Investigating Generic Structure of English Research Articles:
Writing Strategy Differences between English and Indonesian Writers

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Abstract: Research into English research articles (RAs) has largely been focused on articles produced by native English writers. This paper reports a study aiming to investigate the textual structure of research articles written by non-native English (i.e. Indonesian) writers, which may contribute to their acceptance for international publication. A comparison is made between RAs written by native English speakers, an Indonesian writers writing in English, all in the field of Language and Language Teaching. It explores the relation of text's generic structure. The thesis develops a framework for the generic structure analysis based on Swales' (1990) Create-A-Research-Space (CARS) model of *moves*. The analysis focuses on two RA sections: Introduction and Discussion. The findings indicate significant differences in both forms and functions of organizing strategies between the native and non-native texts. The differences may partly be due to the influence of writing practices in the non-native writers' first language and partly to the writer's attempt to find an appropriate format in the absence of well-established research writing conventions in the first language. Consequently, non-native English texts may show organizing strategies unfamiliar to both the native English and native Indonesian texts. Findings from the research highlight two issues. First, formal and functional differences of generic structure elements and their realizations between the native and non-native English texts may disadvantage the non-native writers, particularly with regards to employment of unfamiliar organizational strategies. Second, non-native English writers need to acquire knowledge of commonly used formal generic structure, and more importantly, the knowledge of the nature of scientific writing in English to be able to gain wider readership. The implications for further research and the teaching of academic writing are discussed.

Key words: research articles, writing strategy

This paper is part of research on the textual structure of research report articles written in English by native and non-native English writers for my postgraduate program. The research article (henceforth RA) refer to "a written text, usually limited to a few thousand words, that reports on some investigation carried out by its author or authors. A research article usually relates the findings within it to those of others, and may also examine issues of theory and/or methodology. It is to appear or has appeared in a research journal, or less typically in an edited book length collection of papers" (Swales, 1990:93). Research articles are usually written according to some conventional patterns, which are generically determined. The most common RA surface format is the IMRD (Introduction-Method-Results-Discussion) structure. The organisation of the research articles into particular structure may realise the text type or genre they represent. It may be influenced by the purpose of writing and distinctive writing practices in their cultures, or the context of culture. This cultural aspect may still influence them when they have to write in another language. This may also be the case for Indonesian researchers when they report their research findings in English in order to gain international readership. This paper reports an investigation on the strategy differences adopted by (native) English and (non-native) Indonesian writers as realised in the RA generic structure.

The study was motivated by the growing importance of RA written in English as a favourable medium of reporting research findings for international knowledge exchange. This is due to the strategic position of English as an international language. Distribution of research findings worldwide is also accelerated by the advancement of technology such as electronic journal, the implication of which is that the findings are spread as soon as they are made available in websites. Therefore, publication in

English has become a means of providing evidence of international involvement in knowledge exchange.

The same benefit can also apply to non-native English researchers who wish to participate in international communication, in that their findings may have more far-reaching implications not only for local or national contexts but also for the body of knowledge in general. However, wider or international contribution may be restricted as researchers are limited by the number of outlets at their disposal for spreading the information due to language in which they write their research reports. Research written in their first language may not reach wide an audience as when they are written in English. Thus the growing role of English has left little choice for non-English speaking researchers but to publish in the languages that reach a wider scope of readerships, particularly English.

On the other hand, there have been growing concern about the relatively minimal participation of Indonesian researchers in knowledge exchanges at an international level (e.g. *Kompas*, May 30, 1998). This situation may be traced back to the situation of EFL teaching in Indonesia (see for example, Sadtono, 1995; Dardjowidjojo, 1995) as well as the potential conflict of using foreign languages and the promotion of the national language as media for communication (see e.g. Kleden, 1998; Alwi, 1998; Muhaimin, 2000). However, both Dardjowidjojo and Muhaimin emphasise that the national language policy needs to create an environment that facilitates international communication and development in science and balances the need to develop national language and the advantage of English as the vehicle of technological advancement. It is within this perspective that the context of English as a foreign language in Indonesia obtains its importance as an international language.

Studies of the generic structure of English RAs have been pioneered by Swales (1981, 1990) within the area of English for Specific Purposes (ESP). These studies emphasise the RA organisation as reflecting the communicative relationships between the writer and the particular community of readers, or discourse community, to whom they are reporting and making claims of the significance of their findings. This writer-reader communication is manifested in the stages or '*moves*' that construct the RA structure. This approach has strong pedagogical motivation and has had well-established ground in the area of ESP

research.

Central to Swales' RA generic structure view is the notion of discourse community and genre. Discourse communities are "sociohetorical networks that form in order to work towards sets of common goals" (Swales, 1990:9). One of the characteristics of particular discourse community members is their "familiarity with particular genres that are used in the communicative furtherance of those set goals" (Ibid.). A discourse community is identified from six characteristics: its common goals, participatory mechanism among the members, mechanism of exchange among its members, possession of specific genre (s), specialised terminology and high general level of relevant content and discoursal expertise among the members (Swales, 1990:24-26). Genre on the other hand, is identified in relation to the communicative goals of the discourse community. Swales notes that genre's internal structure displays the communicative purpose, form, structure and audience expectations of the discourse community. The implication of these characteristics is that those who wish to participate in a particular discourse community activity are expected to display those characteristics in their communicative activities.

The structuring of texts consisting of a series of '*moves*', each of which may contain one or more '*steps*', indicates the text's communi-cative stages in response to the audience expectations. This paper is limited to investigating only two sections: Introduction and Discussion. The choice is due to the fact that in these two sections the writers need to make greater efforts to establish the importance of the study (Introduction) and justify the claims being made resulting from the findings (Discussion), and thus more rhetorical efforts are needed which may potentially affect structural differences. The other two sections (i.e. Method and Results) do not seem to require as much rhetorical efforts, due to their presumed straightforward and unproblematic structure (compare. e.g. Conduit and Modesto, 1990; Thompson, 1993; Holmes, 1997 for Method, and Brett, 1994 and Williams, 1999 for the Results).

Swales' (1990) model for generic structure for RA Introduction consists of three moves, each of which is specified into steps. The Discussion section is divided into eight most common moves. Many studies found the Discussion section shows a less predictable structure than the Introduction section (Dudley-Evans, 1986; Peng, 1987). This is

not surprising considering that this is the final stage, where the writer has established a considerable amount of assumed knowledge and information in the previous sections. The model of the two sections is presented in Table 1.

