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STUDENT RESEARCHERS' CITATION BEHAVIOR

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ABSTRACT

Research in recent years has demonstrated that construction of knowledge is a social process. Explicit reference to previous research, or citation, is one feature of this interactivity. Citation is used to credit sources, to demonstrate writers' familiarity with the field, to support writers' arguments, or to "create a research space" [Swales, J., (1990). *Genre analysis: English in academic and research settings.* Cambridge: Cambridge University Press]. Important as it is, citation is often found difficult by student researchers. The current study investigated first-year graduate students' citation behavior. Eighteen student papers were collected for analysis. Aspects examined include number of citations, surface forms of citations, presentation of cited work, and citations in rhetorical sections. The analysis shows that students used far fewer citations than expert writers. Their preference for summary and generalization exhibited a similarity to more experienced researchers'. However, students were found to rely on long quotes when presenting cited information, a citation strategy less commonly adopted in the humanities and social sciences. Implications of the findings are discussed at the end.

Key Words: academic writing, citation analysis, genre analysis, graduate student writing

CITATION IN RESEARCH WRITING

Research in recent years has demonstrated that construction of knowledge is a social process (Bazerman, 1988; Hyland, 2000). Reference to previous research, or citation, is one explicit feature of this interactivity. Citation is a rhetorical element of multiple purposes. In an advanced writing textbook targeted at non-native graduate students, Swales and Feak (2004) enumerate the following theories of using

citations in academic writing:

a. Citations are used to recognize and acknowledge the intellectual property rights of authors.
b. Citations are used to show respect to previous scholars.
c. Citations operate as a kind of mutual reward system.
d. Writers use citations to give their statements greater authority.
e. Citations are used to demonstrate familiarity with the field.
f. Citations are used to create a research space for the citing author. Citations point the way to what has not been done and so prepare a space for new research.

These various functions of citation demonstrate that reference to previous work is not only mandatory but also strategic. In fact, among the six theories listed above, the last three illustrate vividly the strategic operation entailed in citation practices. As Hyland (2000) points out, the construction of academic knowledge is a social process, in which researchers seek to establish the novelty of their argument, to make an appropriate level of claim, and to situate claims in a disciplinary context (p. 12). An obvious example is the conventional practice of identifying a gap in the related literature (Swales, 1990). In such a practice, a researcher usually makes explicit reference to previous work, and then refutes it, or shows that some work has been left undone, so as to make preparations for advancing her position.

A number of aspects have been addressed in citation studies. For example, Swales (1990) categorizes citations as integral and non-integral. Integral citations refer to the instances where the researcher's name appears as part of the sentence, e.g., as a subject or a passive agent. On the other hand, non-integral citations consist of references in which the researcher's name appears in parentheses or is represented by a superscript number. These two forms of citation can be used to show the degree of emphasis placed on a certain reference. For example, integral citation seems to give greater prominence to the cited author, while non-integral citation may imply an emphasis placed on the reported message (Hyland, 2000).

Another facet of reporting is the way academic writers incorporate the cited material into their writing. Possibilities range from "extended discussion" to "mandatory acknowledgement" (Hyland, 2000). These different forms of source incorporation, as represented in quotes, block

quotes, summary/paraphrase and generalization, not only show explicitly the extent the original language is duplicated in one's own work but also represent the social relationships between the writer and the cited author. Hyland's study (2000) reveals that "summary" is used predominantly in research articles, while quotes and block quotes are kept at a minimum to allow the writer to "emphasise and interpret the comments they are citing" (p. 26).

Still another topic of investigation is use of citations in different rhetorical sections of research writing: Introduction, Methods, Results, and Discussion. The widely-known hour-glass diagram (Hill, Soppelsa, & West, 1982, see also Swales, 1990) of a research article's overall organization indicates a tendency to address the general field in the Introduction. The article then narrows down to the particular study reported, before moving from specific findings to an evaluation of the study by comparing results with the literature. Therefore, it can be assumed that citations will be found more frequently in the Introduction and Discussion. This assumption has also been confirmed by Thompson and Tribble's investigation (2001) of Agricultural Botany theses.

