Writing Abstracts for Scholarly Communication by Asian ESL Research Scholars: Preliminary Findings

Chan Soon Keng
Division of Communication Skills, Nanyang Technological University, Singapore

Foo Shou Boon, Schubert
Division of Information Studies, Nanyang Technological University, Singapore

Abbreviations:


Abstract

This paper presents preliminary findings on Asian ESL (English as a Second Language) research scholars writing abstracts for scholarly communication in English-based publications.

A review of recent studies on the genre of abstract writing for both academic and professional communities is first presented. The rhetorical structures and stylistic conventions of abstracts written by academic, medical and corporate writers of native English language abilities are reviewed along with a comparison of these results to textbook and journal prescriptions. The review is focused on their methods of research with the objective of comparing with the methodology of the present study, which proposes to extend beyond that by conducting qualitative investigations on the knowledge and writing processes of writers who have non-native English abilities.

A preliminary experiment with two ESL research scholars using the proposed methodology is carried out. The preliminary findings reveal their knowledge about the functions of abstracts to be vague and narrow in perspective, their abstract writing process arbitrary, and their attitude towards the genre indifferent. These findings, however, reflect the research at its very early stage and are thus inconclusive. The next stage of research that aims to determine the effect of such inadequate discourse expertise on ESL writers’ acceptance into their specialist discipline communities in the real world is identified and discussed.
Introduction

The concept of scholarly communication (SC) stems from the psychology that humans share a common desire to search for information, and to want others to learn from them, provide feedback, and to use their contributions to add on more information to their common discourse community. In the academic world, the most significant method for fulfilling scholarly communication is through formal channels that include a variety of print material and online services. Through them knowledge is utilized. Backer, (1993) in his essay on knowledge utilization explained that information becomes useful only when it is transferred to the end-users effectively. Thus, knowledge informers must cater to users’ needs by employing suitable means to achieve that. Such manner of information transfer is indeed a process of communication. In the field of information studies this transfer process is fundamental to a scholar’s information literacy, and is popularly referred to as the information seeking process (ISP) for information retrieval (IR).

In 1976 the report of the NATIONAL ENQUIRY INTO SCHOLARLY COMMUNICATION was published (Hills, 1983). The report stressed that scholarly communication involves six components, which are fundamentally interrelated, and co-dependent on each other. First, the scholar is the producer as well as the user of information. Then, the learned societies are responsible for convening meetings such as conferences for scholars to exchange information. The publisher is next responsible for disseminating the scholars' information in forms like books, journal papers or theses. But it is the librarian who is the ISP agent operating with various IR systems, print or electronic. The sixth component known better as the new technologies or computerisation is becoming increasingly pervasive throughout the whole process of scholarly communication, playing a determinant role in the production and dissemination of scholars' work. The report concludes that these six components are collaboratively responsible for the "flows of information", and the present research is nested within the twines of this model.

It is believed that more needs to be done in the interest of the scholar-producer component of the model. For example, research on the initialisation of the novice scholar-producers to scholarly communication and their acculturation towards their new discourse communities, especially if they have to operate in a language that is not native to them, should be interesting. What is their competency level of information transfer? What will be their level of success in the scholarly communication process? This interest is particularly relevant because of their recent demographic movements to gain entry into western discourse communities as well as the fact that the publication world is still very much dominated by the English Language. (Canagarajah, 1996; Flowerdew, 1999)

Figure 1 presents a context for this study. Three inter-related arenas of the scholarly communication process are involved. One, is the academic writer who in this context serves as the output source of text production. Next, is the document product, which may be in print or electronic medium, and thirdly, are the components of the scholarly communication process, which includes the discourse communities, learned societies, the IR or ISP systems, and even the publishers. This inter-related context demonstrates the relationship between the scholar-producer or academic writer and the world of scholarly communication where the
output of academic writing, which may be a realisation of the research article, acts as their bridging vehicle.

Simultaneously, the context diagram may be used as a metaphor to support the reasons for selecting the abstract as the data source for this study. In the context of the academic writer the abstract usually precedes his application to a conference organised by a learned society, and so his chances of getting himself that hearing would depend on the effectiveness of his abstract. Besides that, the abstract is also the document that precedes the full text in a publication. By definition, an effective abstract agreed by all sources of publication is an abbreviated, accurate, and clearly written self-contained text that is a true representation of the original document.

Figure1: The Inter-related Status of the Abstract for Scholarly Communication between Producers and End-users
Furthermore, in the field of information studies, the abstract, which may be produced by the original author of the document or by others, serves as a text surrogate for IR or ISP purposes. Therefore, onus again rests on the writer to produce an abstract that serves as an effective “screening device” (Huckin, 1991) for the readers who want to decide whether or not to read his full document. In summary, producing an effective abstract that meets the explicit demands set by the rules of scholarly communication for knowledge utilisation is the responsibility of the writer.