Table 1. Generic Structure of English RA Introduction and Discussion Sections

Introduction
Move I Establishing a territory
Step 1 Claiming centrality and /or
Step 2 Making topic generalisation (s) and/ or
Step 3 Reviewing items of previous research
Move II Establishing a niche
Step 1A Counter-claiming or
Step 1B Indicating a gap   or
Step 1C Question -raising or
Step 1D Continuing a tradition
Move III Occupying a niche
Step 1A Outlining purpose or
Step 1B Announcing present research
Step 2 Announcing principal findings
Step 3 Indicating RA structure
Discussion
Move I   Background information
Move II   Statement of results
Move III   (Un)expected outcome
Move IV   Reference to previous research
Move V   Explanation
Move VI   Exemplification
Move VII Deduction and Hypothesis
Move VIII Recommendation

Swales' model has been extensively applied to different texts to account for the generic structure of English RA in various disciplines (see

e.g. Brett (1994) for sociology RAs; Nwogu (1997) for medicine RAs and Santiago-Posteguillo (1999) for computer RAs as well as different text types (e.g. abstracts (Santos, 1996), essays (Henry and Roseberry, 1997), thesis/dissertation (Dudley-Evans, 1986, Paltridge, 1997, Yu Ren Dong, 1998). Studies of English RAs have also been focused on articles written by non-native English speakers (e.g. Gupta, 1995; Sionis, 1995). Gupta investigated the information flow in English RAs written by international graduate students. He argues that the Introduction links the audience with the writer's work by bridging the gap between the intended reader's knowledge base and the research paper. On the other hand, non-native English writers are found to have difficulties in structuring their Introduction to make a coherent text. According to Gupta, the problem lies not in just following the pattern, but more importantly in the organisation of the scheme of Introduction, different levels of information, and transition between different levels of information. Sionis investigates the communicative strategies of English RAs written by French researchers. He notices a number of problems, including culture-bound attitudes, poor mastery of the target language and lack of familiarity with the discourse conventions of scientific writing in English. These studies suggest that attention needs to be given to both linguistic and socio-cultural aspects of RA genre, particularly for non-native English writers. Studies of generic structure have also been applied to RAs written in languages other than English, such as Finnish (Mauranen, 1993) and Malay (Akhmad, 1997). Mauranen suggests that exposure to foreign rhetoric alone does not necessarily influence the writer's rhetorical practices, particularly when the writer lives in their native culture. She suggest that "learning to adapt to another culture's ways presupposes awareness of textual features and the culture-specific differences involved, together with skills in manipulating textual features in a foreign language to the writer's advantage" (1993:252). Akhmad, on the other hand, identifies an overall resemblance of Malay and native English RAs in terms of rhetorical and informational structure. However, the Malay writers are found to tend to give more definitions, provide historical account, show concern for local consumption of research results, avoid using Move II, especially indicating a gap and show greater tolerance for ambiguity (1997: 296-97). The studies suggest that text may share certain structural features yet also

demonstrate significant differences at other level, pointing to the sensitivity of the text features to local tradition and cultures. From the writer's knowledge, there have not been similar studies of English RA written by Indonesian researchers. The purpose of this study was to investigate RA generic structure differences written by native English and Indonesian writers. The study explored whether the differences between the two text groups indicate acceptance for international publication.

METHODS
Material

The study involves fifty-eight (58) RAs from three sources of data: 20 English RAs written by native English writers (1EN), 19 English RAs by native Indonesian writers (2EN) and 19 Indonesian RAs by native Indonesian writers (1IN). These RAs are selected from the area of language and language teaching. The selection was governed by four considerations: field of study, text types, availability of material and feasibility of carrying out the analysis.

Procedure of analysis

This study focuses on and identifies the functional elements that constitute the generic structure of the texts. The approach is mainly qualitative and focuses on the comparison of tendencies that are observable in the writers' strategies. The study begins with identifying general rules of the overall surface format of the three text groups, i.e. the IMRD structure, in order to identify the surface differences of the text groups. Then, the analysis focuses on the Introduction and Discussion sections.

The main analysis focuses on the generic structure. Each move and step in each section is identified and labelled using Swales' model. *Moves* are labelled with ordinal number (I, II, etc.) and *steps* with cardinal number (1, 2, etc.). For example, Move I-3 in the Introduction refers to the third step of the first move: *reviewing previous research*. The moves and steps are applied to phrases, clauses or paragraphs that are identified as carrying a particular function in the generic structure.

The identification is mainly content-based. This method of identification relies on the researcher's intuition and interpretation of the functions carried by particular part of text. This points to a potential weakness in Swales' model, as it does not specify the relations between particular rhetorical functions and their linguistic realisation in a systematic and predictable way. Analysis of the native English texts, therefore, aims at identifying the pattern(s) of generic structure of the native English RAs and examining the accuracy of Swales' model for English RAs. Analysis of the non-native English RAs and native Indonesian RAs adopts similar strategies. The purpose is to explore the differences and seeks possible explanation for stages of generic structure. Any functions unidentified in both Swales' model and native English RAs are labelled as closely as possible to their possible functions.

RESULTS

General Surface Layout of the Three RA Groups

Frequency analysis of the IMRD structure in the three text groups resulted in relatively consistent structure of the native English RAs (1EN), while varieties were found in both the non-native English RAs (2EN) and native Indonesian RAs (1IN), as shown in Table 2.

Table 2. General Format of Four RA Text Groups

Features of text format	1EN[1]	2EN	1IN
IMRD as separate sections (with/out Conclusion)[2]	(17) 85%	(8) 42.1%	(12) 63 %
Result & Discussion combined	(3) 15%	(65) 26.3%	(4) 21 %
Results without Discussion[3]	(0) 0%	(6) 31.6%	(3) 16 %
Total number of texts	(20) 100%	(19) 100%	(19) 100%

Notes:
1. 1EN = native English RAs , 2EN = non-native English RAs, and 1IN = native Indonesian RAs.
2. The Conclusion section, particularly in the non-native English texts and native Indonesian texts, when separated from the Discussion section, is sometimes labelled as "Implication,""Summary," or "Concluding remarks."

3. The other headings used for Result and Discussion sections are "Findings," "Analysis," or content-related headings.

In the native English text group, the majority of the texts (i.e. 17 texts, 85%) displayed the IMRD format, while only three texts (15%) put the Result and Discussion sections under one section (i.e. *Result and Discussion*). There seems to be no obvious editorial motivation for this, since the two texts were from different journals, while other articles taken from the same sources also displayed the IMRD structure. The writers' decision for combining the two sections could be motivated by rhetorical purposes such as flow of information and clarity of presentation. The nature of the interpretation of the research results may require the writers to present the statistical result of the experiment and its interpretation close to one another. Overall, this indicates that the IMRD structure is quite widely used as a common format for English RA writing organisation.

Both of the non-native English and native Indonesian texts show a less consistent IMRD format, with less than half of the texts (42.1%) displaying the IMRD format and just over half (57.9%) in the native Indonesian group. The rest were found either to combine the two sections under one heading (i.e. *Results and Discussion*) or label the section with *Results* only. Both of the groups also show various subheadings for the *Result and Discussion* sections (i.e. *Findings, Analysis*, or content-related headings) and for the *Conclusion* section (i.e. *Implication, Summary, Concluding remarks*). This shows that the non-native English and native Indonesian RAs have more surface variations in the IMRD structure, which indicates a less consistent pattern than in the native English RAs.

