 12 pmw for 6 grams (Lu et al., 2018), and ranging from one occurrence (Walcott, 2021) to five (Casal & Kessler, 2020). Dispersion thresholds have also been based on various types of measurements such as the number of texts (e.g., five texts in Casal & Kessler, 2020; three or more texts in Lu et al., 2018), and distribution across sub-corpora (two disciplines in Walcott, 2021; two or more disciplines in Lu et al., 2018).

In the current study, the frequency and range were set at two occurrences in two texts because of the relatively small size of the abstract corpora. These thresholds may seem low; however, they match the pedagogical objectives of the study which were to identify any repeated p-frames used to realise specific moves. This is especially pertinent in this context where many students struggle to master an overwhelming number of linguistic devices, many of which they may not need very much in their disciplinary written discourse.

Another condition for retrieval related to the number of slots to focus on. Römer (2010) only included p-frames with the variable slots in the median position, while others (e.g., Nekrasova-Beker, 2019) examined p-frames with the variable slot in any position of the frame. The present study also considered p-frames in any position, for example, in the beginning (* of this study is to), end (aim of this study is *) and in median (aim of * study is to) positions so that potentially useful frames were not excluded from the study, although we did not allow for more than one inner slot. The final list did not include p-frames which occurred between line/sentence boundaries, contained proper nouns, or related to a cited source.

P-frames were retrieved for the Social Science and Physical Science abstracts using AntGram (version 1.3.0, Anthony, 2021). Those shorter than six words were not chosen because they might not be perceptually salient for pedagogical purposes (Lu et al. 2021a). Another reason for focusing on only six-word frames was that investigating frames of various lengths would have made it challenging for quantitative analysis and categorization due to substantial overlap, as Cunningham (2017) highlights.

The list of six-word p-frames was manually filtered to eliminate a few remaining phrasal overlaps (e.g., *purpose of * project is to* and *purpose of this * is to*). The p-frames were then tagged with a label containing the move which it realised. This allowed us to map the moves to the p-frames and highlight which p-frame sequence realized the communicative purpose of a specific move (see Tables 4 and 5).

RESULTS AND DISCUSSION

In what follows we present and discuss the key relationships between rhetorical moves and p-frames across the OCAW social and physical science abstracts.

Research Question 1: Exploring Student Produced Rhetorical Moves

Rhetorical Moves in the Social Science Abstracts

Table 6 shows that in Social Science abstracts, a total of 99 rhetorical moves were identified while the Physical Science

Table 4

Moves and Tags in Social Science Abstracts

Move	Corpus Tag	Example Move	P-frame realising Move
Move 1: Introducing the topic	<AbstractM1id-topic>	The renewed training and science in business administration has become one of the most important elements to be considered by firms and organizations in the contemporary time.	None
Move 2: Identifying the gap/ Problem statement	<AbstractM2id-gap/problem>	The researcher conducted this research for important considerations as many companies suffer from renewed capital expenditures	None
Move 3: Stating Aim/purpose	<AbstractM-3purpose/aim>	The main objective of this project is to study all aspects related to the subject of measuring the impact of capital expenditures and revenues…	main objective of this * is
Move 4: Stating the Method	<Abstract-M4intromethods>	Primary and secondary data were used to collect and analyze data, as the study was designed as a descriptive study.	None
Move 5: Stating results and findings	<AbstractM-5statingresults>	The results obtained by the study are that the MEC uses a Performance Management System (PMS) which focuses mainly on…	the results obtained * the study
Move 6: Conclusion	<AbstractM-6projectcontribution>	At the end of this project, many recommendations and conclusions were presented	At the end of * project

Table 5

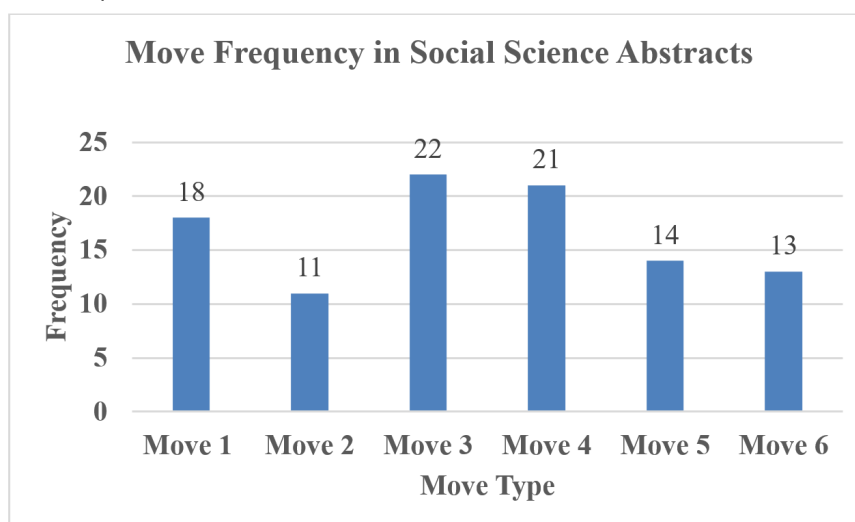*Moves and Tags for Physical Science Abstracts*