STUDENT RESEARCHERS' CITATION PRACTICES

In order to claim for themselves a place in the disciplinary community, researchers often need to demonstrate that they have made significant contributions to the field (Hyland, 2000). This knowledge construction process usually involves contextualizing one's own research and engaging in ongoing scholarly communication by citing and evaluating references appropriately. Therefore, learning to use citation appropriately has been recognized as an important part of acculturation into the discourse community. In a case study of three doctoral students, Dong (1996) describes how professors imparted disciplinary knowledge through instruction on citation use and how students developed different citation strategies to construct their knowledge claims. The advisors in Dong's study provided additional citations, fine-tuned students' dissertation texts to ensure that the cited information was presented accurately. On the other hand, the doctoral students learned to add citations to support argument, delete non-relevant citations and soften tone in negational citations. However, the study also shows that doctoral students often have difficulty with contextualizing their research and with selecting appropriate citations.

Also focusing on dissertation and thesis writing tasks, Pecorari (2003) investigated the relationship between student texts and the sources that they cited. This comparison revealed students' problematic use of sources, although she argued for multiple understandings of the issue and considered various possible factors involved in the seeming act of plagiarism, such as intentional deception, patchwriting, cultural influences, and students' own objectives and priorities. Expanding on this study, Pecorari (2006) further explored three occluded features of academic writing in student theses and dissertations: use of secondary source, signaled quotation, type and age of the source referred to. Her investigation reveals that students might have conformed only superficially to disciplinary expectations.

The above three studies have all focused on doctoral or master's theses or dissertations, which represent arguably students' learning outcomes in the disciplines. Yet, problems with source or citation use still abounded in these student works. Then, it may not be surprising to find that students at less advanced levels, undergraduates or new graduate students, have even bigger problems in their citation practices. Drawing an analogy between research writing activities and courtship rituals, Rose (1996) argues that either too much, too little or inappropriate use of literature can potentially constitute problems in the relationship between the writer and the discourse community, thereby betraying students' inexperience in research writing. He enumerates common problems in students' citation practices as follows:

- Students may rely too much on their sources and therefore can not establish the significance of their own claims;
- They provide unnecessary citations and reveal their inability to distinguish between irrelevant and essential literature;
- They do not provide necessary citations to establish the context for their work;
- Their integration of cited sources are ineffective;
- They use an unconventional citation style, thereby revealing either their lack of familiarity with or respect for academic conventions. (pp. 42-43)

While Rose's (1996) list encompasses various aspects of student citation and source-using problems, Thompson and Tribble (2001) focus more exclusively on students' linguistic devices signaling use of sources.

Problems in students' use of citation signals included: a) lack of variety of citation types (e.g., the repeated use of "According to . . . "); b) lack of linguistic variety and inappropriate selection of verb; c) absences of certain categories such as non-integral citation; d) over-use of non-citational references to authors/authorities (p. 100).

While Rose (1996) and Thompson and Tribble (2001) represent pedagogical observations of student citation practices, some empirical research has also been conducted. Three issues in this body of literature will be examined: selection of sources, presentation of source information, and mechanics of bibliographic documentation.

As using sources is an important feature in most graduate writing tasks (Connor & Kramer, 1995; Samraj, 2004) and some undergraduate assignments (Currie, 1998; Spack, 1997), a number of studies have been conducted on how student researchers evaluated and selected sources. Burton and Chadwick (2000) surveyed college students (mostly undergraduates) for their source use patterns in research writing and criteria in citing Internet and library sources. They found that accessibility ranked as the most important among source evaluation criteria. In other words, students' use of source was rather indiscriminate probably due to the temporary nature of most college assignments and students' consequent lack of involvement in them. Also addressing students' source use patterns, Davies (2003) examined the effect of the Internet on student researchers' citing behavior. He noticed in term papers submitted over the years a significant increase in citation numbers but a decrease in the use of academic sources. However, his study also found that citation guidelines provided by professors contributed to not only students' increasing use of scholarly sources but also accuracy in students' Web citations.

The second, and perhaps also the most frequently examined, issue in students' citation practices is presentation of source information. In fact, students have often been found to copy whole sentences or paragraphs without any references or source acknowledgement. While this omission of citations or inappropriate use of source materials has conventionally been referred to as plagiarism, studies have revealed the complexity of this apparent source misuse (Angelil-Carter, 2000; Barks & Watts, 2001; Currie, 1998; East, 2005; Howard, 1995; Pecorari, 2003; Pennycook, 1996). Several factors have been identified to explain for students' unintentional copying. They included different cultural practices, lack of language proficiency, and a natural process of language learning. In

particular, students new to academic discourses, L1 and L2 students included, are often found to be constrained by their limited linguistic repertoire and inadequate ability to summarize or paraphrase (Currie, 1998). Therefore, writing researchers have investigated L1 and L2 students' ability to summarize or paraphrase (Keck, 2006; Shi, 2004) and suggested that L2 student should be provided with more examples and instructions concerning how to summarize and acknowledge the source texts appropriately.