Within this context, the assumption made in this study is that novice Asian ESL research scholars do not have the competency or explicit knowledge (EK) about the abstract, and may thus be disadvantaged in the process of scholarly communication. EK is a term borrowed from Youngji and Ellis (1998) whose research interests are focused on Second Language Acquisition, and it refers to knowledge about rules of the second language and structures which learners are aware of but not fully conscious or able to use effectively. From this reference, it is also the assumption that ESL writers are handicapped by their lack of language knowledge and proficiency to write acceptably using the rhetorical and stylistic conventions expected of the genre. The hypothesis is that both rhetorical and stylistic knowledge are prerequisites for producing effective academic texts, and novice Asian ESL scholars need to be initiated early to the rules of scholarly communication. This study sets out to test these assumptions, by assessing the competency of Asian ESL research scholars with regards to the abstract and their performance levels in writing it. The purpose is to extend beyond present research interests in genre analyses of sample abstracts corpora written by native speaker proficient writers (Meyer, 1990; Santos, 1996; Keogh, 1994).

The first objective of the study is to measure or evaluate the ESL research scholars’ EK of the definition and value of the Abstract. Another objective is to investigate their writing processes, which are bound to influence the quality of the abstract, and finally, to measure the quality of their product by analysing their sample abstracts and comparing them to academic literature prescriptions. The paper is organised as follows. A review of what textbooks, research writing guides, online writing programmes, Standards, and author instructions prescribe for the effective abstract is presented as the basis for data analysis. Next, three studies by Santos, Meyer, and Keogh are discussed and compared to the present pilot study, and finally, the preliminary findings of the pilot study are discussed.

Literature Review

Various sources of literature on abstract and abstract writing are in existence (ISO 214, 1976; ANSI Z39.14, 1979; Huckin & Olsen, 1991; APA manual, 1994; Cremmins, 1996; Lester, 1996; IEEE Transactions 1997; Glatthorn, 1998; Purdue http://owl.english.purdue.edu/files/88.html, 2000). But all have defined the text surrogate in similar ways. In this study, the following definition found in the ANSI manual is used:

An abstract is an abbreviated, accurate representation of the contents of a document, preferably prepared by its author(s) for publication with it. (ANSI, 1979) It should be as informative as the style and the purpose of the abstract permitted.
Generally, an effective abstract should be a clear, succinct, connected prose. It should be expressed concisely making every word maximally informative, and be a self-contained text surrogate of its original document. It should be non-evaluative and gives an overview of the full document making it the text that is usually read first, but written last.

The universally agreed rhetorical structure of an abstract written in English contains an optional background, which quickly leads to the purpose of study. This is followed by the methodology, which describes the major approaches to the study. The next part presents the results as concisely and informatively as possible. Finally, the conclusions describe the implications of the results, and can be associated with recommendations, evaluations, applications, suggestions, new relationships, and hypotheses accepted or rejected.

The literature also offers prescriptions on how to write effective abstracts. Collectively, the advice is to first reread the full document and highlight specifically main parts like the purpose, method, result and conclusion. Then a rough draft should be written without looking back at the original, and there should be no mere copying of parts of the full text, but the full text sequence should be followed. It is suggested to begin with a topic sentence as the central statement of the document’s major thesis, and to write a one paragraph abstract for short documents, but more than one paragraph is permitted for long reports or theses. Abstracts should be written in complete sentences and in the third person and transition words and phrases should be used for coherence. Key words for indexing may follow the text of the abstract. Writers are also advised to avoid unfamiliar terms, acronyms, abbreviations or symbols, or define them the first time they occur in the abstract. The style should be articulate and scholarly formal, direct and in active mood. Finally, the draft should be revised by correcting weaknesses in organization, coherence; dropping superfluous information, adding important information originally left out, eliminating wordiness, correcting errors in grammar and mechanics, typewriting the revision, and carefully proofread.

Besides reference to these prescriptive guidelines, a review from the perspective of the language specialists, especially experts involved in research on academic writing or ESP (Swales, 1981, 1988, 1990; Evans, 1986; Bhatia, 1993; Bazerman, and Russell, 1994; Belcher, and Braine, 1995) was also made. Swales (1981, 1990) was among the first to introduce the genre analysis concept of the research article (RA) in which he used the term “moves” to identify the distinctive information elements in a corpus of 48 RAs. He selected the Introduction section of each RA and examined their rhetorical structures. He concluded that the microstructure of this section could be further decomposed into at first four moves (1981), and later revised to three moves (1990). His impactful model was adopted and adapted in many subsequent research studies. Some studies replicated his research on RA sections like the Introduction and Discussion (Evans, 1986; Berkenkotter, Huckin, & John Ackerman, 1994) and others have extended to investigate aspects of validation of the move model and deep structures genre analysis (Crookes, 1986; Bhatia, 1993). Yet others have applied his model to studying other text genres like the Abstract (Meyer, 1990; Santos, 1996; Azirah, 1996).

Swales’ move structure is based on the genre theory that specialised texts like the RA as well as their micro sections are expressed in certain rhetorical and stylistic conventions, and corpus studies have proven that these conventions exist. But the predominant interest of ESP
and academic writing experts and enthusiasts seems to be based on the following question. Do real world academic writings and workplace publications follow the conventions or guidelines set and prescribed by the numerous sources of such literature? This preoccupation appears to hold the attention and focus of most studies conducted in this area of research, and as mentioned above, many of them have focused on the Introduction and Discussion sections. It is only recently that research has expanded to focus on the Abstract.