Subsections in Introduction and Discussion Sections

The second distinctive feature of the RAs is the occurrence of various subsections in both Introduction and Discussion sections. In Swales' (1990) model, explicit linguistic markers for moves and steps in the Introduction are expected to work as sufficient signals for the different rhetorical functions carried by each of the stages of reporting. The same principle should be applied to the Discussion section. However, the length and complexity of the topic being discussed, and the vast amount of previous studies being reviewed, requires the writers to organise their

reports efficiently, for which purposes subsections are employed.

Examination of the subsections in both native and non-native English RAs reveals some distinctive features, as presented in table 3.

Tabel 3. Subsection Variations in the Three RA Introductions

Subsections in the Introduction	1EN[1]	2EN	1IN
a) Introduction as one section	(9) 45%	(11) 57.90%	(11) 57.90%
b) Introduction + content-related sections	(3) 15%	(2) 10.53%	
c) Introduction + *Review of Literature* [2]	(5) 25%	(1) 5.26%	(4) 21.05%
d) Introduction + *Research Questions*	(3) 15%	(1) 5.26%	
e) Introduction + other subsections [3]		(4) 21.05%	(4) 21.05%
Total number of texts	(20) 100%	(19) 100 %	(19) 100%

Notes:
[1] 1EN stands for native English RA group, 2EN for non-native English RA groups, and 1IN for native Indonesian RA group.
[2] *Review of Literature* subsections are usually placed separately at the end of the Introduction section, after the Introduction completes at least one cycle of pattern.
[3] The other sections include *Background, Problems, Hypothesis, Purpose of study, Research objectives, Theoretical consideration.*

Point (a) shows that the most common structure is Introduction without subsections. RAs with this feature tend to be shorter and not to recycle move pattern. Point (b) indicates that some Introductions are divided into content-based subsections. The similarity between these texts with the ones in point (a) is that they both display a full completion of the 3-move pattern, i.e. *Establishing a territory, Establishing a niche* and *Occupying the niche*. Point (c) reveals that some Introductions have a separate literature review. The motivation for this is likely to be rhetorical, in that a lengthy review may disrupt ease of reading, if the subsections are incorporated into the Introduction. The figure shows that this feature was rare in the non-native English RAs. Point (d) is interesting in comparison to Swales' model, where *Question-raising* is only one of the alternative steps of Move 2. Here, three native English texts and one non-native

English text presented this stage as a separate subsection towards the end of the Introduction, giving it additional significance as an organisational feature or the RA. Point (e) presents a striking difference in sub-sectioning between the native English and non-native English Introductions. The non-native English and native Indonesian writers seem to highlight some of the rhetorical stages, or in Swales' model, some of the moves and steps, by putting them into subsections, such as *Background, Problems, Hypothesis, Purpose of study, Research objectives, Theoretical consideration.* While this strategy may be rhetorically motivated, the similarity found between the two RA groups indicates that the strategy may be influenced by the writing practice in the writers' first language. This strategy may not on its own affect acceptance for international publication, but its unfamiliarity to the native English community of RA readers may become a contributing factor.

In the Discussion sections, the main sub-sectioning is found in the division between Results, Discussion and Conclusion. There is some variation in the separation between the Discussion and Result sections, and the non-native English and native Indonesian RAs show a greater tendency to combine the Result and Discussion sections.

Generic Patterns of RA Introduction and Discussion Sections

The results show that the native English Introductions display a closer resemblance with Swales' CARS model and a greater tendency to follow Swales' model in terms of order of stages, and the lexicogrammatical signals used to signal the functional stages. The native English text group also shows a striking uniformity in pattern. Eighteen (18) texts displayed the CARS pattern, and only two texts (1EN4 and 1EN8) show a less favoured start by presenting the purpose of study (Move III) instead of topic generalisation (Move 1). Swales (1990) explained this phenomenon as the attempt of the writers to be "straightforward" by beginning the text with thesis statement or statement of purpose (1990:147). The comparison between Swales' CARS model and the two generic structure patterns of the native English RA Introduction sections is presented in table 4 and 5.

Table 4. Pattern 1: Generic Structure of the Native English Introductions

Swales' CARS model		Pattern 1 (18 RAs)	
Move-step	Function	Move-step	Function
Move I	**Establishing a territory**	**Move I**	Establishing a territory
I-1 and/or	Centrality claim	I-1 and/or	Centrality claim
I-2 and/or	Topic generalisation	I-2	Topic generalisation
I-3	Review of previous research	I-3	Review of previous research
Move II	**Establishing a niche**	**Move II**	**Establishing a niche**
II-1A or	Counter-claiming	II-1A or	Counter-claiming
II-1B or	Indicating a gap	II-1B or	Indicating a gap
II-1C or	Question-raising	II-1C or	Question-raising
II-1D	Continuing a tradition	II-1D	Continuing a tradition
Cycle		**Cycle**	**Cycle of I-3 and Move II***
Move III	**Occupying the niche**	**Move III**	**Occupying the niche**
III-1A or	Outlining purposes	III-1A	Outlining purposes
III-1B	Announcing present research	III-1B	Announcing present research
III-2	Announcing principal findings		
III-3	Indicating RA structure		
		Move I	**(Subsection for Review)**
		I-3	**Establishing a territory****
		Move II	(Review of previous research)
		II-1C	Establishing a niche
			Question-raising
			Assumption Hypothesis

Notes:
* Cycles of Moves and steps do not always occur in every text
** When re-occurring, Move I may occur under a separate subheading.

Table 5. Pattern 2: Generic Structure of the Native English Introduction

Swales' CARS model		Pattern 2 (2 RAs)	
Move-step	Function	Move-step	Function
		Move III	**Occupying the niche**
		III-1A or	Purpose of study
		III-1B	Announcing present research
Move I	**Establishing a territory**	**Move I**	**Establishing a territory**
I-1 and/or	Centrality claim		
I-2 and/or	Topic generalisation	I-2	Topic generalisation
I-3	Review of previous research	I-3	Literature review
Move II	**Establishing a niche**	**Move II**	**Establishment a niche**
II-1A or	Counter-claiming	II-1B	Indicating a gap
II-1B or	Indicating a gap		
II-1C or	Question-raising		
II-1D	Continuing a tradition		
Cycle		**Cycle**	**Cycle of I-2, I-3 and II-1B**
Move III	**Occupying the niche**	**Move III**	**Occupying the niche**
III-1A or	Outlining purposes	III-1A	Purpose of study
III-1B	Announcing present research	III-1B	Description of study
III-2	Announcing principal findings		
III-3	Indicating RA structure		

Notes:
 * Cycles of Moves and steps do not always occur in every text
 ** When re-occurring, Move I may occur under a separate subheading.