Researchers have also found that L2 students are often confused about the rules regarding plagiarism (Currie, 1998; East, 2005). Sometimes the confusion may arise from different educational practices between the new academic culture and their home society (Barks & Watts, 2001; East, 2005; Pecorari, 2003). There are times, however, when the subtleties are rather obscure and therefore difficult to distinguish. An exercise from Swales and Feak's academic writing textbook may serve to illustrate this point. In this exercise, students are asked to study the following writing approaches and to distinguish which may constitute plagiarism and which will generate acceptable original work:

1. Copying a paragraph as it is from the source without any acknowledgment.
2. Copying a paragraph, making only small changes such as replacing a few verbs or adjectives with synonyms.
3. Cutting and pasting a paragraph by using the sentences of the original but leaving one or two out, or by putting one or two sentences in a different order.
4. Composing a paragraph by taking short standard phrases from a number of sources and putting them together with some words of your own.
5. Paraphrasing a paragraph by rewriting with substantial changes in language and organization, amount of detail, and examples.
6. Quoting a paragraph by placing it in block format with source cited. (p. 126)

Among these six approaches, probably number 6 is the only textual borrowing strategy unquestionably free of plagiarism. Number 5 may be acceptable if proper acknowledgment is made to the author or text. Most academic writers will agree that students adopting the first three strategies have failed to follow academic conventions. Number 4,

however, merits more discussion. Borrowing short standard phrases has commonly been adopted as a survival strategy by L2 students (Barks & Watts, 2001), and can probably be regarded as a product of the learning process in which L2 writers undertake the difficult task of appropriating academic discourses (Bartholomae, 1985).

Given the above-mentioned problems in determining plagiarism cases, researchers have sought to distinguish between different degrees of textual borrowing. For example, Campbell (1990) categorized students' source use as quotation, exact copy, near copy, paraphrase, summary, or original explanation. Shi (2004) classified textual borrowing examples as "with no references," "with references" and "with quotations." The first two categories were further divided into three subcategories to indicate the extent of word borrowing, such as "exactly copied," or "modified slightly by adding or deleting words" (p. 178). Keck (2006) also developed a taxonomy of paraphrase types to distinguish among "near copy," "minimum revision," "moderate revision," and "substantial revision." It is worth noting that in these studies, "[b]orrowed words and phrases enclosed in quotation marks" (Keck, 2006, p. 267), or direct quotes, were largely left uninvestigated, mainly because use of quotation marks plus a reference to the source author has satisfied the academic requirement for source acknowledgement. However, quotations represent "the least amount of integration" (Campbell, 1990, p. 217) in the sense that the original wordings are transplanted into one's own text without modification. More sophisticated writers have been found to prefer "summary" rather than "direct quotes" because the former allows the writer more flexibility to construct argument (Hyland, 2000). Therefore, student use of quotations merits more attention.

The third and a less visited issue in student citation behavior is the mechanics of bibliographic documentation. For example, references in the bibliography are arranged alphabetically; publication dates and author names are provided in an accurate and complete way. Bibliographic presentation may appear to be mechanical and easy to learn, yet, the attention that it receives in EAP textbooks (e.g., Jordan, 1999) indicates that it is an essential skill to acquire in the process of research writing learning. Although journals and publishers within one single academic discipline, such as applied linguistics, may observe various citation styles, basic principles can still be found across these bibliographic conventions. Lynch and McGrath (1993) therefore suggest five Cs in preparing

bibliography: completeness, clarity, consistency, eConomy, and care. They argue that students should use these five Cs as guiding principles for documentation so that they can fulfill important functions of bibliography: "to facilitate subsequent research and to establish the credentials of the writer as a member of the academic community" (p. 221).

While empirical studies have been conducted on citation use in theses and dissertations (Dong, 1996; Pecorari, 2003, 2006), very few studies have addressed first-year graduates' citation practices. Many students first learn to use citations after they begin their graduate student career. As citation is an important feature in research writing, it would be valuable to observe how graduate students perform in this particular aspect at the initial stage of induction into the academic discourse community. The current study, therefore, aims to explore first-year graduate students' citation practices with respect to the number of citations, the syntactic structures and forms adopted to present cited information, and the mechanics of bibliographic documentation.

METHODOLOGY

Participants

The participants of the study were 18 first-year graduate students enrolled in an in-service TESOL master's program at a national university in southern Taiwan. They were all certified teachers in primary or secondary schools. Over two-thirds of the students majored in English in college, while the others graduated with a degree in education or other humanities fields. Most of the students had very limited experience with research writing.

