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Toward an Understanding of the Distinct Nature of L2 Writing: The ESL Research and Its Implications

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Dealing effectively with L2 writers requires a clear understanding of the nature of L2 writing. In an attempt to develop such an understanding, 72 reports of empirical research comparing L1 and L2 writing were examined. The findings of this research indicate a number of salient differences between L1 and L2 writing with regard to both composing processes (and subprocesses: planning, transcribing, and reviewing) and features of written texts (fluency, accuracy, quality, and structure, i.e., discoursal, morphosyntactic, and lexicosemantic). Implications of the findings for L2 and L1 writing theory; future comparative writing research; and the practical concerns of assessment, placement, staffing, and instruction are discussed.

I n recent years, ESL writing practitioners have frequently been advised to adopt practices from L1 writing. Underlying this advice, there would seem to be an assumption that L1 and L2 writing are practically identical or at least very similar. On a superficial level, such an assumption seems warranted. There is evidence to suggest that L1 and L2 writing are similar in their broad outlines; that is, it has been shown that both L1 and L2 writers employ a recursive composing process, involving planning, writing, and revising, to develop their ideas and find the appropriate rhetorical and linguistic means to express them. However, a closer examination of L1 and L2 writing will reveal salient and important differences drawn from the intuition of ESL writers (Silva, 1992), and ESL writing practitioners (Raimes, 1985), and from the results of the relevant comparative empirical research (the focus of this paper).

If such differences exist, then to make intelligent decisions about adopting and/or adapting L1 practices, ESL writing practitioners need to have a clear understanding of the unique nature of L2 writing, of how and to what extent it differs from L1 writing. One route to such

an understanding is the consideration of the findings of empirical research comparing ESL and native-English-speaking writers (ESL/NES studies) and that comparing the L1 and L2 writing of ESL subjects (L1/L2 studies). (See Silva, in press, 1993, respectively, for separate treatments of the ESL/NES and the L1/L2 research.) Consequently, in this paper, I will review and synthesize the findings of this body of research in order to develop a coherent description of the differences between L1 and L2 writing, and I will draw implications from these findings for L2 writing theory, research, and practice. A comprehensive understanding of the distinct nature of L2 writing will require inquiry into writing in many L2s in addition to ESL. However, at the present time, ESL writing is by far the most developed area of scholarship in L2 writing; I expect that the findings of this analysis will be subject to revision in light of those from research on writing in other L2s.

METHOD

Procedures

For this study, all seemingly relevant reports of research that could be located were carefully screened. Included in this study were reports of empirical research involving a direct comparison of ESL and NES writing and/or the L1 and L2 writing of ESL subjects. Excluded were (a) ESL/NES studies that did not actually involve both ESL and NES writers and those which included ESL and NES writing that could not be fairly compared (e.g., impromptu writing by ESL students compared with the published work of professional NES writers) and (b) L1/L2 studies in which one group of nonnative English speakers wrote only in English and another group wrote only in their L1 (that is, only studies in which the same individuals produced written texts in their L1 and in English were included).

The chosen reports were then reread and analyzed. Noted especially were such features as research design, study focus, sample size, subject characteristics (L1, age, educational level, English proficiency, writing ability), writing tasks (number of tasks, genre, time constraints, writing context), methodological concerns (reporting of subject characteristics, data collection, data analysis, interpretation of findings), and most important, the studies' findings with regard to ESL/NES and L1/ESL comparisons.

Studies

Overall, 72 research reports met the criteria for inclusion mentioned above and were included in this examination. Forty-one involved ESL/NES comparisons. Twenty-seven compared L1 and L2 writing. Four dealt with comparisons of both types (Appendix A lists ESL/NES reports; Appendix B, L1/L2 reports; Appendix C, reports involving both types of comparisons). A look at the publication dates of these reports indicates that comparative research of this kind is a fairly recent and ongoing phenomenon: More than 90% of all the reports examined were published in the past 10 years; 50% within the past 5. With regard to focus, reports looking at written texts outnumbered those dealing with composing processes by a ratio of more than 3:1. Of these text-based studies, more focused on rhetorical (discourse level) than on linguistic (sentence level and below) features. These differences were also reflected in the research design in which quantitative studies (typically text based) greatly outnumbered the qualitative (typically process based). Finally, with regard to subjects, the studies, in total, dealt with more than 4,000, with sample sizes ranging from 1 to more than 300.