In the following section, three studies that use the abstract genre as their data source are discussed and compared with each other. They have been selected to represent three areas of real world practices in academic or professional writing and are significant for comparison with the present study for various reasons. First, all the four studies share common and similar objectives. We use the abstract genre as our data source because of our common belief that the abstract is an important text in the arena of academic writing for scholarly communication, and that abstract writing is indeed serious business. We are curious to discover and verify approximations between what academic literature prescribes and what the real world practises. We are also very concerned with pedagogical objectives of helping non-native writers compete on more equal footing with native English speaking writers for scholarly communication.

These three studies represent the worlds of the academicians writing for linguistic journals, the medical experts writing for medical journals, and the corporate scientists and engineers working in a large corporation (Westinghouse) and writing reports for their in-house publications. They based their data analyses on the prescriptions of textbooks, standards and guides similar to the literature used in the present study, and two adopted Swales’ concept of the move model.

Santos, in his paper on "The Textual Organization of Research Paper Abstracts in Applied Linguistics" (1996), examined how abstracts could be characterized in terms of their textual organization, and analysed other key features of this text. He was motivated by the usefulness of abstracts in the academic field and was concerned for non-native writers in Brazil who needed to write for their discourse communities.

Santos used the move analysis after Swales' model for his analysis, and he selected 93 abstracts from three leading journals in the discipline of Applied Linguistics. The corpus included 37 abstracts of papers found in the journal, Language Learning, 31 from the journal, Applied Linguistics, and 26 from the TESOL Quarterly, all being highly reputable journals in Applied Linguistics. His methodology reflected the works of Swales (1990), Evans, (1986) and Crookes, (1986), in which he examined each abstract from both the macro and micro levels of the move analysis, submove analysis, and how they are presented linguistically and stylistically. He then matched each move analysis with the prescribed guidelines in textbooks.

The analyses of his sample corpus found a five-move model with submoves consistently in the structure of the abstracts and he identified them as:

- Move 1: Situating the research
- Move 2: Presenting the research
Move 3  Describing the method  
Move 4  Summarizing the results  
Move 5  Discussing the results.

He also found the mismatch between recommendations in technical writing literature and actual practice.

Santos concluded that his resultant find of the five-move schematic pattern could provide pedagogical advantages. It could be used for teaching novice or non-native academic writers to write abstracts by helping them in better organization and awareness of the genre structure, and helping them to improve their reading efficiency during their IR process. However, he did caution against the dangers of overspecialization by focusing only on genre analysis studies, because it may be too restrictive and limiting in domain interests of research.

Meyer, in his paper "Discourse Flaws in Medical English Abstracts: A Genre Analysis Per Research- and Text-type" (1990), was motivated by the frequent criticisms made on badly written medical abstracts as being uninformative, misleading and lacking in internal structure. He was also partly motivated by the unmanageable size of the growing literature flooding the researchers' arena and especially wanted to provide non-native writers with better models for writing in the real world. In order to achieve these objectives Meyer set out to determine the actual discourse structures of medical English abstracts.

In his research Meyer conducted a move analysis on 77 Medical English abstracts written between 1986-1989, drawn from 37 different medical journals. He examined the selection and organization of moves of each abstract and analysed the pattern of paragraph structuring in order to assess the adequacy of its internal structure. Like Santos he emulated the works of Swales (1981), McKinlay (1983) and Evans (1986), and he looked for the four-move structure of purpose, method, results and conclusions. Meyer was particularly concerned about the cohesiveness of this surrogate text as he based his study on the criterion that for an abstract to be good it must have discourse or linguistic structures closely related to the whole article. He was therefore, specially focused on the logical ordering of information, and looked for these linking features in his sample corpus. Meyer also examined the macro-paragraph structuring to see if there was more than one paragraph used as prescribed by most literature, and if these paragraphs matched the four moves.

The results of his analyses revealed that 40 out of 77 abstracts conformed to prescribed criteria and they satisfied the rhetorical and stylistic conventions of effective abstracts. However, 37 or 48% out of the total of 77 were poorly structured abstracts, with inconsistencies in their move and, or paragraph levels. He observed several flaws in the move patterning of this group of data. There was an absence of fundamental semantic units especially of logical markers to bind the texts cohesively. Many of them had no purpose statements, and no conclusion move. Moreover, there was a prevalence of illogical sequencing in their move organization. Features of awkward 'move recycling' were observed, for example, the same move was split between other moves. Finally, there were also flaws in the paragraph structuring where six out of the 37 abstracts had overlapping semantic
concepts straddling between paragraphs. All these flaws would make readability problematic especially for non-native readers.

These findings made Meyer draw the following conclusions. If novice writers were going to learn to write by following models of their reading then the models had better be good, and that out of 77 articles 37 were poorly written was a grave concern. If written models were poorly written they would also be difficult to read and comprehend much less be made use of to guide the reader in his ISP. If these models contained incomplete or poorly organised information then using them as guide to further extraction would be ineffective and even misleading during IR. To Meyer, abstract writing is serious business and should be given more significance and writers should be provided with useful instructions. Thus training in writing abstracts is essential.


