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Students' Reading and Writing Strategies and Their WST Performance

■ **The purpose of this study is multifold: (a) to describe the academic background of students enrolled in LLD 99 classes during the summer of 2001 at San José State University, (b) to study the kinds of reading and writing strategies these students use, (c) to assess their perceptions with regard to the validity of the Writing Skills Test (WST), and (d) to explore whether their background, their use of certain reading and writing strategies, and their perceptions with regard to the validity of the WST have any significant correlations with their test performance. A 48-item questionnaire was used to collect the data. Results showed that students preferred some strategies to others and that three strategies positively correlated with passing scores on the WST. There were also positive correlations between prior elementary and/or high school education in English and passing scores.**

Introduction

In the wake of a noticeable decline in the quality of student writing, in 1975, the Chancellor's Office of the California State University system established a task force to investigate the state of affairs. On the basis of the recommendations in the report, the Chancellor's Office mandated the 19 universities that made up the then California State University system to "institute a Graduate Writing Assessment Requirement (GWAR) for all graduate and undergraduate students approaching graduation" (Obrecht & Ferris, 1998, p. vii).

At San José State University (SJSU), the GWAR is known as the Writing Skills Test (WST) and consists of one 60-minute essay and a 45-minute long standardized multiple-choice format test. The multiple-choice test is actually the English subtest of the ACT, from American College Testing, and consists of 75 questions. According to SJSU policy, a high WST score is a necessary requirement for undergraduate students who want to take advanced General Education courses and for graduate students who want to move to classified status. The high scorers are also exempted from a writing course called 100W. Those who pass but do not obtain a high score must enroll in 100W or an equivalent graduate course.

Those who fail the WST can take it again, but if a student fails the test twice, he or she must enroll in either LLD 98 or 99 (*LLD* is an abbreviation for the courses offered in the Department of Linguistics and Language Development). Once students pass either class, they must take the WST again. If they subsequently pass it, they must take 100W (an outright waiver is only allowed the first time students take the WST). If they fail again, they must keep trying to pass the WST. They will not be cleared for advanced GE courses or for advancement to classified status until they pass the WST. The LLD 98 and LLD 99 classes, in short, are for students who have failed the WST two times. Although LLD 98 and 99 are three-unit courses, they do not bear academic or graduation credit.

The primary task of the authors in this research study is twofold: one, to develop linguistic and academic profiles of the students enrolled in LLD 99 classes, and two, to learn about these students' perceived use of certain reading and writing strategies. Since research clearly shows that successful writers do use a larger number of effective strategies than less successful writers do, the authors were particularly interested in learning which of the strategies under study correlated with a passing score on the WST.

This paper is divided into 5 sections. Section I is a review of the literature on reading and writing strategies. Section II provides a short description of the research methods used. Section III contains the findings of the study. In section IV, an attempt has been made to provide appropriate interpretations of the major findings of the study. Section V, the last section, is divided into two parts. The first part addresses the limitations of the study and the second part provides suggestions for future research.

Reading and Writing Strategies

The Use of Strategies. Scholars and teachers have always tried to identify the best strategies students can use to successfully master academic material. In the ancient days, the Romans used spatial mnemonics such as the Loci Method "to memorize speeches" (Wenden & Rubin, 1987, p. 45). Today, students as young as kindergartners are taught songs and rhymes to help them learn days of the week, colors, and the alphabet. At the university level, by the time undergraduates begin their upper-division classes, and certainly by the time they enter graduate school, they realize that in order to be successful, they need to acquire reading and writing strategies that will allow them to become independent learners of academic material. For Oxford (1990), independent learning, as a teaching concept, emerged as the result of the changing characteristics of a (language) teacher's traditional managerial and instructional tasks. In simple terminology, teachers should require students to take responsibility for their own learning, and teachers are expected to give instruction on how to learn rather than what to learn.

For Wenden (1991), autonomous (language) learning happens to those "who have acquired the learning strategies, the knowledge about learning, and the attitudes that enable them to use these skills and knowledge confidently, flexibly, appropriately and independently of a teacher" (p. 15). She claims, furthermore, that autonomous learners are self-confident learners and

that "they believe in their ability to learn and to self-direct or manage their learning" (p. 53). They derive "energy and motivation from knowledge of…errors and continue to work even harder" (p. 53). Wenden's definition of autonomous learning is on par with Oxford's explanation of what independent learning is.

On the part of students, independent/autonomous learning is a result of their attempts to become increasingly self-reliant and independent in their learning process. One way learners can achieve this is by receiving instruction on learning strategies either from a teacher or tutor, internalizing them, and then using them automatically whenever there is a need for it. As far as this study is concerned, in order to become independent in their academic writing, students need to learn the relevant strategies that can assist them in reading the academic materials and responding to them in appropriate academic writing.

There is yet another crucial reason for teaching students reading and writing strategies. It is impossible to teach writing like other subjects such as biology or geography. While other subjects are content based, writing is process based; therefore, it is only possible to teach learners how to *learn* to write. Teaching them how to write is important for another reason. Students at the college level need to learn how to become independent in their reading and writing processes in order to excel in subject matter-related coursework that demands academic writing, such as term papers or project work. As such, it is critical that students become autonomous writers and teachers teach to that end.