Subjects

The subjects involved in this research came from a variety of language backgrounds. At least 27 different L1s were represented in the studies, with Arabic, Chinese, Japanese, and Spanish dominant. (See Appendices A, B, and C for the L1 backgrounds of the L2 subjects in the studies examined here.) Subjects were predominantly undergraduate college students in their late teens and early twenties, though educational levels ranged from high school to postgraduate. They had fairly advanced levels of English proficiency and exhibited a wide range of levels of writing ability. However, the statements here regarding the subjects' ages and levels of English proficiency and writing ability should be seen as tentative because these characteristics were not reported in a fairly large number of studies.

Writing Tasks

In this research, typically one (in the ESL/NES studies) or two (in the L1/L2 studies—one in English and one in the L1) writing tasks were assigned, though some used more. With regard to genre, most studies called for expository essays; argumentative and narrative tasks ran a far second and third. Subjects were normally given a range of from 20 min to as much time as they chose to take to complete their

writing tasks; however, most studies allowed 30–60 min. Finally, with regard to contexts for writing, the majority of subjects in the studies did their writing in class; about half as many, under test conditions; a handful, under laboratory conditions.

Caveats

Before moving to a presentation of the findings of this research and a consideration of the implications of these findings, it is necessary to offer a few caveats with regard to this enterprise. First, as with any body of empirical research, the studies examined here, although generally sound, exhibit some limitations. These include some small samples (resulting in a low level of generalizability); some inadequate description (missing, partial, or imprecise reports) of subject characteristics, writing task features, and conditions for writing; some cases in which reliability estimates for data analyses and statistical tests of significance were not done where appropriate; and some overinterpretation of results (e.g., overgeneralization, unwarranted causal claims).

A second caveat relates to the focus of this paper: differences. This focus does not represent an attempt to ignore, deny, or trivialize the many important similarities between L1 and L2 writing; it stems from the belief that understanding these differences is crucial to comprehending and addressing ESL writers' special needs. Furthermore, the emphasis on differences should not be seen as an attempt to portray ESL writers in negative terms. My attempts at writing in an L2 and my experiences in teaching ESL writers have given me nothing but respect for ESL writers; I am frequently amazed and humbled by their efforts and abilities.

A third caveat has to do with the limitations of would-be synthesizers of research. Their constructions of the meaning of the findings are a function of their reading of the studies, their interests, their biases, and the limits of their knowledge and analytic and expressive abilities. It should also be recognized that any synthesis is reductive in nature; rough spots are smoothed over and details left out in order to present a coherent account of the data under examination. Consequently, it is not claimed that what follows is objective or disinterested. However, a serious attempt has been made to provide an account that is honest, fair, useful, and accessible. Furthermore, the conclusions that will be presented should not be seen as definitive; rather, they should be viewed as tentative, as a set of hypotheses in need of careful consideration and testing.

FINDINGS

In this section, the findings of the studies examined will be presented. To enhance readability, in most cases, ESL/NES and L1/L2 studies (in all cases, the L2 was English) will not be distinguished, and the L1 backgrounds of the L2 writers will not always be provided. This information is available in Appendices A, B, and C. Further, the term *L2* will be used to refer to the ESL writers and their writing in both types of studies. These findings, which will form the basis for generalizations made and implications drawn later in the paper, will be reported in two main categories: composing processes and written text features.

Composing Processes

A number of studies (Chelala, 1981; Krapels, 1990; Moragne e Silva, 1991; Schiller, 1989; Skibniewski, 1988; Skibniewski & Skibniewska, 1986; Whalen, 1988) reported that, in general terms, composing process patterns (sequences of writing behaviors) were similar in L1s and L2s. However, L2 composing was clearly more difficult and less effective; a closer look turns up some salient differences in the subprocesses of planning, transcribing, and reviewing.

Planning

It was reported that, overall, L2 writers did less planning, at the global and local levels (Campbell, 1987b; Dennett, 1985; Jones & Tetroe, 1987; Skibniewski, 1988; Whalen 1988; Yau, 1989). Whereas they devoted more attention to generating material (Hall, 1990; Moragne e Silva, 1989; Skibniewski, 1988), this generation was more difficult (Hildenbrand, 1985) and less successful in that more time was spent on figuring out the topic, less useful material was generated, and more of the generated ideas never found their way into the written text (Moragne e Silva, 1989). L2 writers did less goal setting, global and local (Skibniewski, 1988), and had more difficulty achieving these goals (Moragne e Silva, 1989). It was also reported that organizing generated material in the L2 was more difficult (Moragne e Silva, 1989; Whalen, 1988).

