A CROSS-DISCIPLINARY MOVE ANALYSIS OF RESEARCH ARTICLE ABSTRACTS

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ABSTRACT

This paper seeks to analyze the research article abstracts across three disciplines: applied linguistics, applied economics, and mechanical engineering. The analysis mainly focuseson the rhetorical structure, i.e. the constituent moves and steps. In addition, self-mention of the author as well as the voice and tense of the verbs included in each move are examined. To this end, 21 published abstracts from each field (a total of 63 abstracts), all appearing in established, international journals, were selected. The model proposed by Hyland (2000), composed of 5 moves, was employed as a general guideline and the steps and moves were identified and studied in the three groups of abstracts. The results compared and contrasted the dominant move patterns of each field, their unique moves/steps, the typical voice and tense of verbs employed in each move, and the differences regarding the self-mention. All in all, the findings of this study had important pedagogical implications for the practitioners in ESP and EAP fields.

KEYWORDS: cross-disciplinary, research articles, abstract

INTRODUCTION

The research article (RA) is the most important genre in the academic community. Its purpose, according to Hyland (2000), is two-fold: communicating new knowledge to members of the academic community and persuading them to accept the claims. As a pivotal section of RA, abstract seems to have received increasing attention specially in recent years with the explosion of information in the academic world. What renders abstract its high significance is the unique function it has, namely, "the gateway that leads readers to take up an article, journals to select contributions, or organizers of conferences to accept or reject papers"(Lorés, 2004, p. 281).

Body of research on abstracts includes studies focusing on the analysis of the organizational pattern in terms of its constituent moves (e.g.Lim, 2006) or/and the analysis of the grammatical and stylistic features that characterize these moves (e.g. Pho, 2008). Most of these studies are cross-linguistic, examining the structural variations of abstracts of a single discipline across different languages. Another possible direction of analysis, which has seemingly not received its due attention, is cross-disciplinary analysis which could make great pedagogic contributions particularly to the ESP and EAP classroom. Hence, employing the latter type of analysis, the

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present study attempts to compare the rhetorical structures and grammatical features of research article abstracts across three disciplines (applied linguistics, applied economics, and mechanical engineering) and discuss their similarities and differences.

LITERATURE REVIEW

This section will begin by reviewing the most pertinent aspects to the study at hand, namely, genre analysis, research article as a genre, and RA abstract as a part genre. Next, the three most popular models for the rhetorical analysis of RA abstracts are presented. They are Swales (1981) three-move model, Bhatia's (1994) four-move model, and Hyland's (2000) five-move model. Finally, a brief account will be given of a number of studies analyzing RA abstracts.

Genre analysis

As one of the most significant approaches to text level analysis, genre analysis has aroused great interest, particularly in applied linguistics, where is has been defined as the "study of situated linguistic behavior in institutionalized academic or professional settings" (Bhatia, 1997, p.181). The reason behind such popularity among applied linguists is perhaps its remarkable pedagogic implications for the practitioners in the communicative ESP and EAP classroom (Brett, 1994). Familiarizing students or novice researchers with appropriate disciplinary conventions like the proper linguistic aspects of communicative functions is an example of such implications.

A genre has been defined by Swales and Feak (2009) as "a type of text or discourse designed to achieve a set of communicative purposes"(p. 1). These communicative purposes, which arereflected in distinctive structural patterns, are both the most important common features shared by the texts belonging to the same genre and, at the same time, the most important unique features differentiating one genre from another (Holmes, 1997).

A genre is mainly described in terms of its rhetorical structure, i.e. its constituent moves. A pioneer in the application of this framework in genre analysis was Swales (1981, 1990). In his studies, he investigated research articles in academic discourse based on 'rhetorical movement' analysis. A move, according to Swales (2004) is a "discoursal or rhetorical unit that performs a coherent communicative function in a written or spoken discourse" (p. 228-9). Simply put, while having its own purpose, each move contributes to the overall communicative purpose of genre (Santos, 1996). Each rhetorical move can be realized through a number of smaller rhetorical elements referred to as 'steps' by Swales (1990) or 'strategies' by Bhatia (1994). Both moves and steps are functional units and can be optional or obligatory in a genre (Samraj, 2009).