It is assumed here that successful writers are generally independent and autonomous in their writing process and that they are more likely to be successful in exams, including the WST. Successful students "learn to adopt active strategies for themselves, incorporating monitoring behaviors into their repertoire of learning skills" (Wenden, 1991, p.13), while "less successful students apparently do not, continuing to rely on teachers for this function" (Wenden, 1991, p.13). Furthermore, Wenden suggests that students who do not learn to internalize strategies may have difficulties becoming independent in their learning processes. Strategy knowledge and use together, in short, seem to play a role in determining how successful and independent students are going to be in the writing process.

What follows is a review of some of the research literature on how learners' knowledge and use of reading and writing strategies affect their performance in reading and writing tasks.

Research on Reading Strategies. Cognitive psychologists consider reading to be an interactive process. It is an interaction between what is called *bottom-up processing* and *top-down processing*. For efficient bottom-up processing to take place, one needs good vocabulary knowledge. Top-down processing involves predicting and is based on one's previous experience with content and form. Based on our knowledge of what reading is, reading strategies with regard to academic writing can be divided into two types: vocabulary comprehension-related strategies and meaning (content) comprehension-related strategies. Following Peregoy and Boyle (1993), meaning comprehension-related reading strategies can be divided into three

kinds: prereading strategies, during-reading strategies, and postreading strategies. Prereading strategies include activities such as increasing one's background knowledge of the content one is processing. During-reading strategies may include monitoring comprehension, understanding the purpose for which the text was written, and understanding the significance of headings and subheadings. Postreading strategies may include any strategies a reader uses to organize and remember information.

To date, many research studies have been conducted to understand how training in reading strategies can help one become a skilled reader and improve his or her performance on reading comprehension tests. What follows is a review of some of these studies.

Training in Vocabulary Acquisition-Related Strategies. Saito's 1998 study of Japanese high school English as a Foreign Language (EFL) learners focused on the effects of training students in prereading strategies, especially vocabulary comprehension. The study showed that students who were given "contexts to infer the meanings of unknown words before reading" (p. 84) did better on a postreading test than those who were presented only with lists of unknown words. Furthermore, those students who guessed the meanings of unknown words using the reading context were found to retain the meanings longer than the students who used only the word lists.

In another study conducted by Chodkiewicz (2001), Polish learners of English were trained to learn 60 little-known words using vocabulary acquisition strategies. The findings indicated that though all the students showed some vocabulary gains, the medium and high proficiency learners profited more from training in reading-related vocabulary acquisition strategies than low proficiency learners.

Fraser (1999) did an extensive review of research studies on vocabulary comprehension strategies, student training, and their effects on students. According to her findings, among the three vocabulary comprehension strategies (inferencing, consulting, and ignoring), consulting, in combination with inferencing, had the greatest positive effect on performance in second language (L2) reading and vocabulary comprehension. In her opinion, therefore, teachers should train students to effectively use dictionaries (the consulting strategy). This, she claims, would have a significant effect on the cognitive processes required for vocabulary acquisition: form meaning connections, rehearsal of words for storage in long-term memory, and instantiation of background knowledge with connection to prior experiences.

In general, the findings on training in vocabulary acquisition-related reading strategies are that it greatly assists medium and high proficiency language learners, helps most learners to retain the vocabulary meanings longer, and enables those learners who use strategies to do well on reading comprehension tests.

Training in Reading Comprehension-Related Strategies. Research in reading comprehension-related strategies generally indicates that strategy training is helpful and significantly improves learners' performance on various reading tasks. For examples, Carrell (1987) reports that in her investigation of the relationship between reading strategies and test performance, ESL undergraduate students (N = 45) who had training in reading strategies pro-

duced superior written recalls of comparison/contrast in their essay, both quantitatively and qualitatively, than those who did not participate in the training process. The findings by Hyona, Lorch, and Kaakinen (2002), who used eye fixation patterns to identify reading strategies of adult students as they read expository texts, indicated that readers could be divided into two types: selective readers and nonselective readers. Nonselective readers failed to review and reinspect each sentence, whereas selective readers processed the topic structure and paid close attention to headings by using strategies they had learned in a training program. These subjects also wrote the most accurate summaries. The researchers concluded that competent adult readers who had training in reading strategies used qualitatively distinct reading strategies.

Kusiak (2001) also found that training significantly affected learner performance. Her study investigated the effects of metacognitive strategy training on the reading comprehension of Polish-speaking intermediate learners of English in a university setting. The findings showed that students who were trained in reading strategies performed significantly better on the reading comprehension test than students who were not trained and that training had a more significant effect on intermediate level students than on advanced and beginning level students. The significant effects included an increase in the motivation level and an increased awareness of the reading process. She concluded that training could help learners, particularly intermediate level learners, perceive how their reading process progressed. Bimmel (2001) came to a similar conclusion after reviewing six intervention studies that found that secondary school and college students could achieve superior results in their performance on reading comprehension tests if strategy training was a crucial element in the reading instruction programs. In conclusion, training does have positive effects on learners.