Move	Corpus Tag	Example Move	P-frame realising Move
Move 1: Introducing the topic	<AbstractM1id-topic>	The evolution of data transmission methods has advanced drastically with the internet development.	None
Move 2: Stating Aim/purpose	<AbstractM2pur-pose/aim>	The aim of this study was to identify soil characteristics and to highlight all that relates to soil stability	Main * of this project is
Move 3: Stating the Solution/Approach/Concept	<AbstractM3so-lution/approach/concept>	In this project, power is generated through people walking or running and the kinetic energy generated through their movement is converted into electrical energy.	None
Move 4: Summarising results/findings	<AbstractM5stat-ingresults>	The practical results showed that the copper radiator has a higher thermal discharge capacity, with the value of air temperature outside (68.4 C) and aluminum radiator (60.5 C).	None
Move 5: Contribution of the project	<AbstractM6pro-jectcontribution>	Thus, such a technique will have a significant role in saving time spent by farmers in the work and the exploitation of vast land to be farmed easily.	this project such as * the

Table 6

Social Science and Physical Science Abstract Move Frequencies

Discipline Grouping	Total Moves	# texts	# P-frame (tokens)	# P-frames performing moves (types)	# P-frames performing moves (tokens)
Social Science	99	24	42	8	16
Physical Science	171	46	63	2	4

Note. # = number.

Figure 1

*Social Science Abstract Move Frequencies*

abstracts contained 171 moves. When accounting for the difference in corpus size, move frequencies represented as relative frequencies equaled 2.18 moves per 100 words for Social Science abstracts and 1.54 moves per 100 words for Physical Science abstracts. A breakdown of the move types and their frequencies for each disciplinary grouping is presented in Figure 1.

Move analysis of the Social Science abstracts revealed that each move only occurred once per abstract. The frequencies in Figure 1 indicate that Move 3 (Stating project aim) was the most frequent, appearing in 92% of the abstracts, followed by Move 4 (Stating methods), which appeared in 88%. Move 2 (Identifying gap/problem statement) was the least frequent, appearing in less than half the number of abstracts.

Table 7

Moves Performed in Social Science Abstracts

Move	Examples	Project Focus
1 (Introducing the topic)	This research is about equality of the promotion strategy of <org. name>	Human Resources
2 (Identifying the gap/problem)	Therefore, in this project I have addressed a problem to what extent the training contributes to raising the performance of employee in <org.name>.	Human Resources
3 (Stating the aim/purpose)	This research aims to study the effect of performance appraisal on employee development in the <org.name>	Human Resources
4 (Stating the method)	In this study, quantitative methods will be used	Critical appraisal of employee performance
5 (Stating results and findings)	The results of this study revealed that the training has a positive relationship with the performance of the employees in the institution, because the training works to improve the performance of the staff and develop their skills and abilities and helps to provide staff with the necessary skills in the field of work, and enhance knowledge and increase productivity and effectiveness.	The impact of training on employee performance
6 (Contribution of the project)	This study contributes to the literature exploring the relationship between satisfaction, trust and commitment in the <org.name>, including allowing employees of a company to raise their performance and develop their skills.	Employee performance