The obvious difference between the two patterns and Swales' model is the occurrence of separate subheadings such as *Research Review, Research Questions, Assumption* and *Hypotheses*. Lengthy past research review may be separated for clarity and ease of reading. Also, *Research Questions* seems to be a restatement of the niche establishment. *Assumption* and *Hypothesis* may be linked with the types of research the authors conducted, i.e. whether the research is exploratory or hypothesis-testing in nature.

The non-native English RAs show more variation in the generic

patterning of the Introduction sections. The variation includes the use of stages unfamiliar to Swales' model and different features of apparently similar stages. The analysis found three general patterns, as presented in table 5. The numbering of stages in the non-native English patterns indicates the order of occurrence.

Table 6. Generic Patterns in the Non-native English RA Introductions

Swales' Model	Pattern 1 (13 RAs)	Pattern 2 (3 RAs)	Pattern 3 (3 RAs)
Move I	1. Setting establishment	1. Review of prev. research	1. Outlining purposes
I-1 Centrality claim	2. Review of prev research[1,2]		2. Topic generalisation[2]
I-2 Topic generalisation			
I-3 Review of prev research			3. Review of prev. research
Move II	**Establishing a niche**	**Establishing a niche**	**Establishing a niche**
II-1A Counter-claiming	3. Indicating a gap[2]	2. Indicating a gap	4. Indicating a gap
II-1B Indicating a gap	4. Question-raising[1]	3. Question-raising	
II-1C Question-raising			
II-1D Continuing a tradition			
Cycle of I-3 and II	**Cycle of I-3 and II-1**		
Move III Occupying the niche	**Occupying the niche**	**Occupying the niche**	**Occupying the niche**
III-1A Outlining purposes	5. Outlining purposes	4. Outlining purposes	5. Description of study
III-1B Announcing present research	6. (Research Questions)	5. Benefit of study	
	7. Announcing present research	6. Review of prev. research	
III-2 Announcing principal findings	8. Hypothesis		
III-3 Indicating RA structure	9. Review of prev. research		
	10. Benefit of study		

Notes:
 1. In longer RAs, *Question-raising* and *Review of previous research* may occur towards the end of the Introduction.
 2. *Review of previous research, Topic generalisation* and *Indicating a gap* in the non-native English RAs do not always display exactly the same features as Swales' model.

The above analysis reveals two points. First, the non-native English RAs employ stages unfamiliar to both Swales' and the native English RA

patterns, which I label as *Setting establishment* and *Benefit of study*, based on the functions they seem to carry. Secondly, more detailed analysis of apparently similar stages in this text group (such as *Topic generalisation*, *Indicating a gap* and *Review of previous research*) shows that they may not in fact display exactly the same features or functions.

The native Indonesian RAs displayed an almost uniform pattern, as illustrated in Tabel 6. Three stages were found to display similar features with those in the non-native English Introductions, i.e. *Setting establishment, Review of previous research* and *Benefit of study*, and one feature is unknown in both the native and non-native English RAs: *Importance of Study*.

Table 7. Generic Structure Pattern in Native Indonesian RA Introductions

Swales' Model	1IN RA Introductions
Move I Establishing a territory	1. Setting Establishment
1. 1. 1 Centrality claim	
2. I-2 Topic generalisation	**Establishing a niche**
3. I-3 Review of previous research	2. Indicating a gap
	3. Question-raising
Move II Establishing a niche	
4. II-1A Counter-claiming	**Cycle of No. 1 and 2 or 3**
5. II-1B Indicating a gap	4. Review of previous research
6. II-1C Question-raising	5. Importance of present research
7. II-1D Continuing a tradition	
	Occupying the niche
Cycle of I-3 and II	6. Outlining purposes
Move III Occupying the niche	7. Benefit of Study
8. III-1A Outlining purposes	8. Announcing present research
9. III-1B Announcing present research	
10. III-2 Announcing principal findings	
11. III-3 Indicating RA structure	

The different generic patterns between the native English and native Indonesian RAs clearly show that each RA group has its own strategies and stages of writing acceptable to the intended discourse community. Distinct stages are found in both the native Indonesian and non-native

English RAs, i.e. *Setting establishment* and *Benefit of study*, which may indicate that non-native English RA writers are influenced by strategies in their first language writing practice. The overall comparison of the generic structure patterns shows both similarities and differences among the three groups. The non-native English RAs show a less clear-cut division of the three moves, as do the native Indonesian RAs. The general order in the non-native English and native Indonesian RAs also shows that these two RA groups are critically different from both Swales' model and the native English RAs pattern in the first move, the establishment of the research area.

STAGES OF GENERIC STRUCTURE IN RA INTRODUCTIONS

This part discusses some important features of the three moves in the Introduction of the native and non-native English RAs.

Move I in Native English RA Introductions

Move I consists of three steps (see Table 1). Move I-1, *Centrality claim*, is made to "claim interest or importance, to refer to the classic, favourite or central character of an issue, or other investigation in the area" (Swales, 1990:144). This step is typically, although not inevitably, introduction initial. The analysis found 19 occurrences of this move in the native English texts, nine (9) occurrences are introduction-initial, and the rest (10 occurrences) are paragraph-initial later in the Introductions. Almost half of the texts employ Move I-1 for Introduction opening, which is similar to previous findings (Swales, 1981; Swales and Najjar, 1987). The motivations for using or avoiding this step mentioned in Swales are the disciplinary area, the expectation of a particular journal, the nature of research, or individual rhetorical predisposition. Move I-1 is realised in statements referring to recent research issues or areas of interest. They situate the present research within well-established research activities by making references to them. This helps readers link their familiar knowledge of a particular research area with the research being reported, and thus creates solidarity between the writer and the readers. This strategy is effective and powerful to attract the readers' attention to topics that have been in part familiar to them. By the same token, absence of this

strategy in the non-native English RAs may result in the RAs being less attractive to the readers.

Move I-2, *Making a topic generalisation*, presents a more neutral, general statement than Move I-1. This move provides the readers with some orientation to well-established knowledge in the study area, rather than introducing the topic of study itself.

Setting Establishment in the Non-native English Introductions

Analysis of the opening part of the non-native English RAs reveals that the writers' strategy of establishing their research tends to be oriented around localised space and time rather than towards general knowledge in the area of study. This information may point to a specific, localised context or setting where the researcher may have focused or centred their activities. It may also point to nation-wide practice or policy in particular aspects of education. Considering the features of the strategy and its unfamiliarity in Swales' model, I would call the strategy *Setting Establishment*. It functions to bring readers into the context of the research; this stage of writing shows the following features: it is always Introduction-initial; its scope may be wider than the research topic, but in most cases it tends to be specific to common or recent existing problems the researchers may have encountered in the practice of particular policies or issues; the information contained in it tends to be unspecified in relation to the topic; sometimes it may digress from the information contained in the title of the article; it tends to give negative evaluation of the existing situation or practice; and the length of writing for this stage varies from one clause to several paragraphs.

