Using IMRAD for Writing Abstracts

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Abstract:

The importance of an abstract lies in the fact that it mirrors the whole thesis, dissertation or academic paper. It is the first lines that any peer reviewers, referees and examiners read; as such it must be attractive, clear and concise so that it stimulates the saliva of the readers. Abstracts must leave a positive first impression on the readers, otherwise they would stop reading them, have a negative impression about them and the rest of the papers. This paper tackles the standard linear structure of abstracts' writing, namely IMRAD for Introduction-Methodology-Results-and-Discussion. The methodology consists of a qualitative approach of more than 40 abstracts (n=43) dealing with epistemology and methodology in the field of EFL, and inquires about the use or not of IMRAD. The results are disparate, since the majority of the abstracts do not comply with the norm but follow another trend, introduction-methodology-discussion, and neglect the results. The latter conclusion invites for a larger discussion about the teaching of methodology as a backbone for any scientific research and academic writing.

Key words: abstracts, IMRAD, linear structure, moves, non-linear structure

الملخص:

تكمن أهمية الملخص في أنه يعكس الأطروحة بأكملها، أو الأطروحة أو البحث الأكاديمي. وهو يمثل الخطوط الأولى التي يقرأها أي ناقد أو مقيم أو فاحص؛ وبالتالي، يجب أن تكون جذابة وواضحة وموجزة لتحفيز لعاب القراء. يجب أن تترك الملخصات انطباعًا إيجابيًا لدى القراء، وإلا يتوقف القراء عن قراءتها، ويشعرون بانطباع سلبي من الملخصات وكذلك على بقية الأوراق الأكاديمية. تدرس هذه الورقة استخدام البنية الخطية القياسية للملخصات، وهي IMRAD من أجل مقدمة – منهجية – نتائج – مناقشة. تتكون المنهجية من مقاربة نوعية لأكثر من 40 ملخصًا (ن = 43) تتعامل مع نظرية المعرفة والمنهجية في مجال تدريس اللغة الإنجليزية كلغة أجنبية(EFL) ، وتستفسر عن استخدام أو عدم استخدام IMRAD. النتائج متباينة، لأن غالبية الملخصات لا تتطابق مع المعيار وتتبع اتجاهاً آخر، منهج التقديم — المناهج– المناقشة، مهملاً النتائج. هذا الاستنتاج يدعو إلى مناقشة واسعة حول تدريس المنهجية كعمود لجميع البحوث العلمية والكتابة الأكاديمية.

الكلمات مفتاحية:الملخصات، IMRAD، البنية الخطية، التحركات، البنية غير الخطية

Your job as a writer is to 'sell' your abstract to potential readers

Wallwork, A. English for Writing Research Papers

1.Introduction

In academic writing, the readers pay attention to the very first lines of the paper, i.e.: the abstract, for the latter reflects the content and importance of the upcoming text and research as a whole. Abstracts identify the main contents of the paper in a rapid and truthful manner. They enable readers to judge the validity, relevance, and soundness of the entire article, dissertation or thesis.

Swales (1990) and Bhatia (1993) agree that abstracts are 'faithful' and 'purified' summaries of the entire academic paper. Their main goal is the promotion of the research article. Hyland (2009) contends that the abstract is the turning point as far as the reading of the paper is concerned. That is, the abstract "provides a decision making point for readers to judge whether the entire article merits further attention or not" (Can, Karaback& Qin, 2016:1). In a few words, an abstract is a miniversion of the whole article.

Because of the significance and importance of abstracts, standard structures for the writing of abstracts have been set as earlier as the 1970s (McGirr, 1973, cited in Day 1994:30); they consist of the Introduction-Method-Results-Discussion (IMRAD). Actually, the structure is also referred to as the I, P, M, R, and D for Introduction, Purpose, Method, Results, and Discussion) (Can et al., 2016:11). For Salager-Meyer (1990, as cited in Hyland 2004), there is a tight link between the organisation of the abstract and the move categories, i.e.: introduction-methods-results-conclusion in a typically linear order. All the latter four structural units make up for good abstracts and should be involved in any abstract writing.