Figure 2

Physical Science Abstract Move Frequencies
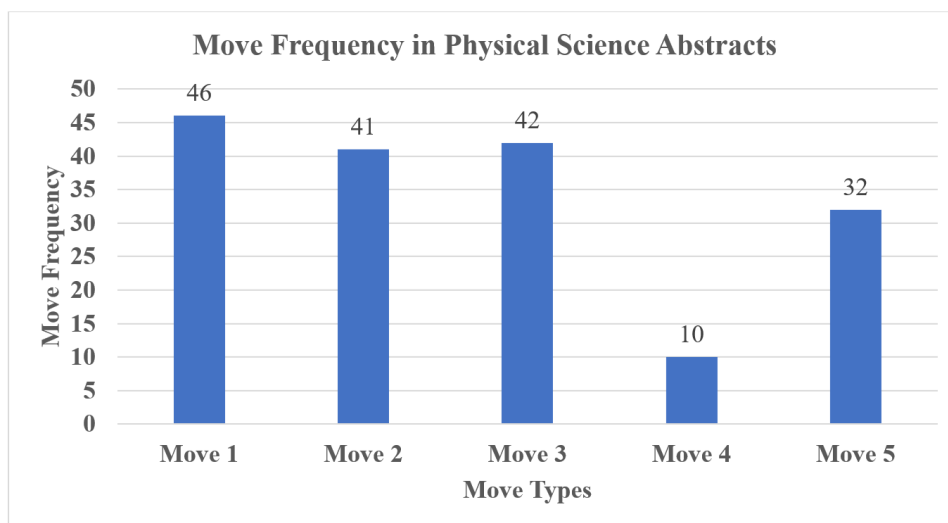
These findings partly align with Ren and Li's (2011) analysis of expert applied linguistics abstracts where they found that student abstracts contained less concluding moves, compared to expert abstracts.

Table 7 presents examples of each move being performed across different project topics. Figure 2 shows the distribution of Physical Science moves.

Move analysis of the Physical Science abstracts revealed that each move only occurred once per abstract. Frequencies in Figure 2 indicate that Move 1 (Introducing the topic) was the most frequent, appearing in all abstracts, followed by Move 3 (Stating solution/approach/concept), appearing in 91% of the abstracts. However, Move 4 (Stating results and findings) appeared only in 10 out of 46 abstracts (22%). Table 8 shows examples of these moves in action across different Physical Science projects.

These findings only align to some extent with findings reported in the past literature. Moves 1, 3 and 4 clearly pass the threshold of 60% set by Pho (2008) and are therefore

'conventional', however, three moves (2,5 and 6) fall below this threshold and may be considered 'optional'. The findings clearly diverge from established abstract move frameworks (e.g., Dos Santos, 1996; Hyland, 2000; see Table 1) and the expectations of the faculty regarding the moves that students should include in their capstone project abstracts. These frameworks all make reference to the identification of a problem/gap (Move 2), stating results and findings (Move 5) and stating the contribution of the project/study (Move 6). However, low uptake of these moves by Omani writers may signal that they perceive the purpose of an abstract to be descriptive, summarising the topic and methods only, with empirical details of the findings to be uncovered whilst reading the whole project report. We therefore observe disparity between student and faculty expectations around producing this part-genre. Such disparity is perhaps not surprising because, as the excerpt from the module guide for the Computing capstone project in Figure 3 shows, students have not received explicit guidance on including these missing moves while writing their abstracts.

The frequency of Move 4 in the Physical Science abstracts written by Omani students indicates that they do not consider this move to be mandatory whilst the literature reports that 'Stating results and findings' is a key rhetorical move in RA Abstracts (e.g., see Dos Santos, 1996; Hyland, 2000). The low presence of this move in Omani student abstracts is further evidence that students did not follow the framework recommended by their faculties. In a similar vein to Social Science students, they might also see the genre of an abstract as functioning at a descriptive introductory level only and they may expect readers to read the full project report to discover the findings.

In summary, the abstract analysis shows that abstract frameworks differ across the disciplines. This finding cha

llenges strands of past literature which have used a single pre-determined abstract framework to analyse rhetorical moves (e.g., Omidian et al, 2018; Saboori & Hashemi, 2013; Saeeaw & Tangkiengsirisin, 2014). However, it does align with the findings from some prior research work of other strands (e.g., Darabad, 2016) which have found variations in moves across disciplines such as applied linguistics, applied mathematics and applied chemistry.

Research Question 2: Realising Moves through P-Frames

Figure 4 shows that Omani student writers did not use many 6-word p-frames to perform rhetorical moves. In Social Science abstracts, we noted that p-frames were used to perform Moves 3,5 and 6. Move examples are shown below in examples (1) to (6) in Figure 4.

In Physical Science abstracts, there was a clear disparity between the number of moves and the number of p-frames being used to realize these moves. While Figure 2 shows that there were 171 rhetorical moves, p-frames actually realized *very* few of these moves, as shown in Table 7, namely Move 2 ('stating the project aim') and Move 5 ('stating the project's contribution'). Examples (7) to (9) in Figure 5 show how Move 2 (stating the project aim) was performed using the p-frame: 'main * of this project is', with a variable filler (e.g., 'idea', 'purpose', and 'objective':

We found two instances of a p-frame being used to perform Move 5 (Stating the project's contribution), as shown in examples (10) and (11) in Figure 6.