The main objective of his study was to identify the structural and stylistic features of 48 abstracts written by scientists and engineers at the R&D division of Westinghouse in U.S., and to compare them to models about the structure of abstracts published in industry journals and conference proceedings in terms of stylistic features like use of cohesive elements, conjunctions, pronoun references, abbreviations, parallel structures and telegraphic writing. His focus was on the differences between advice in published literature and the real world practice, and what accounted for these differences.

Keogh first review 15 textbooks and journal guides which prescribed advice for writing the abstract genre, and he selected four categories of their suggestions to focus on: type of abstract, style, structure, and length. Under each of these categories Keogh examined the 15 technical writing textbooks and journal guides and summarised his findings. Using the summarised information as a template for reference, he developed a detailed analysis of the structural and stylistic features found in each of the 48 abstracts. He develop a template structure that abstracts should have to reflect information on the purpose, scope, method, results, conclusions and recommendations, making it a total of six rhetorical distinctions, but there was no mention of the move model. In the next step of his method Keogh analysed the structures of his sample corpus and matched his template structure with each of the 48 abstracts he had selected. He then discussed their differences and suggested reasons for their results.

Keogh found that although textbook and guides distinguish between descriptive and informative type of abstracts, his sample findings do not reflect such differences. Textbooks and guides recommended the use of active structures but his sample shows an almost even mix of active and passive sentences. While the academic texts advised the importance of the structural sections of the conclusion and recommendations his sample seldom included these, but instead emphasised the scope, which was not highly supported in the textbooks.
Keogh drew the following conclusions from his study. First, contrary to what was implied in academic texts the sample abstracts were not all reduced images of their full texts following the prescribed rhetorical conventions. They exhibited their own internal structure with fixed categorical properties so that anyone who joined the company could just use the in-house templates provided by the company. The scope seemed to be the essential if not the only structure and the sentences were mainly passive constructions. Thus he suggested that textbooks should drop the requirement for using the active structure. Finally, in practice in the real world, he surmised that a lot of academic advice tend to be discarded especially when writers become highly proficient and experienced in the area of their writing responsibilities, or writers often follow the practice stipulated by the internal corporate culture.

At this stage these three studies are reviewed and summarised before the pilot study is reported and a comparison made.

First, all three studies selected their sample abstract corpora from real world practices because they shared the same desire to determine real world of academic or professional practices. Their common question was "Do real world practices mirror the suggestions or advice prescribed by academic literature presumably created by experts for the specific genre?" The common answer appears to be negative.

Next both Santos and Keogh made preliminary research on academic literature and established their prescriptions for abstract writers, and both were working on their higher degrees. They both found similar results, that textbook prescriptions were not always adhered to during real world production. Although Keogh analysed his sample against the four categories about the abstract he selected, and Santos based his work on Swales’ model, it may be pointed out that both templates are closely related and similar. Santos was concerned about providing good models to non-native abstract writers and concluded that helping them to improve their organisational skills and encouraging their awareness of the genre structure were the pedagogical implications of his work. Keogh was more concerned for the awareness among professional writers that in-house conventions should take precedence when writing for the workplace.

Like Santos, Meyer was concerned about helping non-native writers. Meyer also used journal samples but unlike Santos who found the Applied Linguistic abstracts to be highly structured along the move model, Meyer found many flaws among his Medical corpus. Both Meyer and Santos were very concerned about cohesiveness and good structural and organisational skills for writing the effective abstract. Both shared the conclusion that abstract writing is serious business and training in writing abstracts is essential. For Meyer, his concern was largely that if non-native writers were going to learn from models of abstracts in published journals they had better be good models. For Santos the resultant five-move schematic pattern in his corpus could provide the model he needed for the non-native learners.

A comparison between these three studies and the present work find all four studies sharing some similarities in the methodologies of research. Our approach began by examining the rhetorical and stylistic structures of the abstract even if the terms of reference differed slightly. For example, Keogh in his analysis did not utilise Swales’ model, but in the present
study as well as in the work of Santos and Meyer, the strategy was to perform the move analysis on each sample abstract in our respective corpus. Based on our methodologies similar results were found in the studies. For example, it was found that in the real world practices deviations from the prescriptions and advice given in academic literature appear to be the norm. Nevertheless, it is still the general consensus among all four studies that there are still pedagogical advantages for teaching prescriptions of rhetorical and stylistic templates to novice, especially non-native, writers.

At this point the similarities between the present work and the three previous studies end. The next part of the discussion would explore the differences that characterise the present research methodology, which relates more closely to the writer of the abstract, with specific attention on the Asian ESL research scholars.

Methodology

The present research sets out to replicate the genre analysis methodology of earlier studies but instead of selecting a corpus of abstracts written by native writers, a corpus of Asian ESL research scholars’ abstracts is used. The genre analysis of the abstract sample is to assess the rhetorical and stylistic elements of their products and identify deviations from the models of good abstracts. The procedure extends to determining from the writers themselves their explicit knowledge about the genre and their appreciation of its purpose and value for scholarly communication. Next, it proceeds to assess and understand the process of their writing. At the end of the procedure the specialist informants of the respective subjects were consulted to authenticate the subject domain of the text samples.