Transcribing

Transcribing (producing written text) in the L2 was more laborious, less fluent, and less productive. It was reported that L2 writers spent more time referring back to an outline or prompt (Moragne e Silva,

1989, 1991) and consulting a dictionary (Skibniewski & Skibniewska, 1986) and exhibited more concern and difficulty with vocabulary (Arndt, 1987; Dennett, 1985; Krapels, 1990; Moragne e Silva, 1991; Skibniewski, 1988; Yau, 1989). Findings indicated that, in L2 writing, pauses were more frequent (Hall, 1990; Hildenbrand, 1985; Skibniewski & Skibniewska, 1986), longer (Hildenbrand, 1985), and consumed more writing time (Hall, 1990). Furthermore, it was found that L2 writers wrote at a slower rate (Skibniewski & Skibniewska, 1986) and produced fewer words of written text (Moragne e Silva, 1989).

Reviewing

In general, L2 writing reportedly involved less reviewing (Silva, 1990; Skibniewski, 1988). There was evidence of less rereading of and reflecting on written texts (Chelala, 1981; Dennett, 1985; Gaskill, 1986; Silva, 1990; Skibniewski, 1988); however, Schiller (1989) found no difference in rereading in L1 and L2. With regard to revision, similar general patterns, systems, and/or strategies were reported in L1 and L2 writing (Gaskill, 1986; Hall, 1987, 1990; Tagong, 1991); however, differences in the frequency of revision were found. It was reported that L2 writing involved more revision (Gaskill, 1986; Hall, 1987, 1990; Schiller, 1989; Skibniewski & Skibniewska, 1986; Tagong, 1991)— though Skibniewski (1988) found that L2 writers revised less—more before drafting, during drafting, and between drafts (Hall, 1987). However, this revision was more difficult (Hall, 1987) and more of a preoccupation (Whalen, 1988). There was less "revising by ear," that is, making changes on the basis of what "sounds" good (Silva, 1990; Yau, 1989). Moreover, L2 revision seemed to focus more on grammar (Dennett, 1990; Hall, 1987, 1990) and less on mechanics, particularly spelling (Hall, 1990; Skibniewski, 1988).

Written Text Features

In this section, differences in the features of L1 and L2 written texts will be considered in terms of fluency, accuracy, quality, and structure.

Fluency

There is fairly strong evidence to suggest that L2 writing is a less fluent process. Sixteen studies (Benson, Deming, Denzer, & Valeri-Gold, 1992; Cummings, 1990; Hall, 1990; Hirokawa, 1986; Kamel, 1989; Lin, 1989; Linnarud, 1986; Lux, 1991; Mahmoud, 1982; Moragne e Silva, 1991; Ragan, 1989; Reid, 1988; Silva, 1990; Tagong, 1991; Yau, 1989; Yu & Atkinson, 1988) found that L2 texts were shorter

(i.e., contained fewer words). Four (Benson, 1980; Dennett, 1985, 1990; Hu, Brown, & Brown, 1982; Santiago, 1970) reported longer L2 texts; two (Frodesen, 1991; Skibniewski & Skibniewska, 1986) reported similar lengths in L1 and L2 texts.

Accuracy

The research clearly shows that L2 writers make more errors overall (Benson, 1980; Benson et al., 1992; Frodesen, 1991; Hirokawa, 1986; Silva, 1990; Stalker & Stalker, 1988; Terdal, 1985; Yu & Atkinson, 1988), more morphosyntactic errors (Benson, 1980; Benson et al, 1992; Campbell, 1987b; Frodesen, 1991; Hirokawa, 1986; Hu et al., 1982; Santiago, 1970; Silva, 1990; Stalker & Stalker, 1988), more lexicosemantic errors (Benson, 1980; Benson et al., 1992; Dennett, 1985; Frodesen, 1991; Hirokawa, 1986; Linnarud, 1986; Yu & Atkinson, 1988), and more errors with verbs (Benson, 1980; Benson et al., 1992; Hu et al., 1982; Silva, 1990), prepositions (Benson, 1980; Benson, 1992; Hafernik, 1990; Silva, 1990), articles (Benson, 1980; Benson et al., 1992; Silva, 1990), and nouns (Benson, 1980; Silva, 1990).