Studies that have attempted to link moves and frames have concluded that many moves in various part genres of RAs (Abstracts, Introductions) were conventional since they

Table 8

Physical Science Abstract Moves

Move	Examples	Project Focus/Topic
1 (Introducing the topic)	At this time, electronic technologies have developed and are widely known in all countries of the world, especially developed countries.	Electronic technologies
2 (Stating project aim)	The aim of this study was to identify soil characteristics and to highlight all that relates to soil stability and stability to maintain it through the use of available techniques and procedures such as Geo-Textile.	Soil stability
3 (Stating solution/approach/concept)	This project will be accomplished through a specific methodology, which is by a case study of three buildings and testing their strength after exposure to environmental factors and conducting an interview with an engineer to understand the problems and to know the methods used for reducing this problem.	Building corrosion
4 (Stating results and findings)	The study found that the best reservoir for irrigation and sewage uses is the carbon steel tank.	Irrigation and water storage
5 (Stating contribution of project/application)	My project will assist in reducing vehicle accidents in Oman.	Reducing speeding vehicles

Figure 3

Abstract Guidance from Students' Module Guide for Computing Projects

> Abstract - A half page short description of the project has to be written. Use present tense while writing the abstract, e.g., "This project focuses on development of a website for ABC Company". The aim is that any reader should gain a very brief but complete overview of your entire report from aims to conclusions. A short summary (100-200 words) distilled from the introduction, conclusion and recommendation of your Project after the report is written. See Appendix 6 for sample format.
>
> The purpose of this abstract is to give the reader key point of the report, usually no more than A4 page long. It should start with general statement of the aims of the report, a summary of the main finding and/or conclusions and/ or recommendation.

Figure 4

P-frames Realising Moves 3,5 and 6 in Social Science Abstracts.

> **Move 3: Stating Aims/Purpose**
>
> (1) **The main objective of this project** is to study all aspects related to the subject of measuring the impact of capital expenditures and revenues on them Performance Company: studying the pharmaceutical industry in Oman (Text BUS0010).
>
> (2) **The main aim of the research** is to know the effects of Human resource planning as a function towards the performance and productivity of the organization (Text BUS0013).
>
> **Move 5: Stating results and findings**
>
> (3) The **results obtained by the study are** that the MEC uses a Performance Management System (PMS) which focuses mainly on achieving SMART Goals (KPIs) to evaluate employee performance. SMART stands for Specific, Measurable, Achievable, Relevant, Time-bound (Text BUS0001).
>
> (4) The **results obtained during the study are** of extraordinary commonsense incentive for the executives and vital organization advancement (Text BUS0009).
>
> **Move 6: Stating the contribution of the project/application**
>
> (5) **At the end of this project,** many recommendations and conclusions were presented (Text BUS0019).
>
> (6) **At the end of the project,** the main conclusions and recommendations were presented (Text BUS0002).

were realised using p-frames. Our findings in the Omani abstract corpus do not align with these earlier findings. Instead, our findings align more with those of Durrant and Mathews-Aydinli (2011) who found that essays written by MA Social Science students contained less formulaicity than expert writing from Social Science journal articles. The lack of formulaicity in our corpora also indicate that student writers adopt more idiosyncratic practices and rely less on formulaic p-frames to achieve rhetorical moves.

Research Question 3: Learner Variations of Faculty Recommended Moves and Phrasing

Based on our observations of the relationship between rhetorical moves and p-frames, we were interested in further understanding learner practices when writing their project abstracts. We therefore analysed the OCAW abstracts to determine the extent that they adhered to faculty recommended moves and phrasing.

Figure 5

P-Frames Realizing Move 2 in Physical Science Abstracts

> **Move 2: Stating the project aim**
>
> (7) However the **main idea of this project is** to build a system which can provide the ultimate protection and monitoring to the facility.
>
> (8) Over the years there has been a need for manufacturers and researchers to develop a smart wheelchair that can help the user to and-up and sleep **the main purpose of this report is** to provide detailed information on how to design and build a Smart Stand-up &sleeping wheelchair using Raspberry Pi and RF Controller.
>
> (9) **The main objective of this project is** to study the possibility of reducing traffic congestion by distributing a questionnaire and conducting interviews with experts.

Figure 6

P-Frames Realizing Move 5 in Physical Science Abstracts

> (10) There are so many benefits of **this project such as reduce the** bill of the electricity, given clean energy to run the pump, reduce the pollution on the earth and help to give knowledge about the solar panels benefit.
>
> (11) There are many achievements from **this project such as knowing the** codes and IOT components.