Another motivation for this approach has been derived at the research site. As a result of Singapore’s affirmative policy towards “foreign talent” many research scholars were, and are still, being recruited from neighbouring countries. They were awarded study grants to complete their programs within two years for a master’s degree and three for a doctoral degree at the two local universities. In this relatively short period they had to adapt to a new living and working environment, and operate with a foreign language. Consequently, a consensus was reached that they needed linguistic support in order to participate actively in the academic activities of their new discourse community. The decision was to conduct academic writing courses for a semester during which they would be introduced to the genre of academic writing. The present study has selected to investigate the status of their knowledge and appreciation for the abstract as one aspect of academic writing. This work forms part of a study conducted at Nanyang Technological University, Singapore, for the author’s doctoral research on Writing Abstracts for Scholarly Communication: What Do ESL Research Scholars Know, or Don’t Know? (Chan, 2000)

Based on the theories of genre analysis by Swales (1990), the art of abstract writing by Cremmins (1996) as well as the advice and prescriptions in textbooks, handbooks, international standards, documentation manuals and authors' instructions three instruments in the forms of checklists and questionnaires were designed to conduct the study.

In the first instrument (Appendix A), the questions probe for the subjects’ knowledge and experience writing abstract genre, their understanding of its significance for scholarly
communication as well as its importance as the screening device that helps readers to decide on the potential information in a full document.

The second instrument (Appendix B), has been prepared for the interview session or face-to-face meeting with the subjects in the study. Together these questions aim to examine their actual processes and strategies, employed in writing the sample abstracts. Although the reliability of the reflective interview may not be high this stage still serves to triangulate the investigation methodology. The sequence of the questions has been broadly adapted from the writing process model by Emig (1971).

I  
Collection of abstract sample

II  
Genre Analysis

III  
Face-to-face inquiry:  
  i. Questionnaire  
  ii. Interview

IV  
Transcription of interview and collation of questionnaire responses

V  
Consultation with Specialist Informant

Figure 2: Five-Step Data Collection Procedure

The third instrument (Appendix C) comprises two checklists for the genre analysis: A genre checklist and a linguistic checklist. These two checklists would guide the analyses of the data collected, and further support the findings in the previous two steps. Figure 2 illustrates the data collection procedure.

Preliminary Study

An experiment was conducted to test the status of two ESL research scholars’ competency or explicit knowledge (EK) of the abstract genre and writing processes. These two participants were identified as Subject 1, a PhD candidate in Materials Engineering, from Myanmar, and Subject 2, a master’s candidate in Computer Engineering from the People’s Republic of China. In stage I they were briefed on the objectives of the study and asked to submit a recently completed abstract each before the interviews. Then in stage II a genre analysis was
conducted to examine the rhetorical structures and linguistic features of the texts using the instrument comprising two checklists (Appendix C).

The third stage, III, of the study comprised two steps. The first step administered the “Inquiry on Knowledge of Abstracts and Abstracts Writing” (Appendix A) questionnaire. The subjects spent about 15 to 20 minutes on it. Then, the face-to-face interview was conducted using the “Inquiry on Abstract Writing Process” (Appendix B) questionnaire. The subjects were required to reflect on the processes that they followed during the writing experience. The aim was to gain insights into the subjects' behaviour during writing, and the cognitive strategies they employed. The interviews were recorded, transcribed and analyzed in stage IV. Subsequently, the respective supervisors of the two subjects were consulted to help authenticate the knowledge domain of the samples in stage V.

Findings

Some preliminary findings of the investigation are summarized in Table 1.

Table 1: Subjects’ Knowledge on Abstracts and Abstract Writing

<table>
<thead>
<tr>
<th>Items in Questionnaire Survey</th>
<th>Respondents’ profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of abstract genre</td>
<td>Subject S1 responses</td>
</tr>
<tr>
<td>Definition of abstract</td>
<td>Simplistic &amp; Vague</td>
</tr>
<tr>
<td>Perception on purpose for writing abstracts</td>
<td>Specific</td>
</tr>
<tr>
<td>Ideas on uses or values of abstracts</td>
<td>Clear &amp; extended</td>
</tr>
<tr>
<td>Knowledge about where abstracts are found</td>
<td>Very narrow</td>
</tr>
<tr>
<td>Knowledge about abstract genre</td>
<td>Specific</td>
</tr>
<tr>
<td>Experience in writing abstracts</td>
<td>Experience of writing abstracts in English</td>
</tr>
<tr>
<td>Reasons for choice of writing abstract in English</td>
<td>To improve English</td>
</tr>
<tr>
<td></td>
<td>To publish in all kinds of journals</td>
</tr>
<tr>
<td>Perception of abstract writing task</td>
<td>Not difficult (Rank 1)</td>
</tr>
<tr>
<td>Problems experienced in writing the abstract</td>
<td>Vocabulary &amp; conciseness</td>
</tr>
<tr>
<td>Appreciation of value of abstract writing task</td>
<td>Limited</td>
</tr>
</tbody>
</table>
S1 presented a very simplistic definition of the abstract, but appeared to appreciate the purpose and rhetorical structure of the abstract better. At the interview she revealed that the knowledge was obtained from a journal guide she read before writing the abstract. In contrast, S2 appeared confused with the definition and use of the genre because he had merely read several papers to deduce some ideas on what to include in the abstract. Apparently, both subjects possessed different levels of EK.

Both subjects claimed to have experience writing abstracts, but it was interesting that they both perceived writing abstracts in English to be a language exercise.