Quality

A number of studies (Campbell, 1987a, 1987b, 1990; Carlson, 1988; Connor, 1984; Hafernik, 1990; Park, 1988; Reid, 1988; Santiago, 1970, Xu, 1990; Yu & Atkinson, 1988) reported that (at least in terms of the judgments of native English speakers) L2 texts were less effective (i.e., received lower holistic scores).

Structure

General textual patterns. The studies that look at general textual patterns, typically in expository texts, can be fairly described as following from Kaplan's (1966) groundbreaking study, in which the "thought patterns" of the written English texts of NES and ESL writers are characterized and contrasted. Though Kaplan's study does not meet the criteria set forth for inclusion in this discussion, it is addressed here because it provides the theoretical basis for later studies which do. Kaplan described thought patterns as linear (for NESs), parallel (for native speakers of Semitic languages), indirect (for native speakers of "Oriental" languages), and digressive (for native speakers of Romance languages and Russian).

Norment's (1982, 1984) work corroborated Kaplan's claims, reporting distinct organizational patterns in the written English texts of NESs (linear), Chinese (centrifugal—symbolized by an inverted cone),

and Spanish (linear with tangential breaks). Burtoff (1983) also reported distinct patterns of logical relations (which she described as culturally preferred rather than linguistically determined) in the written English texts of NESs (theme-rheme), Arabic (arguments of equal weight), and Japanese (causal chain), which she saw as corresponding in part to Kaplan's characterizations.

Kobayashi (1984a, 1984b) and Oi (1984) reported a tendency in written English texts toward a general-to-specific (deductive) rhetorical pattern for NES subjects and an inclination toward a specific-to-general (inductive) pattern for native Japanese speakers. Xu (1990), who reported no significant differences in the structure of expository paragraphs of ESL and NES subjects, provides a counterpoint to the foregoing studies.

Three studies (Norment, 1984, 1986; Santiago, 1970) comparing the L1 and L2 language writing of ESL subjects reported strong similarities in the patterns of logical relations between sentences (e.g., explanation, addition, illustration) across languages (suggesting transfer of rhetorical patterns). Cook (1988), however, reported that her (native-Spanish-speaking) subjects wrote significantly more disunified (*digressive,* in Kaplan's terms) paragraphs in English than in Spanish (suggesting a possible L2 proficiency effect on L2 rhetorical patterns).

Argument structure. A number of studies addressed the structure of L2 arguments. Mahmoud (1983) reported that his L2 subjects (native speakers of Arabic) did less reporting of conditions, less defining, and less exemplifying, but used more warning and phatic communion than their NES peers. He indicated that the L2 writers less often stated and supported their position fully and were inclined to develop their arguments by restating their position—NES subjects preferred to develop their arguments by stating a rationale for their position. Mahmoud also reported that the L2 writers' arguments exhibited less paragraphing, less rhetorical connectedness (position statements interrupted the flow of their texts), a looser segmental (introduction, discussion, conclusion) structure, less variety and more errors in the use of conjunctive elements, and less explicit formal closure.

Connor (1984) reported that her ESL subjects' texts had less adequate justifying support for claim statements and less linking of concluding inductive statements to the preceding subtopics of the problem. Oi (1984) found that her ESL writers (native speakers of Japanese) used more mixed arguments (arguing both for and against), more argument alternations (for-against-for-against), and more often ended their argument in a different direction (for or against) than it began. She also reported that her ESL subjects were inclined to be more tentative and less hyperbolic than their NES peers. Ouaouicha (1986),

in the part of his study where the English arguments of L2 (native Arabic speakers) and NES writers were compared, reported that the L2 subjects provided more data but fewer claims, warrants, backings, and rebuttals. He also claimed that they less often fulfilled the task, used less ethos (ethical appeal), addressed the audience less often, and used more pathos (emotional appeal) in their texts.

Choi (1988a) reported that whereas all his NES subjects' texts included the elements of claim, justification, and conclusion, some elements were missing in the L2 subjects' (native speakers of Korean) texts. It was also found that the L2 subjects more often used indirect (inductive) strategies—going from evidence to conclusion (this corroborates the findings of Kobayashi, 1984a, 1984b; and Oi, 1984, with native speakers of Japanese). Choi (1988b) reports that his L2 subjects (again, native speakers of Korean) preferred a situation + problem + solution + conclusion pattern to that of the NES subjects (i.e., claim + justification + conclusion).

In two studies comparing L1 and L2 arguments, Kamel (1989) found fewer audience adaptation units, a lower percentage of claims, a higher percentage of data units, and a higher percentage of warrants in the L2 texts; Yu and Atkinson (1988) reported less effective linking of arguments in texts written in English.