Spontaneous Moves

In addition to the types of moves recognised by the faculty inventories, Omani student writers performed a number of spontaneous moves which were not accounted for in the original faculty inventories. In Social Science abstracts, we identified several spontaneous moves as shown in examples (12) to (14):

- Giving an overview of the number of chapters in the project:

(12)   This research had five chapters.

- Explicit signposting of where to locate results:

(13)   There is results in chapter 4 in details.

- Specifying particular aims in addition to the global project aim:

(14)   **Hence, the specific objectives are** that determine how to measure the employee's performance in <org. name>, determine the critical factors for the employee's performance in <org.name> and determine the nature and degree of interrelationships between the main success factors.

In Physical Science abstracts, spontaneous moves were also identified, as shown in examples (15) to (17):

- The impact of not taking action:

(15)   **If** used by the same rate, these forms of energy are **going to become extinct** in a few hundred years.

- Specific reference to past studies:

(16)   Various solar trackers have already been proposed previously.

(17)   The paper also **discusses other existing systems** and their merits and demerits.

The presence of these moves may highlight that students do not always follow pedagogic advice from their faculties. However, it is also possible that like the writers in studies such as Doro (2013), Darabad (2016) and Wei et al (2022), the Omani student writers actively include their own rhetorical moves to try and shape their construction of the abstract as a specific genre.

Absence of P-Frames to Perform Moves

In Social Science abstracts, we found an absence of p-frames being associated with earlier moves 1 (introducing the topic) and 2 (identifying the gap/problem) and later in the abstract, Move 4 (Stating the method). This finding has implications for the assumed premise that p-frames are useful pedagogic units that students should learn. Our analyses in-

Figure 7

Performing Moves without P-Frames

Move 1: introducing the Topic (and its importance)

(18) **This research is about** equality of the promotion strategy of <org name> (Text: BUS0013)

Move 2: 'Identifying the gap/problem statement'

(19) Therefore, **in this project I have addressed a problem** to what extent the training contributes to raising the performance of employee in <org.name>. (BUS008).

Move 4: Stating the Methods

(20) In addition, in this study **I used many methods of gathering information** such as an interview with the director of human resources, so as to highlight the impact of training on IT staff (Text: BUS0008).

---

dicated that Omani Social Science students whose abstracts did include Move 1: 'introducing the topic', and/or Move 2: 'identifying the gap/problem statement', and/or Move 4: 'stating the method', chose to perform these moves with idiosyncratic statements, rather than relying on a variable or more fixed p-frame. Examples (18) to (20) in Figure 7 show how these moves were performed *by not* using six-word p-frames.

These examples show that Omani student writers employ diverse language structures to communicate the rhetorical moves they use.

The Unsuccessful Use of P-Frames to Perform Moves

There were also instances where students attempted to perform recommended moves but were unsuccessful. We considered an unsuccessful move attempt to be when a move contained unclear or repetitive phrasing or when the sequencing of a move (or a series of moves) deviated from the order in the abstract inventories used for annotation.

For example, we found unsuccessful move attempts in the Social Science abstracts, particularly with Move 3 ('Stating the aim/purpose), as shown in examples (21) and (22).

(21) In this research study, reveals **the main purpose of the research** study, and that the importance of accounting information for managerial decision making (Text: BUS0014).

(22) **The purpose of this project is to this project is to** identify the relationship between working capital management and performance Cement Industry in Oman (Text: BUS0009).

Examples (21) and (22) indicate that students may struggle to perform the expected rhetorical moves that are associated with abstracts as a specific genre. Our qualitative analyses also revealed several unique student practices which violated the sequencing of moves expected both from their instructors and also wider expected sequencing that is recommended in abstract-as-a-genre literature (Hyland, 2000; Dos Santos, 1996). For example, we found evidence of students performing Move 5: 'Stating results and findings' before Move 4: 'Introducing method'. This deviation is shown in example (23):

(23) **This project has highlighted** the techniques and methods used in the payment systems adopted by the NTS (Move 5). **The research methodology used** in this project was based on the primary data and secondary data, where the questionnaire was conducted for 70 employees in the company (Move 4). (Text: BUS0002).