Research article abstracts

As one of the most attended genres in academic writing, research article (RA), has been widely researched and has yielded fruitful pedagogical findings(Yearley, 1981). In early studies it was often confused with register and it was first labeled as a 'genre' by Crookes (1986). Research articles put forward a claim as an explicit, logical argumentin a well-defined form of conventional style and format following an established method which has been approved by the

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academic community (Gilbert, 1976). This standard format includes different sections each of which is considered as a part-genre of the RA(Swales & Feak, 2009).

The abstract, as its primary part-genre, is a brief summary accompanying the RA whose main function is to help readers make a decision in selecting the readings. It has been defined by the American National Standards Institute (ANSI) as "an abbreviated, accurate representation of the contents of a document, preferably prepared by its author(s) for publication with it" (Lorés 2004, p. 281). The acceleration of the exchange of information in recent years has directed noticeable amount of attention towards abstract. Such attention stems from the crucial role abstracts play in today's research world in which millions of RAs are being published every year.That is, according to Ventola (1994), abstracts have turned into "a tool of mastering and managing the ever increasing information flow in the scientific community" (p. 281).

Models for RA abstracts

In his pioneer study on move-analysis, Swales (1981)proposed a four-move structure for RA introductions:1. Establishing the field; 2. Reporting previous research; 3. Preparing for the present research; 4. Introducing present research. In 1990, Swales posited a revised version of this frameworkcalled Create a Research Space (CARS), as a three-move pattern. The CARS model has influenced numerous later studies on the structure of the introduction as   well   as abstracts (Bhatia, 1997; Samraj, 2002, 2005). This model consists of three rhetorical moves, each of which is divided into several steps as follows:

Move 1   Establishing a territory
        Step 1   Claiming centrality
        Step 2   Making topic generalization(s)
        Step 3   Reviewing items of previous research
Move 2 Establishing a niche
        Step 1A   Counter-claiming
        Step 1B   Indicating a gap
        Step 1C   Question-raising
        Step 1D   Continuing a tradition
Move 3   Occupying the niche
        Step 1A   Outlining purposes
        Step 1B   Announcing present research
        Step 2   Announcing principal findings
        Step 3   Indicating article structure

Recognizing RA abstracts as a genre, Bhatia (1994) proposed a four-move modelwhich has been accepted by many scholars (e.g. Swales, 1990; Salager-Meyer, 1992; Santos, 1996; Phantama, 2000; Promsin, 2006). An abstract, according to him, gives information on four aspects of the research article it is describing:1. what the author did,2. how the author did it, 3. what the author found, and 4. what the author concluded. Accordingly, his model consists of the four following moves:

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1. Introducing the purpose;
2. Describing the methodology;
3. Summarizing the results;
4. Presenting the conclusions;

Finally, a more elaboratemodel which has been influential for lots of studies is Hyland's (2000) model of RA abstracts (Li, 2011). It includes five moves: Introduction, Purpose, Method, Product, and Conclusion. The functions of the moves and their constituent steps are indicated in the following:

1. Introduction   (*Establishes context of the paper and motivates the research*.)
      Step 1. Arguing for topic prominence,
      Step 2. Making topic generalizations,
      Step 3. Defining terms, objects, or processes,
      Step 4. Identifying a gap in current knowledge
2. Purpose   (*Indicates purpose, thesis or hypothesis, outlines the intention behind the paper*.)
      Step 1. Stating the purpose directly
3. Method(*Provides information on design, procedures, assumptions, approach, data, etc*.)
      Step 1. Describing the participants
      Step 2. Describing the instruments or equipment
      Step 3. Describing the procedure and conditions
4. Product   (*States main findings or results, the argument, or what was accomplished*.)
      Step 1. Describing the main features or properties of the solution or product
5. Conclusion   (*Interprets or extends results beyond the scope of the paper, draws inferences, points to applications, or wider applications*.)
      Step 1. Deducing conclusions from results,
      Step 2. Evaluating value of the research,
      Step 3. Presenting recommendations

Compared with the IMRD model, this framework distinguishes the abstract's purpose from the introduction, because it has a different role from the introduction's typical purpose of providing a justification for the research. In this framework, a product move is adopted instead of the result move, as Hyland (2000) clarified that this move can better account for abstracts from the social science fields, which sometimes include not only a statement of empirical results but also a statement of the argument.