Narrative structure. The features of L1 and L2 narratives were also compared. Harris (1983) asked his subjects to produce an account of a short cartoon film. He reported that the accounts written by L2 subjects had less to say on most of the narrative points, more often began in the middle of the story, less often referred explicitly to the film, and more often omitted essential scene setting elements than those of their NES counterparts. Indrasuta (1987, 1988) compared her native-Thai–speaking subjects' English narratives with those of their NES peers and with their L1 narratives. In the first comparison, she reported that the L2 subjects' texts exhibited more use of the first person singular, more backdrop setting (i.e., in which time and place are not important)—as opposed to the integral setting (i.e., in which characters, action, and theme are closely interwoven and thus setting is essential), less action, and more focus on mental states. In the second comparison, Indrasuta found more use of the pronoun *I*, more implicit (as opposed to explicit) themes, more real (as opposed to projected) scenes, and less description of mental states in the L2 texts. Overall, she found that her L2 subjects' narrative patterns in English were closer to those in their L1 than they were to those used by NES subjects. Lin (1989) reported that the English narratives of her L2 writers (native speakers of Chinese) contained fewer complete episodes and fewer

mentions of entities in episodes (the latter presumed to reflect a smaller lexical repertoire in English) than their L1 versions.

Features of essay exam responses. Comparing the responses to essay questions on a final exam for a graduate course on L2 acquisition, Hirokawa (1986) reported that her L2 writers used more undefined terms, were less able to paraphrase concepts and less cognizant of expected essay answer forms, had more difficulty identifying the topic in the exam question and an appropriate discourse function for framing an answer, had a harder time presenting a reasoned argument and strong support, and had more unnecessary or irrelevant detail, information, and repetition of points.

Textual manifestations of the use of a background reading text. A couple of studies looked at background text use. Campbell (1987a, 1987b, 1990) reported that her L2 subjects' texts had fewer examples of information copied from the reading text, less backgrounding and foregrounding of examples, less use of information from the reading text in their first paragraphs and more use in their last, more documentation in footnotes and less in phrases acknowledging the author or text, more acknowledgment of quotations and paraphrases, and less smooth incorporation of material from the reading text. Frodesen (1991) found that her L2 writers had more difficulty in interpreting the background reading text and made less reference to the background text in their introductions.

Reader orientation. Focusing on reader orientations (i.e., material preceding the introduction of a thesis statement), Scarcella (1984b) reported that her L2 subjects' orientations were longer and contained fewer and a smaller range of attention-getting devices. L2 writers also played down the importance of their themes more, used fewer sentences that signaled a following theme, used more clarifying devices to help readers understand their themes, and more often overspecified their themes and thus underestimated their readers' knowledge by introducing information readers considered obvious. In a similar vein, Atari (1983) reported that his L2 subjects (native Arabic speakers) more often preceded their topic sentences with a broad statement about a general state of affairs.

Morphosyntactic/stylistic features. Numerous stylistic differences were reported. In general terms, L2 writing was found to be less complex (Park, 1988), less mature and stylistically appropriate (Yu, 1988), and less consistent and academic with regard to language, style, and tone (Campbell, 1987a, 1987b, 1990). In more specific terms, Hu et al.

(1992) found their L2 subjects' writing to be more direct, explicit, and authoritative in tone and to involve more warning and admonition, less personal comparison, and more use of strong modals (*will, should, must*). Oi (1984) reported that her L2 subjects used more hedges and superlatives. Dunkelblau (1990) found that the L2 writing in her study exhibited less variety in stylistic device use, that it contained fewer set phrases, fewer interrogative sentences (rhetorical/lead questions), less analogy, less ornate language, less vocative exhortation (addressing the reader directly), less parallel structure, and more repetition of ideas.