Alongside the language struggles which are illuminated in examples (21) and (22), example (23) indicates that students struggle with the sequencing of moves to produce a coherent and logical abstract which tells the 'story' of their research projects. Subject lecturers pointed out that they expected the moves in the student abstracts to be sequenced in accordance with the move framework that they had drafted in collaboration with the authors of this paper. It may be argued that move inventories should not be prescriptive. The lecturers' point of view is that novices on the fringe of their academic discourse communities should adhere to the expectations of examiners and their supervisors. In this context, we understood that the subject lecturers think that it is the students' lack of understanding of the genre rather than creativity that is disrupting the sequencing order as in Example 23. We did, however, find instances where students appropriately employed a single sentence to realise multiple moves such as "Concrete buildings are exposed to many en-

vironments that cause natural corrosion in the concrete that makes up these buildings because of the transfer of corroded materials from these environments to concrete continuously and for a long time". The sentence performs the dual communicative functions of introducing the topic and stating the problem.A similar dual function was also observed in the sentence: "This project will illustrate the general failure of the marine environment buildings due to chloride and sulphate attack and some treatment methods for this problem" which partly introduced the topic and aim of the study.

These instances, along with the spontaneous moves identified in examples (12) to (14), indicate that future move inventories possibly need to be expanded to account for fluid student use of moves, but they also point to a need to raise awareness of steps within moves as is the case in some of the literature (e.g., Yoon & Casal, 2020) . The inclusion of steps would also help show students different variations when writing their abstracts.

Tense and Filler Variation as a Marker of Learner Practices

Our qualitative analysis also revealed filler and tense variation in p-frames across disciplines. In Social Science abstracts, there were a number of different learner practices relating to the words used to fill the slots in the p-frames. For example, with move 3 (stating the aim), the following p-frame: 'The main * of the research', contained variations on the use of 'aim' as the filler. There were also uses of 'objective' and 'purpose' to fill this slot. Tense use also varied when performing move 3. Examples (24) and (25) show different uses of 'is' and 'was' when setting out the aims of the projects:

(24) **The aim of this study is to** explore relationships, trust and commitment (Text BUS0023).

(25) The **aim of this study was to** investigate into the effective strategies to improve the services of different operations in the Human Resource by using the lean management at <org name> (Text BUS0016).

Examples (24) and (25) offer an important insight into how learner writers might perceive the purpose of an abstract. The use of the different tenses highlights an interesting perception: in example (24), the writer might perceive the abstract as an introduction to the project while in example (25), the use of the past tense suggests an understanding of an abstract as a summary of a completed project. These findings show some convergence with past literature. In a similar manner to Darabad (2016) we found that writers vary their tense use across moves but unlike Darabad (2016) we did not find a strong preference for the present tense.

CONCLUSION

This study uncovered a number of findings relating to students' use of rhetorical moves and the extent that they use p-frames to achieve these moves. Answering research question one, the most frequent moves in Social Science abstracts were Move 3 (stating project aim), Move 4 (stating methods), and Move 1 (introducing topic), while the most frequent moves in Physical Science abstracts were Move 1 (introducing topic), Move 3 (stating solution/approach/concept), and Move 2 (stating project aim). The study's findings that different disciplines are using different rhetorical moves also challenges the use of a single pre-determined abstract framework to analyze rhetorical moves. Our findings further highlight a possible disparity between student and faculty expectations around producing abstracts because we noted that there were many instances where students diverged from advice provided by faculty. These findings have implications for the teaching and assessment of abstracts in the Omani context.

Most studies analysing the moves in RA part-genres assume that these are requirements for student genres as well. However, there is an ongoing need to further understand nuanced practices of students as they write their abstracts and a closer realization and attempt to set out student guidance which makes it clear which moves are conventional and which are optional.

Of course, any guidance on teaching must be contextualized and appreciative of how and where students receive advice. There is continuous debate on whether or not students should be taught generic academic English or discipline-specific English. This avenue is still open to debate in the Omani context. The fact that our findings suggest Omani students do not make extensive use of p-frames to perform rhetorical moves leads us to question the value of teaching p-frames to these students. It is also worth recognizing that the abstracts in our corpora are from successful, high-scoring projects and thus, the lack of formulaicity in these abstracts may not be a problematic aspect of the project for evaluators. Ultimately, a follow-up study which aims to understand faculty and academic writing specialists' views on the use of formulaic language in student abstracts would add weight to the initial exploratory study we have carried out here.

ACKNOWLEDGMENTS

DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Priya Mathew: corpus conceptualization, corpus methodology including ethical approval, funding acquisition, writing, editing and revising manuscript.

Lee McCallum: literature review, data preparation and analysis, writing, editing and revising manuscript.