The analysis found 13 non-native English Introductions begin with *Setting establishment*. The tendency to focus the topics around events, practices or policies in the national scope seems to be an attempt of the researchers to indicate their awareness of the issues, be they institutional, local or national. This might indicate a common writing practice among Indonesian academics to establish from the very beginning of the reports the important practical contribution of the research to some existing needs. The tendency to present geographically-specific rather than generalised context could disadvantage the non-native English RAs if they want to gain international readership, because their research contexts could be

considered to be too location-specific and applicable only to specific geographical settings.

Move I-3 Review of Previous Research

Move I-3, *Reviewing items from previous research*, is considered as the only obligatory step in this move, displaying three related features: (a) specification of the previous finding, (b) attribution to the research workers and (c) a stance towards the findings themselves (Swales, 1990:148). These features are manifested in three integrated referencing features: integral/non-integral citations, reporting/non-reporting reference and tense choice.

Analysis of the native English RAs on Move I-3 shows that native English texts do manifest the criteria of integral/non-integral citation, reporting/non-reporting and the specific purposes of tense choice. In the non-native English Introductions, analysis of the tense choice results in the occurrences of 16 citation forms with verbs in past tense, with all these verbs referring to specific research activities. Six (6) citations are found in Present Perfect tense. The rest of the verbs used Simple Present tense, both to refer to specific research activities and general statements. The centrality of the obligatory Move I-3 lies in its role in establishing the topic of study. To create and establish a new research space, the writers situate their claims within a well-established research body by constantly citing past research findings that have been well received within the community of discourse. Move I-3 is also a means to convince readers that the researchers have the necessary range of knowledge and sufficient understanding of the area common to the other research community members. This common background knowledge becomes a departure point that enables the writers to assert the relevance of their new claims, and to minimise the introduction of totally unfamiliar knowledge.

Analysis of reference types in the native and non-native English RAs shows two referencing types: Reviewing and Defining. The Reviewing type dominates references in the native English RAs, which fits the description in Swales' model of Move I-3. This type is characterised by the use of reported verbs or their equivalent in another word class, choices of particular tense forms depending on the generality and relevance of the research reviewed to the topic under study, and equal use of integral and

non-integral citations. Move I-3 is more likely to occur in the second clause of the paragraph or later, following either Move I-1 or Move I-2. When occurring in the first clause, the citations tend to be presented in the non-integral form. In the non-native English RAs, the Reviewing type occurs only 34 times. They show equal preference for Simple Present and Past tense, and only 3 occurrences use Present Perfect tense. While Past tense and Present Perfect tenses are used to refer to specific research activities and to make generalisation, respectively, Simple Present tense seems to be used to refer to supportive literature. This is consistent with the selective use of references to past research to provide supportive past research.

The Defining type of Move I-3 is found in both native and non-native English RAs, with greater frequency in the non-native English RAs. This defining type includes definitions of particular concepts. This feature of reference is not discussed by Swales, but is easily distinguished from the Reviewing type, for the absence of reviewing features. It is characterised by general statements and choice of Simple Present or Present Perfect tense. It is usually found in the first paragraphs and the subsection for literature review. In the non-native English RAs, the Defining type is also characterised by general statement, Simple Present or Present Perfect tense. It occurs after setting establishment and, in many cases, in a separate subsection presenting the theoretical aspect of the study, which is signalled with explicit subheading and lexical items presenting definition and relationships among the concepts being discussed.

The analysis shows that the Defining type occurred 75 times in the non-native English texts, which is more than twice the occurrence of Reviewing type. Almost all of them were expressed in Simple Present tense, indicating general information. The preference for the Defining strategy by the non-native RAs writers could also indicate that they take a more authoritative positioning in relation to their readers. Their preference to provide the new knowledge than to negotiate their new claims with the existing knowledge implies their assumption of the reader's lack of information about some background knowledge of the research topic. However, the absence of references to previous research findings could also mean that the writers may have not kept themselves up to date with

the latest research development and thus failed to identify with the activities of the discourse community. This lack of awareness of the activities of the particular community of research could affect the acceptance for publication.

Move II (Establishing a Niche) and Move III (Occupying the Niche)

Move II functions to show limitations and any gaps in understanding left by previous studies. It may take one or more of the four steps: (a) Move II-1A *Counter claiming*, (b) Move II-1B *Indicating a gap*, (c) Move II-1C *Question-raising*, and (d) Move II-1D *Continuing tradition*. Move II is linguistically realised by conjunctive Adjunct (e.g. *however*), modal Adjunct (e.g. *unfortunately*) and negative forms. The analysis shows that the three RA groups generally use the same strategies as proposed by Swales.

Move III introduces the new research, mainly by stating the research purpose and presenting information indicating the primary methods of investigation adopted in the study. Of the three steps of Move III, only Move III-1 is considered obligatory.

Most of the native English Introductions end with Move III-1A (*Outlining purposes*), only 8 RAs continue to Move III-1B (*Announcing present research*), and one RA to Move III-2. The non-native English RAs mainly use Move III-1A, but they also use a stage uncommon to native English RAs, i.e. *Benefit of study*, describing those who may benefit from the research. This stage seems to tie in with their 'local' perspective of conducting research. *Benefit of study* seems to be a specific feature of the non-native English and native Indonesian texts as no equivalent stage was found in Swales' CARS model or the native English texts. This stage is also different from Move III-2, in that the statement made in this stage is not about the anticipated findings, but the possible actual contribution of the findings to particular institutions or individuals. In the native Indonesian RAs, 10 occurrences of Benefit are found, with reference to practical implementation of the findings for particular institutions (in 9 RAs) and only one RA shows contribution to the body of knowledge in general. The linguistic realisation of this stage is usually explicit. The similarity between the non-native English and native Indonesian RAs seems to be related to the common research setting in Indonesia, i.e. to

complement the significance of the pragmatic setting and purposes of research in the non-native English RAs or perhaps attempts for national recognition or for grant purposes. However, the same recognition may be less likely to come from international readers, for the research may be viewed as too locally oriented and irrelevant to a broader research framework.

STAGES OF GENERIC STRUCTURE IN RA DISCUSSIONS

In the Discussion section, analysis of the three RA groups reveals a number of similarities and differences. Table 8 compares Swales' 8 move model with each of the three groups. The figure indicates the number of texts that employ each move.