Research also shows that learners themselves may have a preference for certain reading strategies, irrespective of how useful the teacher finds these strategies. For example, in a study conducted by Shorey and Mokhtari (2001), survey data were collected from 150 native-speaking and 152 nonnative-speaking college students on their use of reading strategies. Results revealed that though learners had a good knowledge of all the strategies presented to them, they preferred cognitive strategies to metacognitive and support strategies. The findings also indicated that both native and nonnative speakers in the high reading ability groups were more likely to use the strategies than students in the low reading ability groups. A similar finding emerged in a study by Zhang (2001), which showed a positive correlation between the proficiency levels of the nonnative speakers of English and the frequency with which they used reading strategies.

Tian (2000) studied how high and low scorers on the reading comprehension portion of the Test of English as a Foreign Language (TOEFL) differed in their reported use of 42 reading comprehension strategies. The findings indicated that those who scored high on the reading comprehension portion of TOEFL ($N = 43$) tended to use strategies that focused on overall understanding and comprehension of the passage, while the low scorers tended to use word-level strategies. A similar finding was reported in Macaro

(2000). The data for this study were collected by conducting a survey of the strategies used by 14-year-old students (N = 368) in both England and Italy. The subjects rated 24 cognitive, metacognitive, social, and affective strategies on a 5-point scale. The findings indicated that strategies geared toward learning receptive skills were more popular than those geared towards learning productive skills. The subjects also indicated that they used direct strategies such as cognitive and compensatory strategies much more than indirect strategies such as affective and social strategies.

That students may prefer some strategies depending on their proficiency level is confirmed in Chinwonno (2001). In this study, Chinwonno investigated the reported use of reading comprehension strategies by 1st-year college learners majoring in Education. The findings of this study indicated that (a) Learners of different levels of English proficiency reported using different kinds of reading comprehension strategies; (b) Prereading, guided reading and postreading comprehension strategies were significantly associated with English reading comprehension for all the subjects; and (c) Those students who were highly proficient in their second language reported using a greater number of strategies than those who were less proficient in the language. That low proficiency learners tend to have little awareness of the usefulness of strategies compared to high proficiency learners has been reported in a study by Chia and Chia (2000). In this study, researchers did an empirical and descriptive exploration of EFL reading strategies as used by 45 Taiwanese college students of low reading proficiency. The data were collected through one-on-one interviews. Their findings showed that low proficiency subjects showed little awareness of the vast majority of strategies available to them.

That L2 proficiency level is a significant indicator of learners' reported use of strategies has been investigated in at least two other studies. Park (2001) investigated the relationship between L2 linguistic competence and the use of reading strategies by collecting data from 90 Korean learners of English using a survey and tests of Korean reading ability, English reading ability, English grammar, and English vocabulary. The most notable finding of her study indicated that L1 and L2 linguistic competence were strongly correlated and that learners with high English proficiency were also the most frequent users of reading strategies. Yamato (2001) explored the relationship between the learners' levels of strategy awareness and the reading proficiency level in English of 242 Japanese university EFL students. The results obtained through factor analysis did not show any clear relationship between strategy awareness and proficiency level. However, what was interesting in this research study was that students more frequently used strategies that were considered less effective by teachers and less frequently used strategies that teachers considered highly effective.

The findings on training in reading comprehension-related strategies and its effectiveness can be summarized as follows: (a) Strategy training is important, and it can improve performance on reading comprehension tests; (b) Strategy training is more helpful to students at an intermediate level of proficiency than to students at high and low proficiency levels; (c) Strategy training can improve students' motivation for reading; (d) Strategy training can result in an increased awareness of the reading process; (e) Students at all

levels of proficiency prefer to use a variety of reading strategies in their reading comprehension process; and (f) High proficiency learners seem to use a greater number of strategies in their reading comprehension process than those who are less proficient in the language.

Research on Writing Strategies. Recent research into the second language writing process has produced some important findings: The composing process is different in the second language than in the first language; writers are less effective in their L2 academic writing than in their L1 academic writing (Beare, 2001); the writing strategies used in the composing process are similar in both L1 and L2 (Matsumoto, 1995; Brooks-Carson & Cohen, 2000); ESL writers use fewer planning and prewriting strategies when writing in their L2 than they do in their L1 (Hatasa & Soeda, 2000); and finally, there is a significant correlation between the use of writing strategies and L2 writing competence (Hirose & Sasaki, 1994).

It is clear from the above findings that versatile and fluent writers, when writing in either their L1 or their L2, work through the writing process in multiple stages. For this reason, writing instruction in both L1 and L2 is focused on teaching it as a process. Teachers generally focus on teaching the relevant writing strategies so that learners can master the process of writing as a skill. Research has identified many writing strategies. Generally, these strategies can be divided into three types. These are (a) prewriting strategies, (b) editing strategies, and (c) assessment strategies. Raimes (1987) claimed that if students believed that they were learning a useful strategy, they would feel empowered and would be further motivated to use it, which subsequently would result in increased skill execution.