REFERENCES

Alsop, S., & Nesi, H. (2009). Issues in the development of the British Academic Written English (BAWE) corpus. *Corpora*, *4*(1), 71-83. http://dx.doi.org/10.3366/E1749503209000227

Al Jardhani, S. (2017). English language curriculum evaluation in Oman. *International Journal of English Linguistics, 2*(5), 40-44. https://doi.org/10.5539/ijel.v2n5p40

Amnuai, W. (2019). Analyses of rhetorical moves and linguistic realizations in accounting research article abstracts published in international and Thai-based journals. *Sage Open*, *9*(1), 1-9. https://doi.org/10.1177/2158244018822384

Anthony, L. (2021). AntGram (Version 1.3.0) [Computer Software]. Waseda University. https://www.laurenceanthony.net/software

Biber, D., Johansson, S., Leech, G., Conrad, S., & Finnegan, E. (1999). *The Longman grammar of spoken and written English*. Longman.

Can, S., Karabacak, E., & Qin, J. (2016). Structure of moves in research article abstracts in applied linguistics. *Publications*, *4*(3), 1-16. https://doi.org/10.3390/publications4030023

Casal, J. E., & Kessler, M. (2020). Form and rhetorical function of phrase-frames in promotional writing: A corpus-and genre-based analysis. *System*, *95*, 102370. https://doi.org/10.1016/j.system.2020.102370

Cortes, V. (2013). The purpose of this study is to: Connecting lexical bundles and moves in research article introductions. *Journal of English for Academic Purposes*, *12*(1), 33-43. https://doi.org/10.1016/j.jeap.2012.11.002

Cotos, E., Huffman, S., & Link, S. (2017). A move/step model for methods sections: Demonstrating rigour and credibility. *English for Specific Purposes*, *46*, 90-106. https://doi.org/10.1016/j.esp.2017.01.001

Coxhead, A., & Byrd, P. (2007). Preparing writing teachers to teach the vocabulary and grammar of academic prose. *Journal of Second Language Writing*, *16*(3), 129-147. https://doi.org/10.1016/j.jslw.2007.07.002

Cunningham, K. J. (2017). A phraseological exploration of recent mathematics research articles through key phrase frames. *Journal of English for Academic Purposes*, *25*, 71-83. https://doi.org/10.1016/j.jeap.2016.11.005

Darabad, A. M. (2016). Move analysis of research article abstracts: A cross-disciplinary study. *International Journal of Linguistics*, *8*(2), 125-140. https://doi.org/10.5296/ijl.v8i2.9379

Doró, K. (2013). The rhetoric structure of research article abstracts in English studies journals. *Prague Journal of English Studies*, *2*(1), 119-139. https://doi.org/10.2478/pjes-2014-0013

Dos Santos, M. B. (1996). The textual organization of research paper abstracts in applied linguistics. *Text & Talk*, *16*(4), 481-500. https://doi.org/10.1515/text.1.1996.16.4.481

Durrant, P., & Mathews-Aydınlı, J. (2011). A function-first approach to identifying formulaic language in academic writing. *English for Specific Purposes*, *30*(1), 58-72. https://doi.org/10.1016/j.esp.2010.05.002

Durrant, P. (2017). Lexical bundles and disciplinary variation in university students' writing: Mapping the territories. *Applied Linguistics*, *38*(2), 165-193. https://doi.org/10.1093/applin/amv011

Golparvar, S. E., & Barabadi, E. (2020). Key phrase frames in the discussion section of research articles of higher education. *Lingua*, *236*, 102804. https://doi.org/10.1016/j.lingua.2020.102804

Gray, B., & Biber, D. (2013). Lexical frames in academic prose and conversation. *International Journal of Corpus Linguistics*, *18*(1), 109-136. https://doi.org/10.1075/ijcl.18.1.08gra

Hyland, K. (2000). *Disciplinary discourses: Social interactions in academic writing*. Longman.

Hyland, K. (2008). As can be seen: Lexical bundles and disciplinary variation. *English for Specific Purposes*, *27*(1), 4-21. https://doi.org/10.1016/j.esp.2007.06.001

Hüttner, J. (2010). The potential of purpose-built corpora in the analysis of student academic writing in English. *Journal of Writing Research*, *2*(2), 197–218. https://doi.org/10.17239/jowr-2010.02.02.6

Kanoksilapatham, B. (2013). Generic characterisation of civil engineering research article abstracts. *3L: Southeast Asian Journal of English Language Studies*, *19*(3), 1-11.