Both subjects thought the writing task to be simple for the following reasons. S1 claimed that her knowledge of the full text made the task easy, while S2 did not think the abstract important or difficult to write. They only claimed minor problems in linguistic and lexical choices of expressions.

The interviews on their writing process showed that both did undergo a simple process from the preparation stage to the finished product (Table 2). However the strategies employed were not those of effective abstract writing (Creminns, 1996). Both subjects invested little time, put in minimal effort and adopted short cut strategies in writing the abstracts.

Both subjects claimed to have no difficulty in starting to write, did not spend much time planning the writing exercise, and produced the first drafts within minutes. These behaviours again contradicted the conventions of effective abstract writing process advised in literature. For example, Creminns (1996) advised that abstract writing involves a process of thorough reading and thinking through of the full document before selecting the most salient information to include.

Both subjects made no revisions until the first drafts were completed. Subsequently, S1 made revisions expected in the process of abstract writing, such as adjusting length, restructuring sentences and making lexical and grammatical choices to satisfy the brevity condition of the genre. The author’s instructions prescribed by the journal had helped her awareness about the qualities required of the genre. In contrast S2 merely made minor grammatical changes.

The genre analyses of the sample abstracts were completed using the third instrument (Appendix C). The instrument comprised two checklists formulated from the advice and guidelines in textbooks and adaptations of Swales’ model. In the results, (Table 3) S1’s sample contained four structural elements or moves of the conventional abstract: (Move 1) objective, (Move 2) method, (Move 3) results and (Move 4) conclusion indicating that she had a basic knowledge of the genre rhetoric. The information was fairly well structured. However, cohesive expressions were lacking in the text. An element of imprecision was noted between the title and the body text. It was felt that consultation with the specialist informant or supervisor was warranted before passing judgment. Her abstract had been written in fairly comprehensible full sentences, in the third person and keeping to conventional tense shifts of present tense for the objective, past for the method, present for the results and present for the conclusion. However, contrary to advice to use the active voice the writer used predominantly the passive.
<table>
<thead>
<tr>
<th>Writing process</th>
<th>Respondents’ profile</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td></td>
</tr>
<tr>
<td>Objective for writing the sample</td>
<td>To mention objective, report work done, present conclusions</td>
</tr>
<tr>
<td>Time spent on writing the first draft</td>
<td>Follow-up from completing paper</td>
</tr>
<tr>
<td><strong>Preparing to write stage</strong></td>
<td></td>
</tr>
<tr>
<td>Decision to begin writing</td>
<td>Immediately after completing paper</td>
</tr>
<tr>
<td>Global preparations</td>
<td>Referred to journal guide Read over full paper</td>
</tr>
<tr>
<td>Early emotions</td>
<td>Irritated by requirement of abstract Concerned about length constraint Refused to count no. of words No writers’ block</td>
</tr>
<tr>
<td></td>
<td>Confused by uncertainty of requirements of abstract; No writers’ block</td>
</tr>
<tr>
<td><strong>Prewriting stage</strong></td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td>Made brief outline of some notes for expansion</td>
</tr>
<tr>
<td>Time spent on planning</td>
<td>Did not spend much time thinking about it. Few minutes</td>
</tr>
<tr>
<td></td>
<td>A few minutes</td>
</tr>
<tr>
<td><strong>Writing stage</strong></td>
<td></td>
</tr>
<tr>
<td>Production pattern</td>
<td>Linear pattern Wrote continuously Completed draft in one sitting</td>
</tr>
<tr>
<td>Information transfer strategies</td>
<td>Followed outline and notes Expanded on notes Looked at sentence structure Choose the best words to write</td>
</tr>
<tr>
<td></td>
<td>Took outline of full paper and borrowed sentences from Introduction and Conclusion. Put them together for the abstract</td>
</tr>
<tr>
<td>Revision during writing process</td>
<td>Revised only after completion Claimed made 3 revisions of grammatical accuracy</td>
</tr>
<tr>
<td>Problems during writing</td>
<td>Expressing whole work in a few sentences clearly and briefly Choice of best words</td>
</tr>
<tr>
<td></td>
<td>Only some minor grammatical changes Rushed for time.</td>
</tr>
</tbody>
</table>
S2's sample displayed a structure that included two non-conventional elements: a paragraph on the background problem, and another on establishing the field and specificity of his study, parts which he later admitted taken from the Introduction section of his paper. It was only in the third paragraph that the conventional structure of the abstract genre was apparent, consequently, marring the exhaustivity quality of the text surrogate. Moreover, the cohesiveness of the text was affected by the absence of logical linkers. There was a mixture of active and passive verbs. Similarly, it was observed that the title did not reflect the writer’s objective precisely, and consultation with the specialist was relevant.

The next step in the procedure was to discuss the investigator’s perceptions of the sample texts with the respective supervisors. Both supervisors accepted the investigator's concern for the imprecise titles and made some changes to the original ones. Similarly some word choices were discussed. A significant observation by both supervisors was the insufficient content in the samples that they claimed marred the effectiveness of the abstract. The rest of the paper will discuss the significance of these preliminary findings.
Discussion

The pilot study had set out to investigate the EK and production or performance skills of two ESL research scholars with regards to the abstract genre. The main aim was to support the hypothesis that there is interdependency between EK and process, and that the effect would impinge on the quality of the product. Although there are limitations in the study, which would be discussed later, some generalizations may be made with respect to the proposed research.