Table 8. Frequency of Moves in the Discussion Sections in Three RA Groups

Swales' moves	1EN (N=20)		2EN (N=19)		1IN (N=19)	
	No. of text	%	No. of text	%	No. of text	%
I. Background Information	8	40%	11	57.4%	9	47.4%
II. Result Statement	15	75%	11	57.4%	18	94.7%
III. Un-/expected Outcome	20	100%	18	94.74%	17	89.5%
IV. Reference to prev. literature	20	100%	10	52.6%	5	26.3%
V. Explanation	20	100%	19	100%	18	94.7%
VI. Exemplification	10	50%	8	42.1%	7	36.8%
VII. Deduction	20	100%	19	100%	19	100%
VIII. Recommendation	15	75%	11	57.4%	18	94.7%
(a) future study	12	60%	6	31.6%	7	36.8%
(b) pragmatic	6	30%	9	47.4%	16	82.2%

The results show that both the native and non-native English RAs display a similarly high frequency of occurrence of three moves: III (*Outcome*), V (*Explanation*) and VII (*Deduction*). They are found in more than 89-100% of the texts in each RA group. Moves II (*Result statement*) and VIII (*Recommendation*) are the second most frequent moves in the native English RAs, while in the non-native English RAs, these moves only occur in about half of the texts. Interestingly, *Recommendation*

occurs in almost all of native Indonesian RAs (94.7%). Further, the native English RAs indicate a greater tendency to give recommendation for further studies, while both the non-native English and native Indonesian RAs tend to provide recommendation for pragmatic purposes. Another interesting result is the different frequencies of occurrence of Move IV (*Reference to previous literature*). While being found to occur in all native English RAs, Move IV occurs only in a half of the non-native English RAs, and even less frequently in the native Indonesian RAs. Fewer references to previous research indicate that the non-native English and native Indonesian writers have a different view of its importance for establishing a solid argument on the relationship between their research findings and the greater context or research in the particular area.

The results show the different nature of variation in the Introduction and Discussion sections. The Introductions vary in the use of different stages, while the Discussions vary in the frequency of occurrence of similar stages. This implies that different rhetorical strategies are used in the RA Introduction to convince the discourse community of the 'news-worthiness' of the research reports (cf. Swales, 1990). Frequency differences in the Discussions imply different emphases on the importance of stages among the text groups. The differences become significant when important stages, such as *Reference to previous literature*, are not given the same amount of emphasis in the non-native English RAs. Given the fact that references to previous studies is a powerful strategy to make new claims more acceptable to discourse community members, its absence in the non-native English RAs may reduce the opportunity for the same recognition.

Move I (*Background*) occurs both in the initial part and later in the Discussions. The information presented in the native English RAs includes restatement of the purpose of study, research questions, or the main focus of study. In the non-native English RAs, background information includes definitions, assumptions or expectations of the research, purposes of analysis, methodological aspects. This reader-oriented strategy functions effectively as a transitional signal relating the previous with the following section.

Move II (*Result Statements*) presents a brief, general statement of the results of the research, which may be presented in the order of strength:

the stronger results will be dealt with first, followed by the weaker results. The analysis found Move II to be the second most frequent move in the three RA groups, with the highest frequency is shown by the native Indonesian RAs (94%), followed by the native English RAs (75%) and the non-native English RAs (57%). Identification of Result statements in the non-native English RAs is more difficult, particularly when the Result and Discussion sections are combined under *Results* or *Results and Discussion*.

Move III (*(Un)expected Outcome*) presents comments from the writer of the "expected-ness" of the results in relation to the research questions or whether the results are within their expectation or defy the assumption or hypothesis of the research. Move III is either **expected** or **unexpected.** Move III is found in all of the native English texts with variation in the degree of expectedness in the comments and its signals employ various expressions of probability and evaluation. Analysis of Move III in the native and non-native English RAs raises a number of issues of identification using Swales' criteria. First, the intuitive and content-based method of identification poses difficulties since criteria for identification are not specified, and some stages may overlap. Secondly, many clauses in both RAs are neutral and thus are not indicative of the expected-ness of the outcome. These difficulties may be due to the fact that Swales does not specifically predict the relation between functions and choices of lexicogrammatical realisation.

Move IV (*Reference to previous research*) serves to show how the present research is connected to the existing research activities as well as whether or not the new findings are supportive of or in contrast with the previous research. As such, the references are of two types: support and contrast. Frequency analysis shows that Move IV occurs in all native English RAs and only in half of the non-native English RAs. While both RA groups tend to use Move IV of support type, the non-native English writers also use Move IV to provide other information, such as definition. This finding shows some consistency with the use of references in both Introduction and Discussion sections. In the non-native English RAs, Move IV occurs only in 10 RAs, with only 2 RAs displaying contrast. Without ignoring the limitation of data, the lower frequency of references shows that the writers may not consider the importance of relating their

findings with previous findings. Given the crucial role of previous studies to establish the position of new research findings within the wider body of knowledge, absence of this stage may be interpreted as lacking knowledge in the area, and thus become a disadvantage if the writers aim for recognition in a wider community of readers.

Move V (*Explanation*) presents the writers' careful introduction of new claims about the research results. In dealing with this crucial stage, they need to present their position clearly and maintain a careful interpersonal relationship with the readers, especially when their claims are potentially in disagreement with already established claims, as inappropriate presentation of this could cause rejection of the new claims. The analysis found that both the native and non-native English RAs display similar features of Move V, and both employ various linguistic resources as the signals, with great use of modalised statements showing various degrees of probability. Similarities of Move V features in the native and non-native English RAs show that both writer groups have a similar understanding of the importance of Move V in RA writing.

Move VI (*Exemplification*) uses examples or illustration to further support the statements or claims made in preceding parts of the texts. It may not always occur, depending on the writer's consideration of its necessity. The analysis of the native and non-native English RAs found that this stage occurs in about half of the RAs.

Move VII (*Deduction*) presents the claims about the generality of some or all of the reported results, which is inferred or concluded from the line of argumentation in the pervious part of the text. The analysis found that Move VII occurs in all native and non-native English RAs, with explicit signals either by subsection or lexical items. In the non-native English RAs, Move VII shows more variations in the lexical signals and degree of certainty of the claims made. The non-native English RAs also signal Move VII with expressions normally found in Move III (Outcome) or Move V (Explanation) such as *show, appear, suggest* (see also, Weissberg and Buker, 1990:148-149). However, this disadvantage may be compensated for with the presence of a subsection (i.e. **Conclusion**) that carries the function.

Analysis of Move VII in non-native English RAs also presents difficulties as it is less distinguishable from Move V (Explanation).

Another feature of Deduction in some non-native English texts is the occurrence of the summary along with the conclusion. The overlap between the points made in the summary and the statement in the concluding remarks makes it difficult to identify whether or not the summary should be taken as part of Move VII or Move II. The motivation of separating the summary from the Conclusion is not very obvious either. Judging from Swales' model and comparing this feature with the findings in the native English texts, this implies that some of the non-native English writers may have not had a solid knowledge of the stages and strategies of organising the Discussion sections in English. At the same time, variations among the non-native English RAs may also indicate that the writers do not share a common understanding of the macro-structure of RAs.