A fairly large number of more strictly linguistic differences was reported. It was found that L2 writers produced sentences that had more (Gates, 1978; Silva, 1990) but shorter (Cummings, 1990; Dennett, 1985, 1990; Gates, 1978; Kamel, 1989) T units. These sentences also contained fewer (Gates, 1978, Hu et al., 1982) but longer (Gates, 1978; Hu et al., 1982; Silva, 1990) clauses. In terms of connections, they used more coordination (Silva, 1990) and simple coordinate conjunctions (Cummings, 1990; Reid, 1992) and less subordination (Hu et al., 1982; Park, 1988; Silva, 1990) and fewer subordinate conjunction openers (Reid, 1992). With regard to modification, it was claimed that L2 writers used fewer modifiers overall (Gates, 1978), more unmodified nouns and pronouns (Gates, 1978), fewer nonclausal/single word modifiers per T unit (Dennett, 1985, 1990; Gates, 1978), fewer adjectives (Gates, 1978), fewer possessives (Gates, 1978), fewer verb forms used as noun modifiers (Gates, 1978), fewer prepositions and prepositional phrases (Cummings, 1990; Gates, 1978; Reid, 1988, 1992), fewer definite articles (Oi, 1984), and fewer free modifiers (nonrestrictive phrasal and clausal elements) (Park, 1988). Additionally, L2 writers reportedly used more pronouns (Oi, 1984; Reid, 1988), more conjunctions (Oi, 1984; Reid, 1988), less passive voice (Carlson, 1988; Lux, 1991; Reid, 1988), and more initial and fewer medial transitional devices (Mann, 1988).

Lexicosemantic features. The use of cohesive devices was one area of lexicosemantic difference. There was evidence that L2 writers used more conjunctive ties (Hafernik, 1990; Hu et al., 1982; Oi, 1984)—though Almeida (1984) found that they used fewer—and fewer lexical ties (Hu et al., 1982; Indrasuta, 1987, 1988; Mahmoud, 1983). They also reportedly used fewer synonyms (Almeida, 1984; Connor, 1984; Oi, 1984) and collocations (Connor, 1984; Mahmoud, 1983) and exhibited less variety in their use of lexical cohesion (Connor, 1984; Oi, 1984) and less control of over L2 cohesion resources overall (Almeida, 1984).

Another area of distinction was the subjects' lexical repertoire. It was reported that L2 writers used shorter (Reid, 1988) and vaguer (Carlson, 1988) words and that their texts exhibited less lexical variety and sophistication (Hu et al., 1982; Linnarud, 1986). Also, Webb's

(1988) findings suggest the possibility of L2 effects of increased aware-
ness of the metaphorical qualities of language and of reduced imagery
but no L2 effect of metaphors used for catechresis (i.e., to fill gaps in
the vocabulary caused by incomplete knowledge of the L2).

DISCUSSION

Summary of Findings

The findings from this body of research suggest that, in general
terms, adult L2 writing is distinct from and simpler and less effective
(in the eyes of L1 readers) than L1 writing. Though general composing
process patterns are similar in L1 and L2, it is clear that L2 composing
is more constrained, more difficult, and less effective. L2 writers did
less planning (global and local) and had more difficulty with setting
goals and generating and organizing material. Their transcribing was
more laborious, less fluent, and less productive—perhaps reflecting a
lack of lexical resources. They reviewed, reread, and reflected on their
written texts less, revised more—but with more difficulty and were
less able to revise intuitively (i.e., "by ear").

In general, L2 writers' texts were less fluent (fewer words), less
accurate (more errors), and less effective (lower holistic scores). At the
discourse level, their texts often exhibited distinct patterns of exposi-
tion, argumentation, and narration; their responses to two particular
types of academic writing tasks—answering essay exam questions and
using background reading texts—were different and less effective.
Their orientation of readers was deemed less appropriate and accept-
able. In terms of lower level linguistic concerns, L2 writers' texts were
stylistically distinct and simpler in structure. Their sentences included
more but shorter T units, fewer but longer clauses, more coordination,
less subordination, less noun modification, and less passivization. They
evidenced distinct patterns in the use of cohesive devices, especially
conjunctive (more) and lexical (fewer) ties, and exhibited less lexical
control, variety, and sophistication overall.

IMPLICATIONS

Theory

There exists, at present, no coherent, comprehensive theory of L2
writing. This can be explained in part by the newness of L2 writing
as an area of inquiry, but an equally important reason is the prevalent

assumption that L1 and L2 writing are, for all intents and purposes, the same. This, largely unexamined assumption has led L2 writing specialists to rely for direction almost exclusively on L1 composition theories, theories which are, incidentally, largely monolingual, mono-cultural, ethnocentric, and fixated on the writing of NES undergradu-ates in North American colleges and universities. The findings of the research discussed above, however, make this assumption untenable. Clearly, L2 writing is strategically, rhetorically, and linguistically differ-ent in important ways from L1 writing. Therefore, L2 writing special-ists need to look beyond L1 writing theories, to better describe the unique nature of L2 writing, to look into the potential sources (e.g., cognitive, developmental, social, cultural, educational, linguistic) of this uniqueness, to develop theories that adequately explain the phe-nomenon of L2 writing. Such theories would not only serve L2 writing practitioners but could also inform and enhance L1 theories of writing by providing them with a true multilingual/multicultural perspective, by making them more inclusive, more sensitive, and ultimately, more valid.