Previous studies
Most studies analyzing any of the RA sections, including abstracts, have focused on the rhetorical structures of that section in terms of its constituent moves (e.g.Lim, 2006; Samraj, 2002; Yang & Allison, 2003).   Apart   from   that,   sometimes   these   studies   have   also investigated the grammatical and stylistic features that characterize the moves on   the   sentence level, such as the uses of hedging (Hyland, 1996), modality (Salager-Meyer, 1992), personal pronouns (Pho, 2008), and citations (Swales, 1990).

Generally, a brief examination of research on abstracts seems to reveal two trends. The first and more popular trend involves the employment of move-analysis in contrastive rhetoric, that is, studying cultural variation in discourse structure. Such cross-linguistic studies mainly compare English abstracts with those of other languages within a single discipline (e.g., Bonn & Swales, 2007; Busch-Lauer, 1995; and Martin, 2003). The second trend which has not been as much probed involves the cross-disciplinary analysis of abstracts. This trend investigates variations of the rhetorical or other features of abstracts from two or more disciplines written in the same language (e.g., Melander, Swales & Fredrickson, 1997; Pho, 2008; and Samraj, 2005). Since the latter trend is followed by the present study two prominent examples of it are briefly presented.

Samraj (2005) compared RA abstracts from two closely related disciplines: conservation biology and wildlife behavior. Analyzing a total of 24 abstracts randomly selected from two journals, she found that the overall layout of the RA abstracts was similar: Purpose-Method-Results-Conclusion. However, when she examined aspects of the abstracts beyond the traditional moves, differences stood out. The rhetorical structure in conservative biology abstracts included   some moves ascribed to RA introductions, for instance, centrality claims, but they were not present in wildlife behavior abstracts. She concluded that the rhetorical structures of even closely related disciplines could vary.

Similarly, Pho (2008) analyzed the rhetorical organization, the linguistic realization of moves and authorialstance in 30 abstracts from three journals in two disciplines: applied linguistics ande ducational technology. He noted that three moves were found in almost all the abstracts: presentingthe research, summarizing the findings and describing the methodology. He also pointed out that the combination of certain linguistic features would help distinguish one move from the other moves, such as the grammatical subjects, verb tense and voice.

In the same vein, as an inter-disciplinarymove analysis, this studyintends to compare the rhetorical structure and certain grammatical features of abstracts from three different disciplines: applied linguistics, applied economics, and mechanical engineering.

METHODOLOGY
A total of 63 RA abstracts belonging to the three disciplines of applied linguistics (AL), applied economics (AE), and mechanical engineering (ME)constituted the data for the present study.This corpus consisted of three groups, each containing 21 abstracts which were randomly selected from three leading, internationally accredited journals of the corresponding discipline. Table 1 indicates the names of these journals and the number of abstracts taken from each. In addition, all the articles from which the abstracts were selected were published between 2010 and 2012 in order to control for time differences.

Table 1: The journals from which the abstracts were taken.

Applied linguistic (21)	Applied economics (21)	Mechanical engineering (21)

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TESOL Quarterly (7)	Journal of Applied Economics (7)	Journal of Fluid Mechanics (7)
The Modern Language Journal (7)	The Journal of Applied Economic Research (7)	Journal of The Mechanics and Physics of Solids (7)
Applied Linguistics (7)	Applied Economics Journal (7)	Journal of Mechanical Engineering Research (7)

Prior to the analysis of the data, a pilot study was conducted on six abstracts (two from each discipline) as a result of which the researchers managed to decide on the model to be followed in their study, namely, Hyland's (2000) five-move model. The reason was that it was found to be most appropriate for the structure of the examined abstracts especially due to the helpful distinction it offered between introducing the background research area and presenting the research purpose. The five moves are Introduction, Purpose, Method, Product, and Conclusion. A move unit can be composed of one or more sentences or at least clauses. The following example illustrates the linear order of these moves in an applied linguistics abstract:

> This paper investigates whether any difference exists in the degree of second language attrition between two siblings in terms of grammatical complexity, grammatical accuracy, lexical complexity, and lexical productivity based on their storytelling [M2- Purpose] The subjects' L1 and L2 are Japanese and English, respectively. The siblings (one male, one female) have similar L2 profiles with respect to attained proficiency, including literacy, but differ in age. Their storytellingdata was collected over a period of 31 months.
> [M3-Method] The siblings
> showed similar attrition patterns with the exception of grammaticalaccuracy, but thedifference surfaced only after the second year[M4-Product]It indicated that theperiod of disusewas differentially affected according to theirages. The youngersibling's data also suggest that maturational factors may play a role in handling grammatical complexity and accuracy simultaneously. [M5-Conclusion]

All the abstracts were analyzed using this framework. As discussed by Ackland (2009), the identification of moves and consequently the setting of move boundaries in abstracts are usually accomplished through two approaches, one is based on the content of the abstract, called a "top down" approach, and the other is based on linguistic signals, called a "bottom-up" approach. In this study, the textual boundaries of these units were identified primarily on the basis of semantic criteria, that is, the top-down approach.

Having identified the moves, steps, and the move pattern in each abstract, the next phase, namely, the grammatical analysis, was conducted.In this phase, the tense (present/past) and the voice (active/passive) of the verbs characterizing each move were identified. Finally, the self-mention of the author (use of personal pronouns) was marked in the abstracts.

RESULTS AND DISCUSSION

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In spite of their distinct features corresponding to the different disciplines they belong to, the three groups of abstracts interestingly showed a considerable degree of conformity. This section begins with discussing these commonalities. Taking a micro view, it then goes on to compare the three groups regarding each move and step in Hyland's (2000) model. Finally, it is wrapped up by pointing out the overall differences between them.

Commonalities

Table 2: The number of abstracts including each move

	Applied linguistics	Applied economics	Mechanical engineering
Introduction (I)	6	10	8
Purpose (P)	21	20	21
Method (M)	17	14	17
Product (R)*	21	20	19
Conclusion (C)	16	17	13

* In order to be distinguishable from the purpose move, the product move is shown by the letter R (standing for Result) in the move patterns

A number of noteworthy features were found to be shared by the abstracts of the three disciplines. One was thatthe least frequent move in all the disciplines was introduction. As evident in Table 2, it was included in only 6 AL, 10 AE, and 8 ME abstracts.
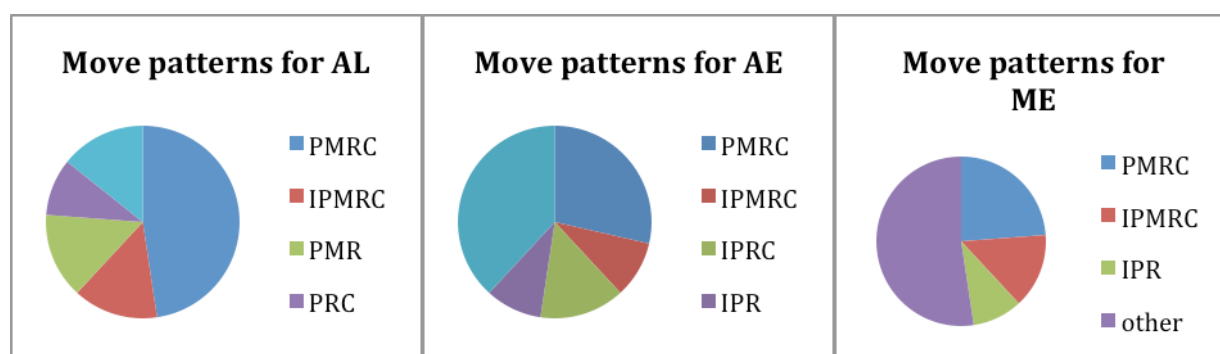

Figure 1: The most common move patterns

In addition,as illustrated inFigure 1, the pattern PMRC turned out to be the most frequent move pattern observed in all the three groups with 10 times of occurrence in AL, 6 in AE, and 5 times in ME abstracts.Another common feature was that the introduction move was, in all the disciplines, mainly embodied through its second step, namely, making topic generalizations. In the same vein, the conclusion move was most often realized through its first step,deducing conclusions from results. Finally, regarding the tense and voice of the verbs, present tense verbs in active voice constituted the dominant type of verbs in all the three sets of abstracts(see Table 3).