Subjects S1 and S2 displayed different levels of EK because S1 read the author’s instructions and was better informed about what information elements to include for the abstract strengthening the support that EK perhaps made the difference. By extension, it could be assumed that if novice ESL RS are provided with the rules of academic writing early a lot of time wastage, fumbling and frustration could be avoided.

Moreover, apart from just genre knowledge, a comprehensive EK about the uses and values of the abstract would influence the attitudes and process of the writers. Instead of perceiving abstract writing as a language improvement exercise writers should be focused on producing effective abstracts that are accurate and exhaustive representations of their full documents so that they serve the purpose of effective screening devices in the ISP systems. Improved EK about the art of abstracting should also encourage novice writers to take the process of carefully reading over of the original document, and thinking critically about what to select as salient information before the writing process begins seriously. In the study both subjects had treated the abstract writing as a simple task and spent only minutes in its production without much thought for planning and revision except for some concern for surface editing. Nevertheless, results did show that S1 who had some formal instructions from reading the author’s instructions performed better than S2 who merely deduced from intuition.

However, the linguistic ability of the writer affected the effectiveness of the product despite the awareness of rhetorical structures as indicated in the work of S1. The results of the grammatical analysis showed that both samples demonstrated several lexico-grammatical problems and displayed inadequate use of cohesive features. Such preliminary findings seem to indicate a degree of interdependency between EK of the form and linguistic ability. It would support the assumption that novice Asian ESL scholars could benefit from an early induction course on the definition, purpose and values of the abstract for scholarly communication but that the stylistic art of academic writing must also be developed simultaneously.

Next, the results appear to make a case for collaboration with the specialist informants. In this study they were the respective supervisors of both subjects. The rational for consulting them arose from the investigator’s concern with authentication of the knowledge domains of the subjects’ disciplines. There was the desire to avoid misrepresentation and to verify the exhaustivity of the abstracts against the original document. The supervisors’ comments and content advice helped to complete the analyses of the products, lending further support to Evan’s and Bhatia’s recommendations that in developing ESL programs or in genre analysis procedure there is relevance for collaboration with the subject specialist (Evans, 1995; Bhatia, 1993). It also illustrated how the language teacher alone may not be sufficiently...
equipped to help novice writers with writing in their disciplines. Expert input is essential for helping to fill the gaps of information that the language expert is unable to supplement to ensure that writing is exhaustive and accurate in both language and information transfer.

However, it must be noted at this stage that although these results and discussions do reflect useful observations of significance they are inconclusive and must remain preliminary. Furthermore, these preliminary findings reveal that the research methodology needs to be fine-tuned in terms of its instruments of measurement and procedure, and that the parameters or scope of the research need to be more focused and defined. Limitations of the pilot study are discussed next.

**Limitations of the Pilot Study**

First, the study involved only two subjects, and the findings are thus too restrictive. A larger corpus of abstract sample is needed for more reliable findings. During the face-to-face meetings and the administration of the questionnaires, some problems with these instruments were noted. For example, in the knowledge indicator questionnaire (Appendix A) some items need to be more explicitly phrased to avoid subjects’ misinterpretations and provision of undesired answers, especially in view of their level of language comprehension.

The pilot study had been exploratory and included several parameters for investigation, and the aim was for further refinement dependent on the application of the data collection procedure and results obtained. Findings conclude that the scope of study need to be better defined and narrowed for improved methodology control. Related to it, the method of data collection would need modifications. For example, the reflective method of probing for the writing process encountered reliability problems.

As a final step in measuring quality the samples abstract should also be verified against the full document. This step is essential for verifying the accuracy and exhaustivity qualities of the text surrogate.

Finally, although the study set out to establish a correlation between EK competency and performance there was no statistical treatment to support the subjective claims concluded from these preliminary findings.

**Future Work**

A corpus of thirty sample abstracts by Asian ESL research scholars will be used for the genre analysis to determine the their abstraction skills in comparison with academic literature prescriptions. The sample subjects would be provided with the process inquiry questionnaire as soon as they have accepted the invitation to participate in the study and before they hand in their abstract sample. All thirty subjects would be invited to the face-to-face meeting with the investigator and the EK indicator questionnaire would be administered followed by an informal discussion of the scholars’ background, adjustment problems, and general attitudes. The meetings will be recorded and transcribed. The rhetorical and stylistic structures of the sample abstracts will be analysed using the revised instruments, and consultations with
specialist informants would be conducted for verification purposes. The results of the analyses will be collated and statistical treatment may be applied to correlate the EK competency of the writers to their performance.

Conclusions

Although the pilot study surfaced several weaknesses in the methodology and the findings should only be viewed as preliminary it has achieved some significant objectives. First, the study has fulfilled to some extent the need recommended by Bhatia (1993), that is, to extend beyond Swales’ surface analysis of the rhetorical and linguistic conventions of a genre, which was more descriptive than explanatory. It has extended to focus on the psychological orientation of the genre. By this orientation Bhatia suggested that more attention be paid to the tactical aspects of the genre construction - how an individual makes strategic choices in his writing in order to communicate his intentions. In this sense, the study has investigated the abstract writing process of the ESL writer.