At the time of the study, these students were taking a one-semester required course, "Research Methods," which aimed to introduce students to the basics of academic research in the field of language learning and teaching. In addition to introduction of various research methods and techniques, a considerable portion of the course was devoted to developing students' research writing skills. A textbook, *Academic Writing for Graduate Students* (Swales & Feak, 2004), was assigned for reading. Chapters and tasks from the book were selected for class discussion to raise students' awareness of research writing conventions. At the end of the course, the students were required to submit a research paper based on a small-scale study of their own design.

The Corpus

The corpus compiled for the current study consists of the 18 student papers submitted for assessment. These papers generally followed the IMRD (Introduction-Methods-Results-Discussion) organizational pattern introduced in Swales and Feak (2004). Details of the student corpus are provided in Table 1.

Table 1. Details of the Student Corpus

No. of Texts	**Length of Texts** (in words)	**Average Length of Texts** (in words)	**Total Size of Corpus** (in words)
18	2,334-4,229	3,119	56,138

Data Analysis

These student papers were analyzed quantitatively for surface citation features, such as number of citations, syntactic structure of citations, and form of presentation of cited work. These various aspects of citations were captured manually. An experienced applied linguistics researcher was invited to code one-third of the corpus. The inter-rater reliability was determined by the correlation coefficient to be .92. In addition, inaccurate citations were examined. Common patterns in student citing behavior were identified and individual differences noted. Finally, comparisons were made, where appropriate, between the findings from the current corpus and those in previous studies, such as Hyland (2000), and Thompson and Tribble (2001).

RESULTS

A total of 351 citations were identified in this student corpus. The following is an analysis of various aspects of citation use noted in the student texts.

Number of Citations

The results show that there existed a great variety among student papers in terms of citation numbers. In average, the students used 19.5 citations in their papers, with a range between 4 and 40, a number far

fewer than in published articles studied by Hyland (1999). Applied linguistics research articles in Hyland's corpus employed 10.8 citations per 1,000 words, while these student texts used slightly over half as many citations (6.3 per 1,000 words).

Citations in Rhetorical Sections

In terms of RA rhetorical sections, Introduction, Methods, Results and Discussion, the student texts showed similar variation as in Thompson and Tribble (2001), where heavy use of citation in Introduction and Discussion was contrasted with relatively few instances of citation in Methods and Results. The student researchers used, respectively, 8% and 2.3% of the total citations in Methods and Results, which was in accordance with the widely accepted conception that these two RA sections tend to be shorter, narrower, more fact-oriented (Swales & Feak, 2004), and, therefore, requiring fewer outward references. However, in Thompson and Tribble's corpus, frequency of citation use in Discussion (10.1 per 1,000 words) was quite comparable to that in Introduction (15.6 per 1,000 words), while 7 student texts in my corpus did not cite any sources in the Discussion section at all. Table 2 shows the number and percentage of citations in various rhetorical sections.

Table 2. Citations in RA Rhetorical Sections

Section	Number	Percentage
Introduction	269	76.6
Methods	28	8.0
Results	8	2.3
Discussion	46	13.1

Syntactic Forms of Citations

Regarding integral and non-integral structures, it seemed that the students did not have a clear preference for either of the two. In total, 46.4% of the sources were referred to in non-integral forms, while students used integral structures with 53.6% of the citations (see Table 3). This result is different from Hyland's findings (2000), in which applied linguistics scholars used nearly twice as many non-integral as integral citation (65.6 vs. 34.4). The discrepancy may suggest that integral structures are easier to grasp and control than non-integral structures, and

therefore preferred by less experienced writers.

Table 3. Syntactic Forms of Citations

Syntactic Form	**Number**	**Percentage**
Non-integral	163	46.4
Integral	188	53.6

A further examination into the forms of integral citations reveals that approximately three-fifths of the integral sentences (60.1%) in this corpus featured the cited author in the subject position (see Table 4). Thus, the students' choice of syntactic forms seems to concur with that of expert writers in Hyland (2000), in which a similar percentage (58.9%) of integral citations in applied linguistics research papers was found to contain the cited author in the subject position.