Table 3: The tense and voice of the verbs

	The voice of the verbs	The tense of the verbs

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	Active	Passive	Present	Past
Applied linguistics	79%	21%	69%	31%
Applied economics	76%	24%	81%	19%
Mechanical engineering	55%	45%	77%	23%

Move analysis
Introduction
This move was present in 10 AE and 8 ME abstracts. Its occurrence, however, was not as much in AL where it was observed in only 6 abstracts. It is also worth mentioning that this move was commonly realized through one step and simultaneous use of more than two steps in the same abstract was hardly ever observed. Furthermore, out of the four steps embodying introduction – namely, arguing for topic prominence, making topic generalizations, identifying a gap in current knowledge, and defining terms, objects, or processes – the second one was most often employed to represent this move. In spite of the similarity of AL and AE in the rare application of other steps, ME abstracts employed them more considerably. Finally, no remarkable difference was witnessed between the three disciplines regarding the tense and voice of the verbs so that,in all the three,the present active verbs dominated this move.

Purpose
This move, which was realized through the direct statement of the purpose, was included in all AL and ME abstracts and in 20 AE abstracts. A striking point regarding this move was that in some cases it was integrated with method (P+M) and, in some others, with product (P+R) to form one single move. Following are examples of such hybrid moves.

P+M: Adopting the constructionist conception of research interviews, the current study introduces a comparative analysis of two interviews with a multilingual speaker of Korean, English, and Japanese conducted by two researchers who come from distinctive cultural, linguistic, and professional backgrounds.

P+R: Building on models of electoral competition with reputational mechanisms, I show that term limits decrease the vote share of candidates from parties less able to reward or punish candidates. Candidates suffer by not being able to credibly commit to policies far from their own preferences.

More interestingly, each discipline was unique in the application of these hybrid moves so that AL included three instances of P+M and no P+R. AE, on the contrary, had three instances of P+R with no P+M. And, ME abstracts included both moves with three occurrences of P+M and four occurrences of P+R. As for the common type of verbs in this move, present tense constituted the dominant tense in the three groups. However, such conformitydid not exist for the voice of the verbs. While in AL and AE almost all verbs were active, in ME there was an equal share of both active and passive voices.

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Method

While equal number of abstracts (17) in AL and ME contained the third move, it occurred in fewer AE abstracts (14). As mentioned earlier, in a few AL and ME abstracts this move was embedded within purpose move to form a single move but such integration was not observed in any AE abstracts. Furthermore, the three steps of this move were rather equally employed in AL corpus. In AE and ME abstracts, however, the application of the last step, i.e. description of the procedure, was much more salient. With regard to the tense of the verbs, in AL, past tense verbs existed almost twice as much as present ones. The case was, however, quite different in AE and ME. The present tense verbs were much more than past ones in these two disciplines. As for the voice of the verbs, active verbs outnumbered passive ones in AL and AE. In contrast, ME abstracts had far more passive verbs than active ones in this move.

Product

This move was included almost equally in the three disciplines, in 21 AL, 20 AE, and 19 ME abstracts.To reiterate, this move in a few AE and ME abstractsmerged with purpose to form a single move but such integration was not observed in any AL abstracts. Furthermore, in all the three disciplines, the present active verbs dominated this move. Nonetheless, some degree of diversity was witnessed involving the intensity of the use of this tense and voice. The proportion of present to past tense was much higher in AE abstracts and that of active to passive voice was much greater in AL as compared to the other two disciplines.