The study extends beyond the current research interests in the abstract as represented by the works of Santos, Keogh and Meyer. It went beyond the genre analysis of abstract corpora written by native writers in academic sources to investigate the cognitive and psychological processes of producing the abstract by non-native writers who face greater challenges in the process of scholarly communication.

The study also contributes to the interdisciplinary interests of researchers in the fields of linguistics and information studies. While the former interest lies in examining the macro and microstructures of a text, the latter is specifically focused on gauging the effectiveness of the genre in terms of information seeking and information retrieval. This is especially in view of the concern over the current situation of information overload, and how information seekers need to sift through rather than amass information.

The findings of the study indicate possible pedagogical implications for planning and teaching the academic writing programme for the ESL research scholars at the investigator’s university. They seem to support the relevance for early teaching of explicit knowledge of rules and conventions of the genre of academic texts as well as creating greater awareness among novice writers in the significance and values of scholarly communicative purposes with the specific discourse community.

References


Appendix A

Inquiry on Knowledge of Abstracts and Abstracts Writing

Definition and Knowledge of the Abstract
1. Provide a definition for the abstract.
2. State your knowledge on the purpose of abstract writing.
3. State your knowledge on the uses of the abstract.
4. State your knowledge on where you find abstracts.
5. What information do you put into an abstract?

Experience in Writing the Abstract
1. How many abstracts have you written so far? _____
2. Are they all written in English? Yes/No
3. If not, how many are written in English? ______
4. Are these abstracts for conference papers/journals/first year reports/dissertation/experimental reports/others?_______?
5. Do you usually have problems in writing abstracts?
6. If so, what are they?
7. How do you rate the writing difficulty of abstract in relation to writing the rest of the research article? 1 2 3 4 5 (1 for not difficult; 5 for most difficult)
8. What are the reasons for your ranking?
9. In the process of writing the abstract what did you learn?
10. If given a choice to write the abstract of your final dissertation, would you prefer to write it in English or in your native language?
11. For your answer to Q 10, give your reasons.
Appendix B

Inquiry on Abstract Writing Process

General
What is your specific objective of this writing?
How long did you take to write this abstract?
Did you write it in one sitting?
If not, how many times did you take?

Getting ready to write
When did you decide that you were ready to write this abstract?
How did you prepare to write?
Did you write it before or after writing the whole paper?

Prewriting
Did you prepare an outline, or notes etc. to help you start writing?
If you did, how closely did you follow your plans?
If you didn’t how did you proceed to write?
When did you actually begin to put pen on paper to write?

Writing
Were you able to complete writing your abstract at one sitting?
Describe your writing process.
Give reasons for this writing behavior/pattern.
Did you have problems during the writing process?
If so, what are they?
What did you do to overcome them?
Did you get others to help in your writing?
If so, who helped your?

Revision
Did you make changes as you were writing?
What changes did you make?
For this question prompts were given:
Grammatical Paragraph restructuring
Word choice Whole text reformulation
Sentence restructuring Others ________ ?
How many drafts did you write before you were satisfied?

Stopping to write
When did you decide to stop writing?

Reflection
After the final version, did you go back to make more changes?
If you did, how long was it after that?
What changes did you make?
Appendix C

The Genre Checklist (Rhetorical structure)
Genre: The effective abstract includes the following structural features:

<table>
<thead>
<tr>
<th>Structural Description</th>
<th>Text-genre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Move 1</td>
<td></td>
</tr>
<tr>
<td>Purpose/Objective:</td>
<td>State the primary objective of the study</td>
</tr>
<tr>
<td>Move 2</td>
<td></td>
</tr>
<tr>
<td>Methodology:</td>
<td>Describe techniques or approaches – identify new techniques, methodological principles, and range of operation and accuracy obtainable</td>
</tr>
<tr>
<td>Move 3</td>
<td></td>
</tr>
<tr>
<td>Results:</td>
<td>Describe findings as concisely and informatively as possible. Priority should be given to new and verified events, findings that contradict previous theories, findings that are relevant to a practical solution.</td>
</tr>
<tr>
<td>Move 4</td>
<td></td>
</tr>
<tr>
<td>Conclusions:</td>
<td>Describe the implications of results, esp. those related to the objective of study. Conclusions can be associated with recommendations, evaluations, applications, suggestions, new relationships, and hypotheses accepted or rejected.</td>
</tr>
<tr>
<td>Move 5 (optional)</td>
<td></td>
</tr>
<tr>
<td>Other information:</td>
<td>Include findings incidental to the main purpose of the document but of value outside its major subject areas. They must not distract attention from the main theme.</td>
</tr>
</tbody>
</table>

The Linguistic Checklist

a) Language of an effective abstract
   - Use verbs than nouns
   - Use verbs in active voice whenever possible.
   - Avoid noun equivalents
   - Present tense for results and conclusions
   - Past tense for method
   - Third person
   - No 'boilerplate' or 'telescope' expressions
   - Mixture of active and passive voice (some advise active voice)

b) In addition to the above guidelines the samples will be examined for surface effectiveness including grammatical and structural accuracy and use of cohesive features.