Move VIII (*Recommendation*) advocates the need for further research or suggests possible lines of future research. The analysis shows similarities and differences between the native and non-native English RAs. The similarities are that Move VIII is explicitly signalled, and indicates two types of recommendation: for further study and for pragmatic purposes. The differences include location and frequency of Move VIII. The greater frequency of Move VIII for pragmatic purposes in the non-native English RAs may be related to the view that research activities should be oriented towards finding solutions for pragmatic issues. This is consistent with the adoption of *Benefit of study* as an important stage in the Introduction section. A similar result is found in the native Indonesian RAs. Again, this may imply some influences from the writing practices in the writers' first language.

DISCUSSION

IMRD Structure

Frequency differences in the use of IMRD structure and labelling across the three groups may be the result of several factors. Firstly, the IMRD structure may be less common in the non-native English writer's first language RA writing practices. While implicit in the IMRD structure are the rhetorical functions and relationships between sections, the results clearly indicate that quite a few non-native English writers do not share

the same grasp of the functional aspects of the structure. Furthermore, it implies that the adoption of a new rhetorical structure into the writers' writing practice has not yet been completed. Secondly, the similarities in labelling variation between the non-native English and native Indonesian RAs suggests that the non-native English writers may have adopted the writing practices of their first language. The native Indonesian RA writers may have different views of reporting stages and goals, and use content-based headings to fulfil their reporting purposes. The difficulty with adopting this variety of labelling into other writing practices such as English RAs, however, is that more responsibility is placed on readers to figure out the rhetorical stages the writers have arrived at. This style could undermine the success of publication in English language based journals, for its failure to meet the structural requirements familiar to the target discourse community.

Stages in RA Generic Structure

This section focuses on some interesting results of the analysis of the RA Introduction and Discussion sections. The analysis of Move I of Introduction, particularly Move I-3 reveals at least two points. First of all, the native English writers put great emphasis on review of previous research as the main strategy of establishing research territory, which supports Swales' model. On the other hand, the comparatively low frequency of Move I-3 in the non-native English texts, particularly of the reviewing type, may indicate different motivations of using references. Furthermore, the similar feature of Move I-3 in the native Indonesian RAs may also indicate the less central role of the literature review for establishing a new research space. Concerns about the context of research in the native Indonesian Introductions, be it local, national need or government policies over particular issues in teaching and learning processes, seem to emphasise the centrality of pragmatic motives for conducting the research. Another possible explanation for the absence of the literature review could be the limited availability and accessibility to the source of research findings, which may be due to limitations in funding, time and individual researchers' limitations. Also, research has only been given emphasis and importance in the last 18 years in some academic disciplines in Indonesia (see e.g. Soehardjan, 1997), which may be encouraged by the trend of global communication including scientific

publication (see e.g. Pennycook, 1994; Graddol, 1997). Therefore, differences in the literature review may arise for pragmatic reasons, rather than from differences in rhetorical strategies. However, the results they bring to the RAs may be the same: they will undermine the success for international publication. The resolution of the problems, however, would be different, depending on the nature of the causes. While causes such as availability of research journals and research facilities need solution at the institutional level, problems with individual writer's knowledge of rhetorical structure and other aspects of report writing are areas that can be improved through training.

Secondly, the relatively greater use of the Defining type in the non-native English RAs may indicate greater emphasis on providing basic theoretical concepts rather than critical review of past research. This may be motivated by the writers' assumption of less common knowledge shared with the readers, who might not obtain equal expertise in the area. Thus, more emphasis on providing information than critical review may be a more appropriate strategy of gaining local readers' attention.

The different functions of references, as shown in the non-native English and native Indonesian texts, indicate how the writers position themselves in presenting claims and sources of information to the reader. In contrast to the native English writers, who use the literature review to demonstrate their knowledge of the area to their readers, and by identification of common knowledge they may gain attention and acceptance, the non-native English and native Indonesian writers seem to take a more authoritative and knowledgeable position toward their readers by taking the decision of the kind and amount of information needed by the readers to understand their area of interest. The readers are left with only little room, if any, to challenge the writers' claims of the position of the research in relation to previous findings. This is supported by the tendency for the non-native English and native Indonesian writers to put their literature review following the establishment of the problems or issues of the research. The references to past studies play a very important role in reflecting the writer's theoretical knowledge, routine discourse practices and they assume a certain amount of background, procedural expertise, theoretical understanding and technical lexis (Hyland, 1999). Lack of this vital strategy in the non-native English texts will certainly be

disadvantageous for the writers wishing their work to be published and read in the international research community since their acceptance is partly dependent on "the strategic manipulation of various rhetorical and interactive features" (Hyland, 1999:341). Moreover, research is viewed as a cumulative process, which is built upon the findings of previous researchers, and the possible risk of ignoring this issue such as being attacked on irrelevant grounds or being not published at all (Kaplan and Grabbe, 1991:209). Thus, better understanding of the differences between the English and Indonesian RA writing practices will enable non-native English writers to present their claims effectively by using strategies familiar to the target readers.

Analysis of Move I (*Establishing the territory*) thus reveals a number of important differences between the native and non-native English RAs. In establishing their research territory, the native English writers direct the reader's attention to the topic of the research being reported by pointing them to the current state of knowledge and referring to the findings in previous research. In this strategy, the native English writers acknowledge the achievement of their fellow researchers and place their research activities within a wider community, which becomes a common ground for gaining the reader's attention and interest in their attempt to establish the validity of the current research.

In contrast to the native English text, the territory establishment in the non-native English texts seems to be constructed on the basis of a more practical motivation. The reader's attention is first directed to some problems existing within the writer's knowledge or areas they have been involved in prior to or during the research. Moreover, most of the problems are presented in the context of local interests and thus the reports may expect a relatively limited readership. This relatively limited scope of discussion could be of less interest to a wider audience if the issues raised in the research are not placed within a more general perspective.

A striking difference between the territory establishment in the native and non-native English texts is the immediacy of the introduction of the area of study. While in the native English texts the connection between the title and the first sentences of the Introduction is mostly straightforward, many of the non-native English writers prefer to present

either a too specific or too broad setting or context from which the area of study is later on narrowed down and established. A similar feature is found in English academic essays of Indonesian graduate students (Harjanto 1999) and in the expository discourse in Javanese (Ngadiman, 1998). These studies suggest that the seemingly wandering opening could be considered as a less straightforward strategy, which may be unfamiliar in the native English texts that value a more direct statement of the area of study.

The non-native English texts also display a feature that does not exist in either Swales' model or the native English articles: *Benefit of study*. A similar strategy is found consistently in the native Indonesian texts, and seems to be a common and logical strategy in the native Indonesian writing practice, considering that even in the beginning of the Introduction section, the practical motivations of conducting the research are clearly indicated. This may be a disadvantage to the non-native English writers if they wish their research findings to be internationally recognised.