Conclusion

Among the examined abstracts, 16 AL, 17 AE, and 13 ME abstracts ended with conclusion. There were three steps representing this move, namely, deducing conclusions from results, evaluating value of the research, and presenting recommendations.Interestingly, this move was, in all the three groups, mainly realized through the first step, in some cases through the second one, and rarely through the last one. Finally, no remarkable difference was witnessed between the three disciplines regarding the tense and voice of the verbs so that, in all the three, the present active verbs dominated this move.

Overall differences

The most significant difference between the three examined groups of abstracts involved the number of identified move patterns for each discipline. As a rule of thumb, the smaller the number of move patterns in a group, the more abstracts having the same pattern, and the more homogeneous that group is, in this respect. As evident in Table 4, the analysis of AL abstracts revealed only 7 move patterns whereas 12 and 14 different patterns were found out in the case of AE and ME respectively. Hence, while AL was relatively homogenous regarding the employed move patterns, AE and ME were more heterogeneous, in this regard.

Table 4: the move patterns identified in each discipline

	Applied linguistics	Applied economics	Mechanical engineering
1	PMRC (10)	PMRC (6)	PMRC (5)
2	IPMRC (3)	IPMRC (2)	IPMRC (3)

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3	IPR	IPR (2)	IPR (2)
4	PRC (2)	PRC	PMRCPRC
5	PMR (3)	PRMC	PMR
6	IPMR	PMRCMRC	PMRCMRC
7	IPRC	IPRC (3)	IPMRPMRC
8		IPMR	IPMR
9		PRCM	PRCPR
10		IPMC	PRMR
11		PMRMR	PM
12		IRC	IP
13			PRC
14			PMRMR

The second difference was about the number of moves constituting each abstract, regardless of the repeated moves. As illustrated in Figure 2, most abstracts in AL and AE disciplines were composed of 4 moves. In ME corpus, however, the majority of abstracts included only three moves.
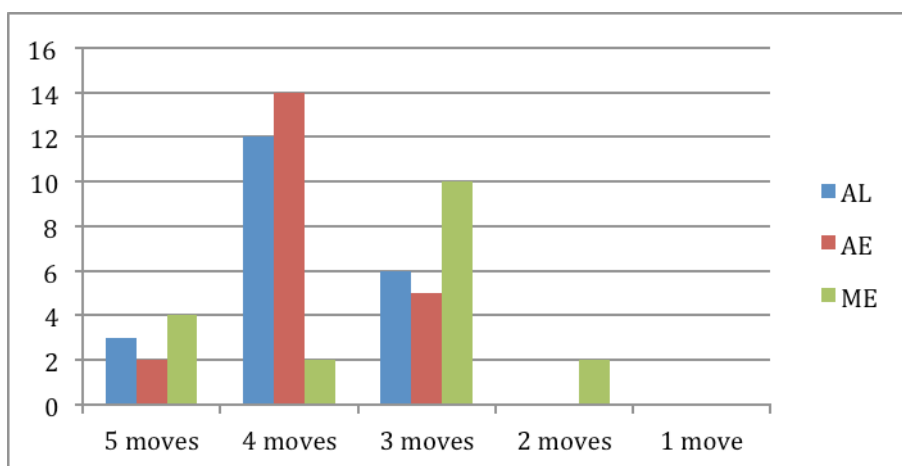

Figure 2: The number of moves included in the abstracts.

The third noteworthy difference dealt with the repetition of a move in the same abstract. This case was manifested in such patterns as PMRCMRC.One possible explanation for such repetition could be a stage-wise report of different phases of a study. This feature was observed in 6 ME, 2 AE, and no AL abstracts.

Next important difference was in the application of the hybrid moves discussed earlier. There were instances of P+M in AL abstracts with no occurrence of P+R. In contrast, instances of P+R were observed in AE with no P+M. And in ME abstracts, both these moves were identified.
Still, another difference which is worthy of attention is that, apart from introduction which was the least frequent move, method seemed to have been less emphasized in AE and conclusion seemed to have occupied this position in ME.

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The sixth difference involves the proportion of the passive verbs to the total number of verbs. Although they were outnumbered by the active verbs in all the three disciplines, passive verbs had a relatively much more remarkable percentage in ME as compared to the other two groups. As indicated in Table 3, in ME the passive verbs were almost twice as much as the ones in AL and AE.