Table 4. Syntactic Positions for Integral Citations

Syntactic Position	**Number**	**Percentage**
Subject	113	60.1
Passive	13	6.9
Adjunct	39	20.7
Noun-phrase	23	12.2

In addition, an analysis of individual students' citation use shows that the students tended to rely on one particular syntactic form when incorporating other voices into their writing. For instance, 5 out of the 18 students chose to place over 80% of their citations in the subject position, as illustrated in the following example:

(1) More recently, Mayer (1999) investigated educational multi-media explanations including science text and illustrations. (S18)[1]

Another example is from S11, in which 9 out of the student's 12 citations were framed in the same adjunct agent structure, "according to":

(2) According to Brown (2001), Finocchiaro and Brumdit (1983), Richards and Rogers (2001), and Wilkins (1976), CLT should be referred as an approach instead of a method. (S11)

The following excerpts provide more examples of various syntactic forms of citations included in the corpus.

(3) (non-integral) Eventually, information-gap type is considered the most beneficial one (Foster, 1999). (S5)

(4) (integral, passive) Classroom based SLA research over the last 15 years, such as that done by Pica & Doughty (1985), and Pica et al., (1987) point to the value of two-way over one-way tasks in generating negotiation of meaning, with an increase of almost 10 times the amount of interaction in group work over teacher-fronted class situations when interaction was required, rather than optional. (S1)

(5) (integral, noun-phrase) However, Zhicheng's (1992) research findings showed that test-taking strategies did not have a significant influence on the comprehension scores. (S13)

Presentation of Cited Work

Four forms of presentation were distinguished in this study: short direct quotes, block quotes, summary/paraphrase and generalization. In Hyland (2000), short direct quotes referred to phrases of "up to six or eight words" in original wording, while "extensive use of original wording set as indented blocks" (p. 26) were categorized as block quotes. Adopting instructions from the *Publication Manual of the American Psychological Association*, this study defined block quotes as material of "40 or more words" quoted from another work (*American Psychological Association*, 2001, p. 117), while quotes less than 40 words were counted as short quotes. Table 5 displays the number and percentage of citations in the four forms of presentation.

Table 5. Presentation of Cited Work

Type	Number	Percentage
Quote	49	14.0
Block quote	6	1.7
Summary/Paraphrase	231	65.8
Generalization	65	18.5

Similar to Hyland's applied linguistics corpus, summary/paraphrase (65.8%) was the most preferred among the four forms of presentation, as in (6) and (7).

(6) Guion, Flege, Liu and Yeni-Komshian (2000) found evidence that speaking rate may be a reliable index of overall oral proficiency. (S3)

(7) Without the ability to comprehend, a person cannot learn information on his or her own and enjoy reading (Dewalt, Winkler, & Rubel, 1992). (S16)

Generalization (18.5%) ranked second, constituting nearly one-fifth of citation instances in the corpus, as in (8).

(8) On the other word, students incorporate peer suggestions less because they do not believe that their peers, who are not English native speakers and are still in the process of learning English, have enough knowledge and ability to critique their work or to give effective and useful suggestions to their drafts (Carson & Nelson, 1996; Mangelsdorf, 1992; Zhang, 1995).

At the same time, these students used much more direct quotes, which constituted 14% of the total citations, as compared to 8% in Hyland's corpus. Upon examination, however, these direct quotes merits more attention. It was found that these students tended to quote long phrases or sentences, often ranging between 20 and 30 words, with several instances reaching over 35 words. One obvious example was a passage from S18:

(9) The reason is just as Shahar (1996) mentioned in her study: "Three weeks into the project some students told the teacher that they did not wish to continue working together in groups, but rather as individuals. During the conversation that followed it became clear that all the 'rebels' were high-achieving students with impressive abilities who did not want to work in groups because group work would lower their grades due to the low-achieving students in the group." (S18).

Here the student researcher duplicated in the original language a 66-word passage that describes in detail student reaction to a pedagogical implementation, which expert writers will most probably choose to paraphrase or summarize, if they wish to incorporate the material into their own text. Thus, this long quote may be seen as an example of ineffective integration of cited sources that has been observed in students' citation use (Rose, 1996).

Inaccuracy in Student Citations

The analyses of the students' texts also reveal an inaccuracy problem in students' citation practice. One form of this inaccuracy is an inconsistency between end-of-text references and in-text citations. *The Publication Manual of the American Psychological Association* (2001) explicitly demands that text citations and reference list entries should be consistent. In other words, only sources cited in text should appear in the reference list, while all entries in the reference list ought to be matched with citations in the text (p. 215). However, it was found in the corpus that 10 among 18 student texts list in the reference list more sources than citations actually included in the text. An obvious example is S2, where 11 out of her 14 references were not mentioned in the paper at all. On the other hand, instances of missing references were found in 3 student papers (S1, S4 and S9). Other inaccuracy problems include spelling inconsistency (i.e., the same author spelled differently in in-text citation and in the reference list) and incomplete references (e.g., page numbers were omitted when book chapters were cited) and apparent copying mistakes (where an article title was followed by erroneous publication information).