Day (1994) states that: "The abstract should (1) state the principal objectives and scope of the investigation, (2) describe the methods employed, (3) summarize the results, and (4) state the principal conclusions." (P: 30). The simple past tense characterises the abstract simply because the latter is about research work that is already done.

The abstracts must be short and concise, not exceeding 250 words in one-block paragraph, and not inclosing any bibliographic, figure and table references. Moreover, they should not contain information or statement that is not found in the text. Most of the time, the abstracts are void of any reference to previous literature unless the research seeks to modify or infirm a previously published method, hypothesis, and theory.

There are various types of abstracts; the most famous being the *informative* and the *indicative*. The former aims at abbreviating the paper; it must encompass the statement of the problem, the method and/or material used to study the problem, the results obtained out of the research and, finally, the conclusion (see appendix n°1 as an example of the informative type of abstracts). The indicative abstract, on the other hand, is also referred to as the descriptive abstract. It indicates the issues tackled in the paper with the avowed aim to make it easier for readers to choose to read or not the article (cf. appendix n°2 for an indicative type of abstract). The main difference between both types of abstracts is that the indicative abstract is not substantive but descriptive. Hence, it does not substitute for the entire paper, and cannot be considered as its "heading" (Day, 1999:30).

The present paper deals with the use of IMRAD in a number of abstracts submitted for approval by the scientific committee of an international conference on *Epistemology and Research Methodology*. The main questioning is about the organisation of moves in the abstracts: Do they follow the linear structure,

i.e.: introduction-method-results-discussion? Are there any other patterns of moves? And what are the most frequently used moves?

2. Methodology

2.1 The Corpus

The corpus of study consists of forty-three (n=43) abstracts submitted to the scientific committee of the international conference on *Epistemology and Research Methodology* during the 2017-2018 academic year. All the abstracts chosen are considered useful and significant for the sake of the research. Though the size of the corpus is limited to 43 abstracts, it is deemed sufficient to draw overall and exhaustive conclusions about the use of IMRAD by Algerian full and novice researchers.

The statistics concerning the abstracts, especially in matter of word counts, are reported in Table1. However, a few details must be added regarding the statistics relative to the corpus of study. The word counts did not take into consideration the following items:
-abstracts in Arabic and French,
-the key-words,
-the references, and finally
-the authors' short biographies

It is also worth mentioning that the word count was done thanks to the software programme Microsoft Word (Word 2016), while the counting of the words was made thanks to Microsoft Excel 2016. The number of words in each abstract ranged in between 102 and 663 words; the last number shows that the authors did not respect the required length of abstracts which is 200-250 words as mentioned in the conference's CFP.

Table 1. Frequencies in the corpus for abstracts, words, and their mean lengths

Number of Abstracts	Total Number of Words	Mean Length of Abstracts in Terms of Words
43	8742	203.302

Table1 illustrates that the abstracts' length and number of words is acceptable, for the mean length does not exceed the required number of words, i.e.: 203 vs. 250. Yet, seven abstracts did not abide by the norms; they did not conform to the guidelines of the CFP. For example, abstracts numbered 06, 12, 18, 21, 35, 43, and 44 used between 274 and 663 words.

2.2 Coding the Abstracts

All the abstracts were coded for the moves following the IMRAD linear structure. Hyland's (2004) model, which consists of a five-move pattern, was slightly changed to correspond to the actual paper's framework. The model proposed by Hyland (2004) is used as a frame of reference for the four-move pattern of the present research. Table 2 introduces the pattern that was used to code the various abstracts.

The moves are hand-coded in a sequential numerical manner. Number 1 stands for *Introduction* (I), 2 for *Methodology* (M), 3 for the *Results* (R), while 4 is for *Discussion* (D). The abstracts that respect IMRAD are described as linear while those which do not abide by the rule are *non*-linear. Next examples of abstracts illustrate the linearity and non-linearity of the moves respectively.