Research

The foregoing review of studies suggests a need for more, more balanced, and more rigorous research in this area. More comparative research is necessary to corroborate and enhance present findings and to fill in gaps. This research needs to be more balanced, that is, more evenly distributed in its treatment of strategic, rhetorical, and linguistic concerns; in its use of qualitative and quantitative designs; and in its consideration of subjects of different ages and levels of education, language proficiency, and writing ability. It is also important for future comparative researchers to continue to improve design, reporting, and interpretation by using larger samples to enhance generalizability; by including more writing tasks and making these tasks and the conditions under which they are done more realistic; by reporting on subject characteristics, writing task features, and writing conditions more fully; by providing reliability estimates for data analyses and information on statistical significance of findings, where appropriate; and by being reasonable and responsible when making generalizations and/or cause and effect claims based on their findings.

In addition to being more abundant, more balanced and more rigor-ous, research comparing L1 and L2 writing needs to be more accessible. As the bibliography of this paper indicates, most of the existing com-parative research is available in the form of unpublished dissertations, ERIC documents, and articles in periodicals that are often difficult to locate. What are needed are more outlets for publication of research

on L2 writing. Although some efforts have been made to increase the number of outlets, (e.g., the creation of the new *Journal of Second Language Writing*), more needs to be done if significant progress is to be made. Mainstream (L1) writing publishers need to be more receptive to L2 writing scholarship, and generalist publications in L2 studies need to allow for a greater focus on writing.

Practice

If these findings are valid, they have important implications for assessment, placement, staffing, and instructional procedures and strategies. First, these findings cast doubt on the reasonableness of the expectation that L2 writers (even those with advanced levels of L2 proficiency) will perform as well as L1 writers on writing tests, that L2 writers will be able to meet standards developed for L1 writers. This suggests a need for different evaluation criteria for L2 writing and raises such difficult but necessary questions as, When does different become incorrect or inappropriate? and What is good enough?

Second, the findings suggest that L2 writers, because they have special needs (distinct from those of L1 writers, whether they be basic or skilled) might be best served by being given the option of taking (credit-bearing, requirement-fulfilling) writing classes designed especially for them, that is, not being forced, in sink-or-swim fashion, into "mainstream" (i.e., native-speaker-dominated) writing classes which may be inappropriate, and perhaps even counterproductive, for them.

Third, the findings support the notion that whether or not L2 writers find themselves in L2 writing classrooms, they should be taught by teachers who are cognizant of, sensitive to, and able to deal positively and effectively with sociocultural, rhetorical, and linguistic differences of their students. That is, they should be taught by teachers with special theoretical and practical preparation for teaching L2 writers. Significant levels of cooperation and collaboration between graduate programs in composition studies and those in second language studies will be required to graduate such teachers in needed quantities.

Fourth, the findings have numerous implications for instructional practices in the L2 writing classroom. In the most general terms, L2 writers may need, as Raimes (1985) suggests, "more of everything" (p. 250). (However, more of everything should not necessarily entail more work for L2 writing teachers at the same rate of compensation; lowering class sizes and/or having fewer writing assignments completed over longer periods of time are called for). In particular, it is likely that L2 writing teachers will need to devote more time and attention across the board to strategic, rhetorical, and linguistic concerns. They

may need to include more work on planning—to generate ideas, text structure, and language—so as to make the actual writing more manageable. They may need to have their students draft in stages, for example, to focus on content and organization in one draft and on linguistic concerns in a subsequent draft or to separate their treatments of revising (rhetorical) and editing (grammatical). In essence, teachers need to provide realistic strategies for planning, transcribing, and reviewing that take into account their L2 students' rhetorical and linguistic resources.

There also seems to be a clear need for more extensive treatment of textual concerns. At the discourse level, L2 writing teachers may need to familiarize their students with L1 audience expectations and provide them with strategies for dealing with potentially unfamiliar textual patterns and task types they are likely to have to produce. It may also be necessary for L2 writing teachers to work to enhance their L2 writers' grammatical and lexical resources. Teachers might do this on a global level by using a set of assignments that look at one (student-chosen) theme or topic area from a variety of perspectives, thereby allowing students to build a syntactic and lexical repertoire in this area through repeated use (see Leki, 1991). On a more local level, teachers can provide individual L2 writers with syntactic and lexical options in the contexts of their own written texts.