The analysis of the Discussion section raises a number of points. The first striking difference between the native and the non-native English Discussion sections is the separation between the Result and Discussion sections. This feature has been observed in various disciplines, and in social sciences in particular (Williams, 1999). While almost all of the native English texts separate the two sections for functional reasons, more than half of the non-native English texts combine the two sections. The same result is also found in the native Indonesian texts. This may indicate that in Indonesian writing practice, the separation may not be necessary. However, since some texts separated the two sections, this could imply that there has not been a unified view of how the researchers should present the result of their research, which may reflect an absence of firm guidelines or conventions for research report writing.

Secondly, the non-native English articles generally seem to display more unstable patterns, in comparison to the other RA groups and within the text group itself. The functional elements displayed by the non-native English texts may indicate that this writer group is in a transitional process between leaving behind the writing strategies in the writers' first language and making an effort to conform with the strategies common to the target language. The occurrence of elements of writing practice in the first

language that are unfamiliar in the target language may also indicate that the writers have not yet acquired a comprehensive knowledge and understanding of the writing strategies in the target language, or of the differences between the two writing practices. If this is the case, efforts need to be made to increase the knowledge and awareness of the differences for the writers who wish to publish their research reports in English-based journals.

Third, the function of reference to previous literature in non-native English RAs seems to be uncommon to the native English RAs. Both in Swales' model and the native English Discussion sections, the references made to previous studies function to relate the present research results with the previous findings. The references serve to provide comparison or support for the present research. In the non-native English texts, adding to the fact that the texts make relatively few references, more than half of the references are made to provide a conceptual account rather than give references to past studies. As Salager-Meyer (1999) has put it, as citation practice is an important strategy to persuade readers of the validity of his/her arguments, and to provide support for newly announced findings, the absence of this stage in the non-native English texts will result in less convincing claims about the new findings.

The next feature is the nature of recommendation made at the end of the study. In Swales' model and most of the native English texts, recommendations are made for the possibility of further studies in the future. This stage also indicates that the present findings are not final and open for further investigation. In the non-native English and native Indonesian texts, however, most of the recommendations made are for more practical purposes, for the benefit of particular institutions or individuals. The explanation may be the specific motivation of the study. The occurrence of recommendation for practical purposes has a logical ground, considering the general purpose of the research in both text groups, to provide a contribution in a very practical manner to the issues or problems presented. There seems to be an "unwritten rule" that the researchers need to mention specifically the particular benefits to institutions to show the practicality of the findings. However, the motivation behind the practical recommendations made in the non-native English texts, and the references to specific benefits to institutions create

research findings, which are specific and relevant to local contexts. This limited audience may be less advantageous for writers wishing to have their research findings recognized internationally.

Finally, the resemblance between Swales' model and the generic structure of the native English RAs implies two things. First, Swales' model has captured the generic structure commonly practiced and accepted among the researchers writing in English. Second, the model is generally a useful guide to identify the expected generic pattern of English research articles, including articles written by non-native English writers.

EVALUATION OF SWALES' MODEL FOR NON-NATIVE ENGLISH RA WRITING

The results of the study show that the native English RAs display a closer resemblance to Swales' model in both writing stages and linguistic realisation. The non-native English texts, on the other hand, show a transitional stage between the writing practices in the writers' first language and the one more common in the target language. While displaying some similarities, they also show significant differences in their writing organisation and functional stages.

With regard to the resemblance to Swales' general model, native English RAs generally follow Swales' RA model. The analysis of the native English RAs revealed relatively few difficulties in identification of stages of the writing strategy. This shows that Swales' model provides a basic guideline for the canonical RA generic structure and reasonably represents common practice in English RA writing, and that the native English writers have full control over the RA generic stages and the linguistic resources commonly employed for their realisation. This implies that English RAs have a standardised generic structure and typical linguistic realisation of functional stages, which may indicate that Swales' model is useful for the non-native English writers if they wish to familiarise themselves with the general format of English research articles.

On the other hand, identification of functional stages in the non-native English texts is problematic, due to the absence of explicit lexical signals for each functional stage of reporting. This absence may be due to two reasons. Firstly, the writers may not have sufficient knowledge and

awareness of the process of report writing stages. This could reduce their control over the content of information in the report, and eventually will lead them to write a less coherent report. Secondly, they may lack mastery of various linguistic resources realising discourse functions. This may partly be due to the fact that in teaching English in Indonesia, more emphasis has been given to mastery of English sentence structure and grammar. While the first problem may be resolved by familiarising the writers with common generic structure of English RAs, the second problem can only be resolved by improving the goals of English teaching and by placing more emphasis on discourse analysis.

Some evaluation needs to be made about using Swales' proposed model for English RAs. First of all, the resemblance between the stages in the model and the stages revealed in the native English RAs provides evidence that the model describes both the ideal and actual standardised English RA structure. It is therefore recommended that the model be taught to non-native English writers who wish to learn and improve their understanding of the English RA generic structure.

There should be caution, however, in applying Swales' model to foreign language composition classes, since Swales' account reflects the canonical pattern, and little information is available to describe possible variation, or less canonical but still acceptable structures. Teaching only one model may imply a risk of making writing a more prescriptive rather than creative process, a danger of a "homogenising effect" in taking one single model in contrast to the variability found across disciplines (Belcher, 1995:175).

Secondly, the intuitive, content-based method of identification for stages of writing organisation may not be sufficient for text analysis. Whereas Swales' model is useful in providing general guidelines of the structure, its implementation in text poses methodological problems, particularly when a clear method of analysis is expected to reveal a systematic relation between function and form of realisation (Bloor, 1998).

Thirdly, for non-native English writers to get their articles published in international journals, they need to master all aspects of RA writing. Good mastery of the generic structure is only part of the whole process. Their ability to write a cohesive and coherent text, to control step by step

their writing with full awareness of the process, even clause by clause construction, will contribute to the success of their writing. Swales' model offers the aspects of general structure of the writing. Swales' model reveals how the product of RA writing should look, but it does not reveal the process of writing to arrive at the final product. In order that this study of English RAs gives a more complete picture of the genre to non-native English writers, analysis is needed on the systematic organisation and arrangement of information.

SUMMARY

This paper has investigated the generic structure and the similarities and differences between the native and non-native English RAs. The non-native English writers seem to be in a transitional process of conforming to the writing practices in the target language and the first language. The analysis reveals that the differences displayed by the non-native English texts may be due to two major reasons: the non-native writers' insufficient knowledge of the differences between the two writing practices and lack of control over the process of writing and the linguistic resources available to realise functional stages of writing. This generic structure analysis provides information on aspects of structure that may enlighten non-native writers wishing to have their research report gain worldwide readership. The analysis also shows the limitation of the methodology, which, if ignored, will fail to provide a complete picture of the process involved in producing a coherent and cohesive research article.

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