Table 2. Coding the Moves in Abstracts

Abstract Moves	Function	Coding
Introduction	Introducing the main topic/setting and scene/purpose and	1

	research questions	
Methodology	What material/methodology is used	2
Results	What are the results/scores/percentages obtained	3
Discussion	What are the conclusions/discussions/recommendations	4

(1)   Linear abstract: (1-2-3-4, I-M-R-D)

(I) The present study aims at assisting Arabic teachers at the department of Arabic Language and literatures … to write well-constructed abstracts. Many Arabic language teachers are required to accompany their articles with abstracts written in English for conference participation or publishingan article in a scientific journal. Abstracts which do not respect the genre- writing norms and standards can lead to exclusion. (M) To investigate what practices are adopted by the teachers of Arabic and how to equip them with the abstract-writing requirements, a research was conducted on a number of ten (10) Arabic teachers at the department of Arabic Language and Literatures … in the academic year 2017/2018. A semi- structured interview was chosen as a data gathering tool. (R) Results of the study reveal that due to time constraints, teachers adopt wrong practices while writing their abstracts such as the total dependence on machine translation with its subsequent frequent disadvantages or seeking assistance from teachers of English who will find themselves uncertain about either to translate the abstract or to rewrite a completely a new one that meets the requirements of abstract writing in English. Results also show that the abstracts written in Arabic do not include the compulsory components of a well composed abstract which are: aim of the study, clarification of the research problem, research methodology including methods and techniques adopted, summary of the results obtained and pedagogical implications and/or recommendations. (D) Results of the study led to suggest the introduction of the direct and explicit instruction of abstract writing to Arabic teachers organized in a form of seminars or workshops.

(2)   Non-linear abstract: (1-3-2-4, or I-R-M-D)

(I) Conducting research at university for master students presents both chances and challenges. Students come into the master program with a variety of backgrounds and have diverse career interests that will take them into professional and academic settings. They are expected to be competent in methodological inquiry and the design of research studies. In fact, a well determined and designed research problem is the core of any research study. Yet, a vague research problem is the weakest point in an investigation. Stating a good and researchable research problem is the key to success in any research study. This paper explores the students' problems and dilemma encountered when undertaking an action research study. (R) The major factors that hinder students to conduct a research appropriately are lack of training, seminars and workshops regarding research activities, and library services. (M) Around 45 participants were selected randomly to collect the primary data. (D) Some recommendations were suggested to alleviate the students' problems.

Moreover, deciphering the abstracts necessitated using another technique, which is giving colours to each move. The introduction (I, 1) is green, the methodology (M, 2) is blue, the results (R, 3) are in red, while the discussion (D, 4) is in light red. Figure1 illustrates the various moves and their corresponding colours.

Introduction (1)
Methodology (2)
Results (3)
Discussion (4)

Figure1. Moves and corresponding colours

Table 2 above shows that numbers are used instead of abbreviations to avoid any misinterpretation of the results and to make the findings decipherable and comprehensible.

As a structure, moves in the abstracts are signalled through various ways. First, *Introduction* is considered to be the whole sentences that precede *Methodology*. Most of the time, it contains such words or phrases as the following:

(3) *In this respect, the present paper tends to shed some light on the definition of quantitative research methods.*

(4) *focus will be made on…*

(5) *The present talk highlights…*

Methodology, on the other hand, starts with the following sentences:

(6) *a research was conducted to…*

(7) *To strongly authenticate the teachers' approved stance, the current paper sought to come up with evidence of such issue through examining a sample of forty master dissertations of foreign language didactics, over four years, at the aforesaid department and university.*

(8) *This paper, however, is a short working guide on how to write a scientific article out of theses made at both undergraduate and postgraduate levels.*

The *Results* sentences are introduced as follows:

(8) *The results obtained from the analysis demonstrated that the problems encountered in the students' dissertations are numerous and annually repeated.*

(9) *the generalization of the results from the sample to the whole population can be subject to error, since what might work with one sample under one condition might not at all work with another sample under the same condition or even the same sample under a different condition.*

(10) *The results show that MA students rely mainly on three to four constituents of abstract rhetoric.*

Furthermore, the discussion section does not split between those abstracts which give details about the discussion and those which simply refer to the discussion upcoming in the text. In the examples below, the difference is made clearer:

(11) *This study shows how implementing corpora helps understanding the broad lines of academic contributions.* (abs.11)

(12) *Based on the findings, suggestions to enhance the practices and quality of research supervision of EFL master students at the university of Adrar-Algeria- were proposed at the end of the study.* (abs.4)

2.3 The Participants

The abstracts submitted to the conference were sent by researchers, teachers and doctoral candidates from a variety of Algerian universities and university centres. Table3 is a breakdown of the participants taking into consideration their academic positions.