And the last but not the least, concerns the self mention of the authors. In both AL and AE, more than half of the abstracts (11) included pronouns such as I, we, our, etc. referring to the author whereas, in ME, less than one third of the abstracts (6) was marked by such self mention.

CONCLUSION
As discussed in detail, the contrastive cross-disciplinary analysis of RA abstracts revealed the existence of both similarities and variations in the rhetorical structure as well as grammatical features between the abstracts of the three disciplines: applied linguistics (AL), applied economics (AE), and mechanical engineering (ME).

Based on the results of the rhetorical analysis, the main similarities were the position of introduction as the least frequent move and that of PMRC as the most frequent move pattern. This finding shows that, not surprisingly, most RA abstracts follow the pattern which, according to Hyland (2000), is the conventional structure set by the English academic discourse community.In addition, since almost all abstracts in the three groups included purpose and product, these two moves can be considered as obligatory moves in these disciplines.

The major rhetorical difference, on the other hand, was that AL had the least variety of move patterns and no cases of repetition of a move within the same abstract. ME had the opposite position, being relatively heterogeneousin this respect. And AE's position was somewhere in between closer to that of ME. This finding appears to be somehow contrary to the common belief that expects ME as a "hard discipline" (Hyland, 2000, p. 9) to follow more strict norms and conventions in RA writing.

The other important difference involved the use of hybrid moves. As indicated in the results, the method move was in some AL and ME abstracts embedded in the purpose move to form the hybrid move P+M. This was found to be quite in line with both Santos' (1996) and Pho's (2008) findings indicating that method could merge with purpose partially or totally in the RA abstracts of applied linguistics and educational technology. The other hybrid move found in this study was the integration of purpose with product (P+R) in some AE and ME abstracts. This was in line with Li's (2011) findings showing that in his English corpus the product move was sometimes foregrounded in the purpose move. In general, some scholars believe that the phenomena of move merging can be attributed to the condensed structure of the part-genre abstract (Santos, 1996; Pho, 2008).

The last noteworthy difference between the three sets of abstracts regarding the rhetorical analysis was that, apart from introduction, the method move had relatively fewer occurrences in

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AE corpus and the conclusion move had this position in ME corpus. This can allude to the less salient role of these moves in the corresponding disciplines as these disciplines place less emphasis on them. This finding, also, confirms Ge and Yang's (2005) claim on the existence of a significant difference in the frequency of moves in relation to disciplinary characteristics.

As for the linguistic analysis, the results indicated the dominance of present tense verbs with active voice in all the three disciplines. In spite of this similarity, the percentageof passive verbs was much higher and the self-mention of the author considerably lower in ME corpus as compared to the other two groups. One justification could be the more intensive use of scientific language in ME discipline as a "hard science" to sound more objective through the greater application of passive structures and fewer cases of personal pronouns.

All in all, this study demonstrated that disciplinary variations could influence the textual organization of the abstract and that, as Melander, Swales, and Fredrick (1997) maintained, disciplinary factors may create preferences for certain rhetorical and linguistic features by members of different academic discourse communities. The findings of this study had important pedagogical implications for the practitioners in ESP and EAP fields. Genre analysis could expose students to and provide them with the explicit knowledge of genre conventions andthe mastery of genre knowledge would help students become members of their disciplinary community, and also explore and produce more complex genres (Bhatia, 1997; Hyland, 2002; Loi & Evans, 2010). Moreover, awareness of genre practices would make students benefit from thorough understanding of specific textsand would guide them in producing academic discourse following the required norms and thus would increase their chances for publication and effectively participate in international academic discourse communities.

Finally, the present study was a cross-disciplinary genre analysis of RA abstracts. Future research could take language into account as well and as dual contrastive analysis investigate the effects of both discipline and language in the generic structure of the abstract. In addition, this study was conducted on 63 abstracts from three disciplines. Future research should be conducted on a bigger corpus including more disciplines. Also, while the current study included only written discourse analysis, future studies can take one step further by carrying out interviews with the authors so as to explore the socio-cultural factors more comprehensively.

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