DISCUSSION

Number of Citations

The results of the study show that these students used far fewer citations than expert writers. The difference can be attributed to the following reasons. Overall, the students were less experienced in doing research and, in particular, locating relevant literature. For example, they often failed to find more recent studies pertaining to their research focus. Although they had attended library workshops and were taught search

techniques and criteria for evaluating sources, they may still feel unfamiliar with the research task. Researchers gain expertise in accumulating and evaluating literature. Student researchers may need to learn through various means, such as extensive reading of research literature and guidance from supervisors and more seasoned researchers.

This study also found in the corpus an under-use of citation in the Discussion section. As evidenced in a previous section, the students' citation use frequency was remarkably low when compared with more mature student writing investigated in Thompson and Tribble (2001). In fact, nearly two-fifth of the student texts (39%) did not include any citations in the Discussion section. This finding seems to indicate that students may have failed to grasp one important communicative purpose of the Discussion section: commenting on results by interpreting and comparing results with literature (Yang & Allison, 2003). Instead, their interpretations of results were more often based on intuition or personal experience. While this form of interpretation is legitimate in itself, students' failure to suggest wider implications of the results with reference to previous research may reflect on their lack of knowledge in academic conventions, thereby damaging their effort to establish the worth of their works as well as their credibility as a researcher.

Finally, the time factor can play a crucial role in graduate students' use of citation. The student texts included in the present corpus were prepared and written as a term paper to be assessed at the end of a course. In order to meet the deadline, the students may have needed to rely more on "easy to find" and "easy to use" sources (Burton & Chadwick, 2000), such as course books, books available on campus, information available online. Besides, a limited range of writing time also means that they would have less time to digest, evaluate and incorporate properly previous research into their own studies.

Presentation of Cited Information

As presentation of information is critical in crafting the rhetorical power of an argument, more proficient writers tend to use their own words when rendering the original material (Hyland, 2000). The results of the study show that when presenting cited information, the student researchers mostly opted for summary/paraphrase and generalization. While this practice apparently concurs with that adopted by expert researchers (Hyland, 2000), the students' citing behavior was featured by a heavy reliance on the original wording realized in long quotes, a

"minority [citation] strategy" (Pecorari, 2006, p. 20) in the humanities and social sciences. As noted earlier, researchers have less frequently examined direct quotes, probably because direct quotes have apparently satisfied the academic requirement for source acknowledgement. Yet, extensive borrowing of original wording, as realized in long quotes, may undermine students' credibility as effective writers.

This overuse of long but ineffective quotes can be explained in several ways. First, it was possible that these non-native student researchers had difficulty in summarizing or paraphrasing source texts. This difficulty may be caused by students' failure to understand the text, which made it impossible for them to summarize or paraphrase the cited information. It was also possible that while text comprehension was not problematic, their inadequacy in advanced writing proficiency may have prevented them from adopting a more effective textual borrowing strategy, such as paraphrase or summary. Second, students may have interpreted that it was appropriate to quote as lengthily as necessary so long as clear signals were given as to the exact source of the quote. In fact, students may have used long quotes as a survival strategy to avoid being accused of plagiarism. Since enclosing borrowed words or phrases in quotation marks has met the requirement for source acknowledgment, it may be taken as a ready way out of the "tensions" between academic workloads and developing linguistic proficiency (Currie, 1998). In sum, students may be aware and willing to observe the academic conventions regarding using others' words or ideas, yet their citation behavior, particularly use of direct quotes, reveals a need for teacher guidance on presenting the cited information in a more strategic way.

On the other hand, the students' preference for long quotes is reminiscent of the patchwriting practice described in Howard (1995, see also Pecorari, 2003). A patchwriter copies from a source text, makes only surface changes (lexical or syntactical), but acknowledges the source. Howard stresses that patchwriting is "a transitional writing form" produced by inexperienced writers. Because patchwriting can help "the learner begin to understand the unfamiliar material" (p. 799), it can be seen as a stage that novice writers go through before they can master new discourse and successfully mix their own voice with that of the source. Students' reliance on long quotes as found in the current study may similarly be held as a "pedagogical opportunity" (ibid., p. 788), one that instructors can use to conduct discussion with students regarding the effect of different ways of presenting a source text.