Table 3. Breakdown of participants according to academic status

Participants	Numbers
Professors	05
Doctors (Associate/Assistant professor)	21
Doctoral candidates (Senior Lecturer/ Lecturer)	19
Total	45

The next table summarises the participants and the types of abstracts submitted.

Table 4. Details of the participants and type of work

Participants' status	Individual work	Pair work
Professors	05	-----------------------
Doctors	19	-----------------------
Doctors-Doctors	---------------------------------	04
Doctors-Doctoral candidates	---------------------------------	02
Doctoral candidates	15	----------------------
Doc.candidates-doc.cand	-----------------------	01
Senior Lecturers	02	----------------------
S.Lecturers- S.Lecturers	---------------------------------	02
Lecturer	02	----------------------
Lecturer- Lecturer	-----------------------	01
Total	43 (81.13%)	10 (18.86%)

Table 4 informs that the abstracts proposed for the international conference were submitted individually and represented 81.13% of the whole corpus. Whereas, the abstracts worked in pair were quite reduced (10= 18.86%); a number which reveals that participation to conferences in group work is still timid in Algeria.

3. Results and Discussions

In the next lines, the analysis of the results takes into consideration the *range*, *quantity*, and *order* of the four moves.

3.1 Range

The results obtained out of the corpus analysis show that only 7 (i.e.: 16.27%) abstracts respected the *perfect* linear standard moves pattern, that is I, M, R, and D, or 1,2,3,4 in the current study. This means that 36 (83.72%) abstracts lacked at least one move in their patterns. Furthermore, the majority of the abstracts (n=21, 48.83%) selected the I, M, and D pattern, i.e.: 1,2,4. This arrangement raises the question of the 'essentiality' of the moves, particularly their linearity. The abstracts might have avoided the *results* move as part of a "tactical decision to enhance the promotional aspect of the abstract" (Can, 2016:6).

One noticeable result is that of *methodology* (M, or 1). It was present in all the abstracts, and represented 100% of the most recurrent of the whole moves. This result confirms that of Tseng (2011) who noted that M is the most frequent move in abstracts. Can (2016) says that M is "…a conventional move in AL [Applied Linguistics] articles" (p: 6)

Methodology is shortly followed by the introduction (I, 1). This last is present in 97.67% of the abstracts. It is the second most frequent move used in the abstracts. The fact that the introduction is not

found in all the abstracts can be accounted for by the infrequent presence of theoretical rather than informative abstracts. In the case in point, only one abstract did not have any introductory sentences; it is abs.40. Overall, the I move is also conventional in abstracts in the social and human sciences (SHS) writings.

Contrary to Hyland (2004), Tseng (2011) and Can (2016), the results obtained through our sample showed that D, and not R, is the third most frequent move in the abstracts submitted to the international conference. D is present in 29 abstracts and amounts to 67.44%. This last result raises a further question which is: Do the writers assign a more important role to the discussions than to the results? Or do they *promote* their papers through raising discussions and hiding results?

In light of the results obtained, one can venture and state that D is a conventional move in the SHS abstracts submitted to the international conference on Epistemology and Research Methodology. It is also well important to note that most journals on Applied Linguistics explicitly ask authors to state their "major conclusions" (Can, 2016:8) in the D section. Most Social and Human Sciences journals expect writers to do the same and stress on it in the *authors' guidelines*.

The last and most infrequent move found in the abstracts is that of R. *Results* (R, 3) were reported in 12 abstracts only, that is 27.90%. The scores for R show that it is not that conventional in the abstracts of our sample. At this level another question arises: why do the Algerian SHS writers background the results of their research? Is this a tactical move, or is it an illustration of a gap in methodology?