In conclusion, the research comparing L1 and L2 writing, in my view, strongly suggests that, whereas they are similar in their broad outlines, they are different in numerous and important ways. This difference needs to be acknowledged and addressed by those who deal with L2 writers if these writers are to be treated fairly, taught effectively, and thus, given an equal chance to succeed in their writing-related personal and academic endeavors.

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Appendix A

ESL/NES Studies: Native Languages of the ESL Subjects

Atari (1983): Arabic

Benson (1980): Arabic, Farsi, Ga, Japanese, Spanish, Thai

Benson et al. (1992): Amharic, Arabic, Cambodian, Chinese, Farsi, French, Gola, Gujartic, Hindi, Japanese, Korean, Portuguese, Somali, Spanish, Tagolog, Thai, Tigringa, Vietnamese

Burtoff (1983): Arabic, Japanese

Campbell (1987a): Chinese, Farsi, Hebrew, Indonesian, Korean, Lao, Spanish, Vietnamese

Campbell (1987b): Chinese, Farsi, Hebrew, Indonesian, Korean, Lao, Spanish, Vietnamese

Campbell (1990): Chinese, Farsi, Hebrew, Indonesian, Korean, Lao, Spanish, Vietnamese

Carlson (1988): Arabic, Chinese, Spanish

Choi (1988a): Korean

Choi (1988b): Korean

Connor (1984): Japanese, Spanish

Cummings (1990): Spanish

Dennett (1985): Japanese

Dennett (1990): Japanese

Frodesen (1991): Chinese, Korean, Spanish

Gates (1978): Farsi, Spanish, Thai

Hafernik (1990): Chinese, Japanese, Norwegian

Harris (1983): not specified

Hirokawa (1986): Arabic, Chinese, Indonesian, Japanese, Thai

Hu et al. (1982): Chinese

Intaraprawat (1988): Bengali, Chinese, French, Japanese, Thai

Kobayashi (1984a): Japanese

Kobayashi (1984b): Japanese

Linnarud (1986): Swedish

Lux (1991): Spanish

Mahmoud (1983): Arabic

Mann (1986): Arabic, Chinese, Spanish

Norment (1982): Arabic, Chinese, Spanish

Oi (1984): Japanese

Ouaouicha (1986): Arabic

Park (1988): Chinese

Ragan (1989): Chinese

Reid (1988): Arabic, Chinese, Spanish

Reid (1992): Arabic, Chinese, Spanish

Scarcella (1984a): Japanese, Korean, Romance, Taiwanese

Scarcella (1984b): Japanese, Korean, Romance, Taiwanese

Silva (1990): Chinese, Spanish

Stalker & Stalker (1988): not specified

Webb (1988): Spanish

Xu (1990): not specified

Yau (1989): Chinese

Appendix B

L1/L2 Studies: Native Languages of the Subjects

Almeida (1984): Portuguese
Arndt (1987): Chinese
Carson et al. (1990): Chinese, Japanese
Carson & Kuehn (1992): Chinese
Chelala (1981): Spanish
Cook (1988): Spanish
DeJesus (1984): Spanish
Dunkelblau (1990): Chinese
Gaskill (1986): Spanish
Hall (1987): Chinese, French, Norwegian, Polish
Hall (1990): Chinese, French, Norwegian, Polish
Hildenbrand (1985): Spanish
Jones & Tetroe (1987): Spanish
Kamel (1989): Arabic
Krapels (1990): Arabic, Chinese, Spanish
Lin (1989): Chinese
Moragne e Silva (1989): Portuguese
Moragne e Silva (1991): Portuguese
Norment (1986): Chinese
Santiago (1970): Spanish
Schiller (1989): Arabic
Skibniewski (1988): Polish
Skibniewski & Skibniewska (1986): Polish
Tagong (1991): Thai
Terdal (1985): Hmong, Vietnamese
Whalen (1988): French
Yu & Atkinson (1988): Chinese

Appendix C

ESL/NES and L1/L2 Comparisons: Native Languages of the L2 Subjects

Indrasuta (1987): Thai
Indrasuta (1988): Thai
Norment (1984): Chinese, Spanish
Watabe et al. (1991): Japanese