Le, T. N. P., & Harrington, M. (2015). Phraseology used to comment on results in the discussion section of applied linguistics quantitative research articles. *English for Specific Purposes*, *39*, 45-61. https://doi.org/10.1016/j.esp.2015.03.003

Lu, X., Yoon, J., & Kisselev, O. (2018). A phrase-frame list for Social Science research article introductions. *Journal of English for Academic Purposes*, *36*, 76–85. https://doi.org/10.1016/j.jeap.2018.09.004

Lu, X., Yoon, J., & Kisselev, O. (2021a). Matching phrase-frames to rhetorical moves in Social Science research article introductions. *English for Specific Purposes*, *61*, 63-83. https://doi.org/10.1016/j.esp.2020.10.001

Lu, X., Yoon, J., Kisselev, O., Casal, J. E., Liu, Y., Deng, J., & Nie, R. (2021b). Rhetorical and phraseological features of research article introductions: Variation among five Social Science disciplines. *System*, *100*, 102543. https://doi.org/10.1016/j.system.2021.102543

Martin, J. R. (1997). Analysing genre: Functional parameters. In C. Francis., & J.R. Martin (Eds.), *Genre and institutions: Social processes in the workplace and school* (pp. 3-39). Continuum.

Nekrasova-Beker, T. M. (2019). Discipline-specific use of language patterns in engineering: A comparison of published pedagogical materials. *Journal of English for Academic Purposes*, *41*, 1-12. https://doi.org/10.1016/j.jeap.2019.100774

Nesi, H., & Gardner, S. (2012). *Genres across the disciplines: Student writing in higher education*. Cambridge University Press. https://doi.org/10.1017/9781009030199

Omidian, T., Shahriari, H., & Siyanova-Chanturia, A. (2018). A cross-disciplinary investigation of multi-word expressions in the moves of research article abstracts. *Journal of English for Academic Purposes*, *36*, 1-14. https://doi.org/10.1016/j.jeap.2018.08.002

Pawley, A., & Syder, F. (1983). Two puzzles for linguistic theory. In J. Richards., & R. Schmidt. (Eds,). *Language and Communication* (pp.191-226). Longman.

Pho, P. D. (2008). Research article abstracts in applied linguistics and educational technology: A study of linguistic realizations of rhetorical structure and authorial stance. *Discourse Studies*, *10*(2), 231-250. https://doi.org/10.1177/1461445607087010

Römer, U. (2010). Establishing the phraseological profile of a text type: The construction of meaning in academic book reviews. *English Text Construction*, *3*, 95-119. https://doi.org/10.1075/etc.3.1.06rom

Saboori, F., & Hashemi, M. R. (2013). A cross-disciplinary move analysis of research article abstracts. *International Journal of Language Learning & Applied Linguistics World*, *4*(4), 483-496.   .

Saeeaw, S., & Tangkiengsirisin, S. (2014). Rhetorical variation across research article abstracts in Environmental Science and Applied Linguistics. *English Language Teaching*, *7*(8), 81-93. http://dx.doi.org/10.5539/elt.v7n8p81

Stubbs, M. (2007). Quantitative data on multiword sequences in English: the case of the word world. In M. Hoey., M. Mahlberg., M. Stubbs., W. Teubert (Eds.), *Text, discourse and corpora: Theory and analysis* (pp. 163–189). Continuum.

Soler-Monreal, C. (2015). Announcing one's work in PhD theses in computer science: A

comparison of Move 3 in literature reviews written in English L1, English L2 and   Spanish L1. *English for Specific Purposes*, *40*, 27-41. https://doi.org/10.1016/j.esp.2015.07.004

Swales, J. (1990). *Genre analysis: English in academic and research settings*. Cambridge University Press.

Swales, J. (2004). *Research genres: Exploration and applications*. Cambridge University Press.

Swales, J. M., & Feak, C. B. (2009). *Abstracts and the writing of abstracts* (Vol. 2). University of Michigan Press ELT.

Tseng, F. P. (2011). Analyses of move structure and verb tense of research article abstracts in applied linguistics journals. *International Journal of English Linguistics*, *1*(2), 27-39. https://doi.org/10.5539/ijel.v1n2p27

Walcott, K. (2021). Informing academic writing pedagogy through the study of phrase-frames. *Journal of Language Teaching and Research*, *12*(1), 158-171. https://doi.org/10.17507/jltr.1201.17

Wei, H.Y., Razali, A.B., & Abd Samad, A. (2022). Writing abstracts for research articles: Towards a framework for move structure of abstracts. *World Journal of English Language*, *12*(6), 492-504. http://dx.doi.org/10.5430/wjel.v12n6p492

Yoon, J., & Casal, J. E. (2020). Phrase-frames and rhetorical moves in applied linguistics conference abstracts. In U. Romer, V. Cortes, & E. Friginal (Eds.), *Advances in corpus-based research on academic writing: Effects of discipline, register, and writer expertise* (pp. 282–305). John Benjamins. https://doi.org/10.1075/scl.95.12yoo