Table 5. Results of the moves analysis of abstracts, in percentages

Abstracts	Introduction (%)	Methodology (%)	Results (%)	Discussion (%)
43	100	97.67	27.90	67.44

According to the overall results obtained from the sample of 43 abstracts, we arrive at the conclusion that the preferred moves pattern of Algerian SHS writers is I-M-D or 1-2-4, that is *introduction*, *methodology*, and *discussion*. The latter moves are deemed the most important for the promotion of SHS papers. Moreover, the fact that R is not among the conventional moves explains why some writers' abstracts do not attract the attention of the reviewers and accounts for their rejection by the concerned scientific committees.Table 6 reports the results obtained for each move in the 43 abstracts. A mention about the 'essentiality' of the moves is also given.

Table 6. Move patterns in the abstracts

Moves	Number	%	Essentiality
I	42	100	Conventional
M	43	97.67	Conventional
R	12	27.90	Optional
D	29	67.44	Conventional

The most conventional of all moves are I, M, and D. In the case of I, the present data contradict those of Hyland (2004) and Can (2016). For both authors, I is the least used move in abstracts of AL, as evidenced by the scores they obtained in their respective studies, i.e.: 40% vs. 54%. Table 6 does also clearly illustrate that *results* (R, 3) move is optional rather than conventional in the abstracts of the sample.

3.2 Quantity

This section concerns the amount of move-tags used in all abstracts of the sample. The total number of moves is 126. Figure 2 illustrates the percentage of each one.
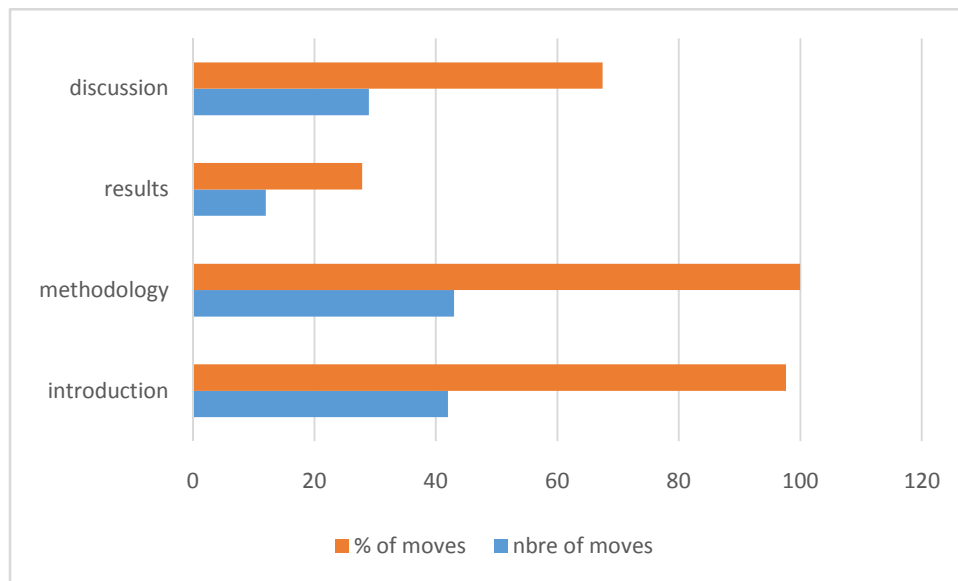
Figure 2. Percentages of move-tags in the abstracts

The figure makes it clear that methodology (M) scores the highest percentage of move-tags, i.e.: 43 or 100%. The next most important move is that of (I) which score is 42 tags (97.67%); it is followed by (D) which amounts to 29 tags, that is 67.44 % of the whole moves. The least frequent tag is that of (R) which is 12 and represents 27.90%.

One can draw the conclusion that (M), (I) and (D) are the focal points of Algerian SHS abstracts. Their percentages of use inform that the writers allocate an important text space to these three moves. These finding do not corroborate those of Ren and Li (2011) who found that in matter of quantity, the pattern is R, I, M, P and D. Hence, they discovered that D is the least of the moves to be used in their sample. However, present research shows that the order is M, I, D and R attesting that the *results* receive the smallest quantity of moves.