In contrast, if learners did not believe that a specific strategy contributed much to their writing, they would not use it systematically or feel confident about using it. In addition, in our opinion, strategy instruction might not be useful for every student learning to write since strategies are not synonymous with skills. Knowing about strategies is one thing and using them is another thing. In fact, being able to use them is what is important. In other words, internalization of the strategies is the key to success. Extensive research has been carried out with many kinds of learners on the effectiveness of the teaching and use of various writing strategies. What follows is a review of some of these studies.

A study by Englert, Raphael, and Anderson (1992), which focused on improving students' knowledge about writing, indicated that students who had taken part in a socially-mediated writing intervention program that emphasized the process of writing and writing strategies gained "metacognitive knowledge related to the processes by which writers plan, draft, monitor, and revise expository text" (p. 412).

Another study conducted by Torrance, Thomas, and Robinson (1999) attempted to identify the planning strategies that students preferred to learn and indicate the effectiveness of these strategies. The study identified four kinds of learners: (a) *minimal-drafting* strategy users, (b) *outline-and-develop* strategy users, (c) *detailed-planning* strategy users, and (d) *think-and-do* strategy users. Their findings indicated that the minimal-drafting and outline-and-develop strategies produced below-average quality writing samples,

while detailed-planning and think-and-do strategy users produced high quality writing samples. The researchers found that, in general, students tended to use the same type of strategy throughout their college years. The study, therefore, stressed the importance of teaching students the most effective strategies, since they would be unlikely to change their strategy once they had begun using it consistently.

Wong (1993), in her study of student writing performance in Chinese and English, found that both effective and ineffective writers "use meaning-constructed strategies in their writing, but they differ in the quality of this use" (p. 291). She also found that the students who had developed good meaning-constructing strategies in their dominant language were able to transfer these strategies to the weaker language. Wong's findings are similar to findings in later studies by Matsumoto (1995), Whalen & Menard (1995), and Beare (2001), which also suggest that writers transfer their writing strategies from the L1 to the L2. Matsumoto (1995), in particular, claimed that her subjects, Japanese university professors, viewed writing a research paper in their L2 as virtually identical to writing a research paper in their L1 and that they transferred writing strategies that they used in their L1 writing process over to their EFL writing process.

Leki (1995) did a qualitative study of the strategies that ESL learners at the University of Tennessee used at the beginning of their academic career. She concluded that the students were already familiar with a range of strategies in their L1 and that, given time and opportunity, they would adjust their knowledge to the new linguistic setting and would be able to do well. She recommended that the writing teachers help learners bring to their consciousness what they already know rather than teaching them new strategies.

Raimes (1987) studied the use of strategies by native and nonnative English speaking student writers at the college level. The data were collected through think-aloud protocols. She correlated the kinds of strategies the subjects used with their writing, which was holistically graded. The analyses showed that native English speaking (L1) basic writers and L2 writers had many strategies in common and that strategy knowledge was only one of the factors in attaining success in academic writing.

The findings in general confirm that (a) ESL learners at the college level come to the new linguistic setting with a knowledge of writing strategies in their L1 and that the task of the L2 writing teacher is to enable a smooth transition of this knowledge to the L2 writing process, (b) There may be qualitative differences in the kinds of strategies that successful and less successful L2 writers use in their writing process, (c) The strategies that successful L2 writers use are similar to the strategies that successful L1 writers use; and (d) Even if the L2 writers know the importance of writing strategies, there is no guarantee that they have internalized this knowledge and will use it in their academic writing process.

Methods

Purpose

The goal of this study was to develop a profile of students enrolled in LLD 99 classes in terms of their academic and linguistic backgrounds as well as to learn about their perceived use of certain reading and writing strategies. Preliminary informal interviews with LLD 99 course instructors indicated that they did indeed focus on teaching reading and writing strategies to their students, though they did not have any means to ascertain whether these learners used them outside the classroom. In other words, for many students, especially ESL students, taking a writing class in which they were taught reading and writing strategies did not ensure that they internalized the strategies and used them later in their language learning process. In summary, the purpose of this inquiry, which surveyed nine sections of LLD 99 at SJSU during the summer of 2001, was to answer the following research questions:

1. What are the academic and linguistic profiles of the students enrolled in LLD 99 classes during summer 2001?
2. How often do LLD 99 students use reading and writing strategies?
3. What is the face validity of the WST in general?
4. Do the academic profiles of the students, their use of reading and writing strategies, and their perceptions of the WST as a valid test have any statistically significant relationships with their test performance?

It is important to note here that data could not be collected from LLD 98 students since only LLD 99, and not LLD 98, was offered that summer.

Sample Population

The sample population consisted of 77 students. Of these, 72 were undergraduate students. Students majored in a variety of disciplines although the most popular majors were Engineering (24 students) and Business (21 students).