Inaccuracy in Student Citations

Inaccuracy in student citations as found in the present corpus merits attention. While it was possible that some of the students were not aware that all and only the cited sources should be listed in the reference list, the inconsistency appearing in the student citations may have been caused by their lack of time and lack of discretion. This problem is understandable when we consider the time constraints imposed by the need to complete course assignments often within several weeks. Unlike theses and dissertations, which usually have to undergo numerous extensive revisions and minute corrections and which students have to defend to the satisfaction of examiners, term papers are generally written without input from professors and submitted as a finished product for assessment. Students may be unable or unwilling to invest extra time and effort on editing and improving their use of citation. However, as Davies (2003) rightly point out, accuracy in citation indicates a "viable link" to original works. Only by providing links that enable other researchers to access referred documents can we give proper credit to ideas and sustain scholarly communication (Lynch & McGrath, 1993). Mechanics of bibliographic documentation may appear trivial compared to other issues in conducting and writing up research, but students may need to be reminded that failure to attend to documentation details often reflects poorly on the overall value of one's research works.

CONCLUSION

This study has identified characteristics in student researchers' citation behavior. It has also noted the discrepancy between expert and novice researchers' citation practices. The differences spotted in the student texts included fewer citations, a reliance on long quotes, lack of variety in citation forms, and inaccurate citations. These differences indicate the students' inexperience with and lack of control over academic conventions. For example, if we consider the purposes of citations, such as demonstrating a familiarity with the field and positioning one's own study in the research tradition, an inadequacy of relevant citations will signal a writer's lack of disciplinary knowledge and therefore undermine the credibility of the researcher as well as the potential contributions of the study (Rose, 1996). Similarly, the lack of linguistic variety detected in the student texts suggests that students may

not be able to manipulate the available linguistic resources to present cited information in a way that can most effectively help build their arguments.

To help student researchers with citation use, a few approaches can be adopted. The first may be explicit instruction with the purposes of citation and various forms of citation that can help achieve these purposes. What should follow explicit instruction is awareness raising concerning the actual citation practice. Applied linguistics literature on citation such as Hyland (1999) can be introduced to students (Casanave, 2003) so that they see explicitly how citation conventions may vary across disciplines and how these differences are interpreted by educated readers. Students can then be encouraged to conduct their own analysis of citation in academic articles in their chosen fields. A number of areas can be addressed in students' analysis, such as citation use in different rhetorical sections as well as ways to present cited information and their effect. Next, students can be encouraged to provide feedback on the use of citation in their peers' works, focusing alternately on the areas that they have examined in the previous activity. Finally, they can be asked to revise their own works employing the insights obtained from these awareness-raising tasks (Thompson & Tribble, 2001).

The over-reliance on long quotes found in this study may also be dealt with using the following approaches. First, students can be made to compare the effect of quotations and summary. They can then be reminded of the convention that quotations are often adopted as a "minority [citation] strategy" (Pecorari, 2006, p. 20) in the humanities and social sciences fields. Discussion can also be initiated to understand students' motivations for using quotations. Some possible motivations include students' attempt to avoid plagiarism and their inadequacy in summary or paraphrase skills. Examples should be provided and workshops held to equip them with the necessary skills.

While suggestions above point to the importance of proper citation skills in research writing, we do not intend to ignore the more occluded facet of citation practice. As Pecorari (2006) found in her study, novice researchers may appear to conform to disciplinary conventions by the use of various citation signals, while actually consulting secondary sources without acknowledging so or copying phrases and sentences without using quotation marks or even noting the source. Indeed, to address these occluded citation features, their significance needs to be emphasized and more time and attention invested on both professors' and

students' parts so that graduate students learn the true spirit of citation practice.

This is a study focusing on applied linguistics graduate students, future research is thus needed in other study areas to find out if differences exist across academic disciplines. In addition, as this study investigates citation behavior based on a corpus of student writing samples, the researcher can only make assumptions and speculations about why and how students practiced citations. It would therefore be valuable to conduct follow-up interview research examining how student researchers decide on particular syntactic structures or forms to present cited information as well as what effects they aim to achieve by adopting various citation signals. In this way, we may start to build a full picture of graduate students' conception of citation.

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NOTES

1. These examples are taken from the corpus. The language is unedited. The code in parentheses (e.g., S18) refers to the specific student paper from which the example is taken.

REFERENCES

American Psychological Association. (2001). *Publication manual of the American Psychological Association* (5th ed.). Washington, DC: Author.