3.3 Order and Linearity of Moves

Table 7. Order or linearity of moves

Order of moves	Number of abstracts
I, M (1,2)	10
I, M, R (1,2,3)	03
I, M, D (1,2,4)	*21*
I, M, R, D (1,2,3,4)	07
I, R, M, D (1,3,2,4)	01
M, R	01
Total	*43*

The present section underscores pattern organisation of the moves, for it is through the linearity of these last that abstracts are deemed attractive or not. Within the sample of our research, the organisation of the moves proves to be quite revealing as far as methodology is concerned.
Table 7 reports the overall finding about the linearity of moves.

As already stated in previous sections, the most frequent order of moves is that of I, M, and D, that is *introduction*, *methodology*, and *discussion*. Figure 3 (see appendix n°3) indicates that there are various patterns used by the writers, and that several others do not conform to the standard order.

A closer look at Figure3 shows that six patterns emerge:

- 21 (48.83%) abstracts followed the I, M, and D pattern;
-10 (23.25%) respected the I, M order and did take into consideration neither R nor D,
- 7 (16.27%) abstracts used the standard linear I, M, R, and D pattern,
- I, M, R (n= 03, or 06.97%),
-I, R, M, D (n= 01, or 02.32%), and
-M, R (n= 01, or 02.32%)

The patterns that followed the standard linearity are referred to as *linear*, while those that did not abide by the expected norm, omitted some moves, but were still linear are called *semi-linear*. The others are qualified as *irregular*. Table 8 gives an overall picture about the six patterns encountered in the abstracts.

Table 8. Frequency of linear, semi-linear, and irregular patterns in 43 abstracts

Linearity	Moves	Frequency	% of abstracts
Linear	I M R D	07	16.27
Semi-linear	*I M*	*10*	*23.25*
Semi linear	I M R	03	06.97
Semi linear	*I M D*	*21*	*48.83*
Irregular	I R M D	01	02.32
Irregular	M R	01	02.32

One notices that the I, M, D pattern is the prevalent in the majority of abstracts (n=21). It is followed by I, M (n=10) then by the standard linear pattern I, M, R, D (n=07) and the semi-linear I, M, D (n=03). The irregular pattern are less frequent and are found in two abstracts, only.

4. Conclusions

Several conclusions can be drawn out of the present research which considered 43 abstracts, only. The most important one is that most Algerian SHS writers do not respect the standard linear pattern of abstracts' writing. They rather use an easiest "soft" one which is *introduction*, *methodology*, and *discussion* (I, M, D). Although the latter is semi-linear, it does not conform to the expected one.

The use of the standard linear order by 07 abstracts shows that the researchers are aware of this pattern and of its regularity. A fact which pushes further the questioning about methodology in Algerian universities. It is also worth mentioning that the patterns do also depend on the nature of the abstracts; are they informative, indicative, or theoretical?

The present research can be considered as exhaustive, for the abstracts were selected from those available to the scientific committee of the International Conference on Epistemology and Research Methodology. Hence, they stand for a large array of diverse types of abstracts and writers from Algerian HEIs (Higher Education Institutions).

The results of the study tell us that EFL Algerian writers favour to leave their results out of the abstracts. This is a tactical move which shows that those authors try to captivate the attention of the readers and to stimulate their curiosity as to the importance of the research without giving any hints about the data and their interpretations. It may also be due to the fact that text space forces the writers to reduce or omit some moves.

Deviations in the order of moves is a sign that writers need to reconsider their methodologies of writing abstracts. They also inform us about the importance of teaching methodology to undergraduate and post-graduate students, in particular doctoral candidates.

As a last word, one can say that the topic deserves further study taking into consideration other variables such as the linguistic devices and metadiscourse markers, the status of the writers and their educational background.