Data Collection

Memos were distributed to both instructors and students informing them about the study (Appendixes A and B). The data were obtained by administering a 48-item survey (Appendix C). The items in the survey can be studied under three broad sections. They are: (a) background information, (b) reading and writing strategies and (c) face validity. Section 2 of the survey was based on the subskills considered to be essential components of reading and writing, such as critical thinking, top-down processing, summarizing, making an outline, developing structural awareness, revising drafts, and planning an essay in advance. This section was divided into four subsections that corresponded with four types of strategies: vocabulary comprehension and use, reading comprehension, improvement of grammatical ability, and improvement of writing skills. The overall attempt was to learn, based on students' self-reports, how frequently they used certain reading and writing strategies.

These strategies were chosen because in LLD 99, teachers found these strategies critical to passing the WST.

The instructors of each class distributed the surveys to their students. The coordinator of the LLD 99 classes for the summer session had sent voice mails to all the instructors informing them when they would receive the surveys. The coordinator also informed the instructors that the students could take the surveys home and return them within a week. When students brought them back, instructors put them in a special box in the Linguistics and Language Development office. One of the authors came into the office almost daily and collected the surveys.

Response Rate

A total of 138 surveys were returned, a response rate of 79%. Of the 138 respondents, only 77 took the WST on July 14, 2001. These 77 students made up the sample population.

Data Analysis

All the items on the questionnaire were analyzed using SPSS Version 7.5 for Windows.

Findings

The findings on student background are given in the following subsections.

Student Background

Gender. Of 77 students, 37 were male and 40 were female. Seventeen males (46%) and 8 females (20%) passed the WST. A chi-square test of independence was calculated comparing the WST pass rates of males versus females. A significant difference was found (chi-square = 5.901, $df = 1$, $p < .05$), with males performing significantly better than the females on the test.

First Language. The most common first languages were Vietnamese (22) and Chinese (21), followed by English (7), Spanish (6), Japanese (4), Farsi (3), Tagalog (3) and Indonesian (2). Languages that came up only once were Gujarati, Igbo, and Urdu. 5 students who designated their first language as Chinese and 2 who stated that it was Cantonese passed the exam, while 3 speakers of Vietnamese passed. Others who passed the exam were 4 who spoke English, 4 who spoke Spanish, 2 who spoke Tagalog, and one from each of the following languages: Japanese, Indonesian, Portuguese, Arabic, and Urdu.

Medium of School Instruction. Twenty-nine of 77 respondents indicated that English was the medium of instruction during their elementary school education. Fourteen of them passed the WST. A chi-square test of independence was calculated relating WST pass rates with elementary school education in English. A significant positive relationship was found between the two variables: (chi-square = 6.051, $df = 1$, $p < .05$).

Forty-nine respondents stated that English was the medium of instruction in their high school education. Twenty-one of these students passed the WST. A chi-square test of independence was calculated relating WST pass rates with high school education in English. A significant positive relationship was found between the two variables: (chi-square = 8.120, $df = 1$, $p < .05$).

Self-Perceived Level of Reading Ability in English. Students were asked to rate their reading ability in English on a scale of 1 (*below average*) to 5 (*excellent*). Out of 77 students, 43 felt that their reading ability in English was average. Fourteen of them passed. Sixteen students stated that their reading ability in English was good and 8 thought that it was very good; 4 students from each group passed. Eight students felt that their reading ability in English was below average, and of these, 2 passed the WST. Two stated that their reading ability in English was excellent; of these, 1 passed the WST. The overall mean of students' self-perceived level of reading ability in English was 2.3896, with a standard deviation of .9055. A chi-square test of independence was calculated with WST pass rates and perceived reading ability in English as variables. No significant relationship was found between the two variables: (chi-square = 2.012, $df = 4$, $p > .05$). Furthermore, a chi-square goodness of fit test analysis indicated that there were significant differences between the subjects in terms of their self-perceived levels of reading ability in English: (chi-square = 68.260, $df = 4$, $p < .05$).

Self-Perceived Level of Reading Ability in Native Language. Students were asked to rate their reading ability in their native language on a scale of 1 (*below average*) to 5 (*excellent*). Perceived reading ability in one's native language varied; it was not clumped around the average rating. The overall mean was 3.56, with a standard deviation of 1.3380. Twenty-six students felt that their reading ability in their native language was excellent, compared to only 2 when reading ability in English was considered. Fourteen participants felt that their ability was very good, compared to only 8 when reading ability in English was considered.

A chi-square test of independence was calculated correlating WST pass rates with perceived reading ability in one's native language. No significant relationship was found (chi-square = 2.566, $df = 4$, $p > .05$). A chi-square goodness of fit test was calculated comparing the subjects' rating of their reading ability in their native language. Results (chi-square = 14.667, $df = 4$, $p < .05$) indicated that there was a significant difference between the self-perceived levels. It appears that students varied considerably in their self-perceived level of native language reading ability.