Angelil-Carter, S. (2000). *Stolen language? Plagiarism in writing*. Harlow, England: Longman.

Barks, D., & Watts, P. (2001). Textual borrowing strategies for graduate-level ESL writers. In D. Belcher & A. Hirvela (Eds.), *Linking literacies: Perspectives on L2 reading-writing connections* (pp. 246-267). Ann Arbor: The University of Michigan Press.

Bartholomae, D. (1985). Inventing the university. In M. Rose (Ed.), *When a writer can't write: Studies in writer's block and other composing-process problems* (pp. 134-165). New York: Guilford.

Bazerman, C. (1988). *Shaping written knowledge: The genre and activity of the experimental article in science*. Madison: The University of Wisconsin Press.

Burton, V. T., & Chadwick, S. A. (2000). Investigating the practices of student researchers: Patterns of use and criteria for use of Internet and library sources. *Computers and Composition, 17*, 309-328.

Campbell, C. (1990). Writing with others' words: Using background reading text in academic compositions. In B. Kroll (Ed.), *Second language writing: Research insights for the classroom* (pp. 211-230). Cambridge: Cambridge University Press.

Casanave, C. P. (2003). Multiple uses of applied linguistics literature in a multidisciplinary graduate EAP class. *ELT Journal, 57*, 43-50.

Connor, U. M., & Kramer, M. G. (1995). Writing from sources: Case studies of graduate students in business management. In D. Belcher & G. Braine (Eds.), *Academic writing in a second language: Essays on research and pedagogy* (pp. 155-182). Norwood, NJ: Ablex.

Currie, P. (1998). Staying out of trouble: Apparent plagiarism and academic survival. *Journal of Second Language Writing, 7*, 1-18.

Davies, P. M. (2003). Effect of the web on undergraduate citation behavior: Guiding student scholarship in a networked age. *Portal: Libraries and the Academy, 3*, 41-51.

Dong, Y. (1996). Learning how to use citations for knowledge transformation: Non-native doctoral students' dissertation writing in science. *Research in the Teaching of English, 30*, 428-457.

East, J. (2005). Proper acknowledgment? *Journal of University Teaching and Learning Practice, 2*(3a), 1-11.

Hill, S., Soppelsa, B., & West, G. (1982). Teaching ESL students to read and write experimental research papers. *TESOL Quarterly*, *16*, 333-347.

Howard, R. M. (1995). Plagiarisms, authorships, and the academic death penalty. *College English*, *57*, 788-806.

Hyland, K. (1999). Academic attributions: Citation and the construction of disciplinary knowledge. *Applied Linguistics*, *20*, 341-367.

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

Jordan, R. R. (1999). *Academic writing course* (3rd ed.). London: Longman.

Keck, C. (2006). The use of paraphrase in summary writing: A comparison of L1 and L2 writers. *Journal of Second Language Writing*, *15*, 261-278.

Lynch, T., & McGrath, I. (1993). Teaching bibliographic documentation skills. *English for Specific Purposes*, *12*, 219-238.

Pecorari, D. (2003). Good and original: Plagiarism and patchwriting in academic second-language writing. *Journal of Second Language Writing*, *12*, 317-345.

Pecorari, D. (2006). Visible and occluded citation features in postgraduate second-language writing. *English for Specific Purposes*, *25*, 4-29.

Pennycook, A. (1996). Borrowing others' words: Text, ownership, memory, and plagiarism. *TESOL Quarterly*, *30*, 201-230.

Rose, S. K. (1996). What's love got to do with it? Scholarly citation practices as courtship rituals. *Language and Learning Across the Disciplines*, *3*, 34-48.

Samraj, B. (2004). Discourse features of the student-produced academic research paper: Variations across disciplinary courses. *Journal of English for Academic Purposes*, *3*, 5-22.

Shi, L. (2004). Textual borrowing in second-language writing. *Written Communication*, *21*(2), 171-200.

Spack, R. (1997). The acquisition of academic literacy in a second language: A longitudinal study. *Written Communication*, *14*, 3-62.

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

Swales, J. M., & Feak, C. B. (2004). *Academic writing for graduate students* (2nd ed.). Ann Arbor: University of Michigan Press.

Thompson, P., & Tribble, C. (2001). Looking at citations: Using corpora in English for academic purposes. *Language Learning & Technology*, *5*(3), 91-105.

Yang, R., & Allison, D. (2003). Research articles in applied linguistics: Moving from results to conclusions. *English for Specific Purposes*, *22*, 365-385.

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