References

1. Bhatia, V.K. (1993). Analyzing Genre: Language Use in Professional Settings; Longman Publishing: New York, NY, USA.
2. Can, S., E. Karaback& J. Qin. (2016). Structure of Moves in Research Article Abstracts in Applied Linguistics. Publications 4(23):01-16.
3. Day, R.A. (1994). How to Write and Publish a Scientific Paper (4th Edition). Cambridge: Cambridge University Press.
4. Hyland, K. (2004). Disciplinary Discourses: Social Interactions in Academic Writing; University of Michigan Press: Ann Arbor, MI, USA.
5. Hyland, K. (2009). Teaching and Researching Writing, 2nd ed.; Routledge: Abingdon, UK.
Kallet, Richard H. "How to Write the Methods Section of a Research Paper." *Respiratory Care* 49 (October 2004): 1229-1232.
6. McGirr, C.J. (1973). Guidelines for Abstracting. Tech. Commun. 25(2):2-5.
7. Ren, H.; Li, Y. (2011). A comparison study on the rhetorical moves of abstracts in published research articles and master's foreign-language theses. Engl. Lang. Teach. **2011**(4):162–166.
8. Salager-Meyer, F. (1990). Discoursal flaws in medical English abstracts: A genre analysis per research and text type. Text 10 (4):365–384.
9. Swales, J.M. (1990). Genre Analysis; Cambridge University Press: Cambridge, UK.1
Wallwork, A. (2011). *English for Writing Research Papers*. Springer.
12. Tseng, F. Analyses of move structure and verb tense of research article abstracts in applied linguistics. Int. J. Engl. Linguist. 2011(1): 27–39.

1Appendix n°1: An Informative type of abstract

The purpose of this study is to analyse the corpora of MA theses abstracts on EFL teaching and learning arguments. A thousand-word electronic corpus was designed after collecting 90 abstracts from MA theses in EFL specialty. First, a corpus study was set forth to highlight how far MA students respect the main constituents of abstract rhetoric. Second, a frequency analysis was carried to understand how the main tenses are used in those abstracts. The results show that MA students rely mainly on three to four constituents of abstract rhetoric. Besides, students are more partial to make use of action verbs. This study shows how implementing corpora helps understanding the broad lines of academic contributions.

<u>Appendix n°2</u>: An Indicative type of abstract

How to articulate a thesis is certainly a challenge because it has to be undertaken under different time and academic constraints. Beside providing appropriate contextualisation of the topic, wording the problematic can be quite a difficult process as it needs most of the time an extensive background which the researcher might not yet have acquired. S/he has to find the originality of the topic as well as the relevance of the aspects of the context developed to form various elements into a meaningful coherent whole keeping in mind that any reader's ability to engage with the topic is mediated by the text. The difficulty lies in managing the evolving relationship between writer, reader and text (Hyland and Tse 2004) while relating ideas back to the outline. Indeed critical writing seems probably a laboured effort emerging from critical reading (Wallace and Wray 2006). Thus, some guidelines linked to methodology for research in literature will be formulated as a good starting point for the thesis project.

Appendix n°3:   Figure 3. Order or Linearity of moves

Abstracts	I	M	R	D
1.	green	blue	black	red
2.	green	blue	black	red
3.	green	blue	black	red
4.	green	blue	black	red
5.	green	blue	black	black
6.	green	blue	black	red
7.	green	blue	black	red
8.	green	blue	red	red
9.	green	blue	black	red
10.	green	blue	black	red
11.	green	blue	red	red
12.	green	blue	red	red
13.	green	blue	black	black
14.	green	blue	black	black
15.	green	blue	red	black
16.	green	blue	black	black
17.	green	blue	red	black
18.	green	blue	red	red
19.	green	red	blue	red
20.	green	blue	black	red
21.	green	blue	red	red
22.	green	blue	black	black
23.	green	blue	black	red
24.	green	blue	black	red
25.	green	blue	black	red
26.	green	blue	black	red
27.	green	blue	black	black
28.	green	blue	black	black
29.	green	blue	black	black
30.	green	blue	black	red
31.	green	blue	black	red
32.	green	blue	black	red
33.	green	blue	black	black
34.	green	blue	red	red
35.	green	blue	black	red
36.	green	blue	black	black
37.	green	blue	black	red
38.	green	blue	black	red
39.	black	blue	red	black
40.	green	blue	red	black
41.	green	blue	black	red
42.	green	blue	red	red
43.	green	blue	black	red

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