Self-Perceived Level of Writing Ability in English. Respondents' perceived writing ability in English also varied. When students were asked to rate their writing ability in English on a scale of 1 (*below average*) to 5 (*excellent*), 24 (31.2%) felt that their writing ability was below average, 36 (46.8%) felt it was average, and 4 (5.2%) perceived that their ability was very good. No one felt that his or her writing ability in English was excellent. The overall mean was 1.95 with a standard deviation of .83. It was interesting that 7 (29.2%) of those who felt that their writing ability in English was below average passed the WST. A chi-square test of independence was calculated comparing WST pass rates with perceived writing ability in English. No sig-

nificant relationship was found (chi-square = 2.270, $df = 3$, $p > .05$). A chi-square goodness of fit test was calculated comparing the subjects' reported levels of their perceived writing ability in English. Results (chi-square = 30.947, $df = 3$, $p < .05$) indicated that there was a significant difference between the self-perceived levels, meaning that students varied considerably in their self-perceived level of native language reading ability.

Self-Perceived Level of Writing Ability in Native Language. A contrast can be seen in how participants viewed their writing ability in their native language. Students were asked to rate native language writing ability on a scale of 1 (*below average*) to 5 (*excellent*). Overall, they perceived their native language writing ability to be higher than their English writing ability. Ten (13.0%) thought that they wrote at an excellent level in their native language, while 24 (31.2%) felt that their ability was very good. Fourteen (18.2%) felt that they wrote at a good level in the native language. The overall mean was 3.11 with a standard deviation of 1.28. Of the 10 students who perceived their writing ability in their native language as below average, only 3 passed the WST. Likewise, of the 10 students who perceived their writing ability in their native language as excellent, only 3 passed the WST. A chi-square test of independence was calculated comparing WST pass rates with perceived writing ability in the native language. No significant relationship was found (chi-square = 3.635, $df = 4$, $p > .05$). A chi-square goodness of fit test was calculated comparing the subjects' reported levels of perceived writing ability in their native languages. Results (chi-square = 8.973, $df = 4$, $p > .05$) indicated that there was not a significant difference between the subjects' self-perceived levels of writing ability in their native languages.

Summary of the Major Findings on Students' Backgrounds

A summary of the most important findings regarding student background is as follows:

1. Male students performed better on the WST than did females.
2. The most common first language of the subjects under study was Vietnamese, with 22 out of 77 students claiming this as their first language.
3. Forty-three students felt that their reading ability in English was average.
4. Twenty-six students perceived their reading ability in their native language to be excellent.
5. Sixty out of 77 students stated that their writing ability in English was average or less than average
6. Twenty-six out of 77 students stated that their writing ability in their native language was average or less than average.
7. Success on the WST seemed to come to students who had English as the medium of instruction either at the high school level or at both the primary school and high school levels, as compared to those who did not have English medium instruction at those levels.
8. There was no statistically significant relationship between the students' perceived writing ability in English or in their native language and their success on the WST.

9. There was no statistically significant relationship between the students' perceived reading ability in English or in their native language and their success on the WST.
10. The subjects varied in terms of their self-reported levels of reading ability in both English and their native language.
11. The subjects varied in terms of their self-reported level of writing ability in English.
12. The subjects did not vary in terms of their self-reported level of writing ability in their native language.

Perceived Use of Strategies in Vocabulary Comprehension and Use

Findings with regard to the LLD 99 students' perceived use of strategies on vocabulary comprehension and use are given in Appendix D.

The table in Appendix D shows that there were 12 strategies in the category of vocabulary comprehension and use. Of these 12 strategies, "guessing the meaning of an unknown word" was perceived to be the most widely used vocabulary comprehension and use strategy. Forty-five (58.4%) and 28 (36.4%) students reported using it most of the time and some of the time, respectively. Fifteen (33.3%) students from the most of the time user group and 8 (28.6%) students from the some of the time user group passed the WST, respectively. Two (2.6%) students stated that they had never used the strategy; neither passed the test.

The strategy "using the spell checker" was perceived to be the second most widely used strategy. Sixty (77.9%) out of 77 students used the spell checker most of the time, whereas 11 (14.3%) students used it some of the time. Out of the 60 who used the spell checker most of the time, 20 (33.3%) students passed the WST, while 3 (27.3%) of the 11 who used it some of the time also passed. Three (3.9%) students stated that they had never used the strategy; none of them passed the test. A chi-square goodness of fit test showed that there was a significant difference (chi-square = 77.216, $df = 2$, $p < .05$) among the three groups of students who indicated different levels of strategy use (*never*, *some of the time*, *most of the time*).

"Looking up an unknown word in a dictionary" was perceived to be the third most widely used strategy by the sample population. Out of 77 students, 16 (20.8%) students used it most of the time. Fifty-three (68.8%) students used this strategy some of the time, and 7 (9.1%) never used it. Of those who passed the test, 6 belonged to the most of the time user group, 16 belonged to the some of the time user group, and 2 never used this strategy. A chi-square goodness of fit test indicated that there was a significant difference (chi-square = 46.921, $df = 2$, $p < .05$) among the three groups of students who indicated different levels of use of this strategy.

The strategy of "using a different word with a similar meaning when the word wanted is not available" was perceived to be the fourth most widely used strategy in this sample. Forty-seven (61.0%) students reported using this strategy most of the time; of these, 17 (36.2%) passed the WST. Nineteen (24.7%) students reported using it some of the time; of these, 3 students (15.8%) passed. Eight (10.4%) students claimed that they never used it; 4

(50.0%) passed the WST. A chi-square goodness of fit test indicated that there was a significant difference (chi-square = 32.784, $df = 2$, $p < .05$) among the three groups of students who indicated different levels of use of this strategy.

The strategy of "paying attention to a word's use" was perceived to be the fifth most widely used strategy. Thirty (39.0%) students stated that they used the strategy most of the time, 26 (33.8%) some of the time, and 18 (23.4%) never used it. Seven students (23.3%) from the most of the time user group, 12 (46.2%) from some of the time user group, and 5 (27.7%) from the never used group passed the WST.

The strategy of "remembering a word's meaning by translating it into the native language," although perceived only to be the 8th most popular strategy in this group, actually correlated with passing the WST. 38 (49.4%) students used this strategy most of the time, with 8 (21.1%) passing the WST. 13 (16.9%) students used the strategy some of the time; of them, 3 (23.1%) passed the WST. 24 (31.2%) students never used the strategy; out of these 24 students, 12 (50.0%) passed the WST.

A summary of the most important findings regarding subjects' reported use of vocabulary comprehension strategies is as follows:

1. Guessing the meaning of an unknown word while reading in English was the most widely used strategy.
2. Using the spell checker on the computer was the second most widely used strategy.
3. A chi-square test of independence indicated that translating an unknown English word into the native language and passing the WST were interrelated events. It is important to note here that this was the only strategy that seemed to have some kind of significant relationship to the passing of the WST. This could simply mean that those who passed the test seemed to use this strategy more often than those who did not pass. Also note that there were significant differences in the reported use of this strategy among the most of the time users, some of the time users, and never used groups.
4. Statistical analyses indicated that there was a significant difference among the three self-perceived levels of use (most of the time, some of the time, never) for the following strategies: using the spell checker, looking up the unknown word in a dictionary, and using a different word when the intended word could not be remembered or recalled.

Perceived Level of Use of Strategies in Reading Comprehension

Findings with regard to the LLD 99 students' reported levels of use for strategies on reading comprehension are given in Appendix E.

The table in Appendix E lists five reading comprehension strategies. Of these, "rereading a paragraph when the reader can't understand it" was the most widely used. By their self-report, 61 (79.2%) students used this strategy most of the time, 12 (15.6%) some of the time, and 2 (2.6%) never. Of these three groups, 19 (31.0%), 4 (33.3%), and 1 (50.0%) passed the WST respectively. A chi-square goodness of fit test indicated that there was a significant

difference (chi-square = 79.760, $df = 2$, $p < .05$) among the three groups in terms of their perceived levels of use of this strategy, which simply means that students perceived themselves as varying significantly in the use of each particular strategy.

The strategy of "summarizing information in a text after reading it" was perceived to be the second most widely used strategy. 25 (49.4%) students used this strategy most of the time; of these, 7 (28.0%) passed the WST. Thirty-eight (49.4%) students used it some of the time; of this group, 13 (34.2%) passed the exam. Of the 12 (15.6%) students who never used the strategy, only 3 (25.0%) passed the WST. A chi-square goodness of fit test indicated that there was a significant difference (chi square = 13.520, $df = 2$, $p < .05$) among the three groups in terms of their perceived use of this strategy.

A summary of the most important findings regarding subjects' reported use of reading comprehension strategies is as follows:

1. The rereading of a text (backtracking) when the reader didn't understand it was the most widely used strategy in this category.
2. The second most widely used strategy was that of summarizing information when reading in English.
3. There was a significant difference among the subjects in terms of their perceived levels of use for three of the five strategies. These were: rereading of a paragraph, distinguishing relevant and important details from the irrelevant and unimportant details, and summarizing information after the reading of a text.
4. None of the strategies seemed to have a significant relationship with the passing of the WST.

Perceived Use of Strategies in Grammatical Ability

Findings with regard to students' perceived use of strategies on grammatical ability are given in Appendix F.

The table in Appendix F shows four strategies in the category of one's use of strategies to improve his or her grammatical ability while learning the English language. Students were asked to issue a numerical rating for their use of these strategies: 1 (*most of the time*), 2 (*some of the time*), or 3 (*never*).

Of these four strategies, "noticing grammar mistakes while proofreading or peer editing an essay" was perceived to be the most widely used strategy. Out of 77 students, 31 (34.6%) reported using this strategy most of the time; 9 (29.0%) passed the WST. Thirty-eight (49.4%) reported using the strategy some of the time; of these, 14 (36.8%) passed the WST. Six (7.8%) reported never using the strategy; only 1 (16.6%) of these students passed the WST. A chi-square goodness of fit test indicated that there was a significant difference (chi-square = 22.640, $df = 2$, $p < .05$) among the three groups in terms of their perceived level of use of this strategy.

The strategy of "using the grammar checker" was perceived to be the second most widely used strategy in this group. Out of 77 students, 47 (61.0%) stated that they used the strategy most of the time; of these, 14 (36.6%) passed the WST. Eleven (14.3%) reported using it some of the time;

of this group, 3 (27.3%) passed the WST. Sixteen (20.8%) students reported never using the strategy; 6 (37.5%) of them passed the WST. A chi-square goodness of fit test indicated there was a significant difference (chi-square = 30.838, $df = 2$, $p < .05$) among the three groups in terms of their perceived level of use of this strategy.

"Focusing on learning grammar to improve writing skills," was chosen by 22 (28.6%) students most of the time, 36 (46.8%) some of the time, and 17 (22.1%) never. Of these students, 3 (13.6%), 10 (27.7%), and 11 (64.7%) passed the WST, respectively. This strategy also correlated with a positive outcome on the WST. A chi-square goodness of fit test indicated that there was a significant difference (chi-square = 7.760, $df = 2$, $p < .05$) among the three groups in terms of their perceived level of use of this strategy. Analysis also indicated that the students preferred not to use the strategy of "paying attention to grammatical constructions of the sentences while reading."

A summary of the most important findings regarding the subjects' reported level of use of strategies for improving their grammatical abilities is as follows:

1. Proofreading was cited as most popular strategy in this category.
2. The second most widely used strategy was that of using the grammar checker.
3. The perceived level of one's intention to learn grammar correlated with a passing score on the WST.
4. There was a significant difference among the subjects in terms of their perceived levels of use for three of the four strategies in this category. These were (a) using grammar checker, (b) noticing grammar mistakes while proofreading, and (c) focusing on learning grammar.

Perceived Use of Strategies for Improving Writing Skills

Findings with regard to students' reported levels of use for strategies to improve their writing skills are given in Appendix G.

As the table in Appendix G shows, students were asked to rate seven different strategies aimed at improving writing skills in terms of the frequency with which they used them.

Of these seven strategies, "deciding in advance what to write in the essay" was the most widely used strategy. Out of 77 students, 40 (51.9%) reported using this strategy most of the time, 28 (36.4%) some of the time, and 8 (10.4%) never. Ten (25.0%) from the most of the time user group passed, as did 11 (39.3%) from the some of the time user group, and 4 (50.0%) from the never used group. Statistical analyses indicated that there was a significant difference (chi-square = 20.632, $df = 2$, $p < .05$) among these three groups in terms of their perceived level of use of this strategy (most of the time, some of the time, never).

The strategy of "revising one's writing more than once" was perceived to be the second most widely used strategy in this category. Out of 77 students, 23 (29.9%) reported using it most of the time; 8 (34.8%) passed the WST. 43 (55.8%) students reported using this strategy some of the time; 15 (34.9%) of them passed the WST. Of the 9 (11.7%) students who reported never using

the strategy, only 1 (11.1%) passed. A chi-square goodness of fit test indicated that there was a significant difference (chi-square = 23.360, $df = 2$, $p < .05$) among the groups in terms of their perceived level of use of this strategy.

"Deciding in advance what content to put in which paragraph" was the third most popular strategy. Twenty-eight (36.4%) students claimed that they used the strategy most of the time, with 7 (25.0%) of those passing the WST. Of 31 (40.3%) students who reported using the strategy some of the time, 13 (41.9%) passed. 17 (22.1%) students reported never using the strategy at all; of them, 5 (29.4%) passed the WST. There was not a statistically significant difference among the students in terms of their perceived level of use of this strategy.

The only strategy that seemed to have a significant relationship with the passing of the WST in this category was "observing how classmates write essays." Out of 77 students, 24 (31.2%) claimed using the strategy most of the time, 31 (40.3%) some of the time, and 20 (26.0%) never using it. Within these three groups of users, 2 (8.3%), 13 (41.9%), and 10 (50.0%) passed the WST, respectively.

It is interesting to note that three important strategies: making an outline, showing one's writing to another person in order to get feedback, and reading for the purposes of improving one's writing skill were unpopular with this sample population.

A summary of the most important findings regarding subjects' perceived use of strategies for improving their writing skills is as follows:

1. The most frequently used strategy in this category was that of deciding in advance what to write about.
2. The second most used strategy in this category was that of revising more than once.
3. The least used strategies were "reading in order to improve one's writing skills" and "showing one's writing to another person for the purpose of getting feedback."
4. There was a statistically significant difference among the groups of the sample population in terms of their perceived level of use for the following three strategies: (a) deciding in advance what to write about, (b) revising one's writing more than once, and (c) reading in order to improve one's writing skill.
5. Though the strategy of "observing how one's classmates write essays" was perceived to be second least used strategy in a group of 6 strategies, it was the only strategy in this group that correlated with a passing score on the WST.

Student Perception of Face Validity of WST

The last part of the survey required students to give their opinions regarding the face validity of the WST, labeling it as "excellent," "good," or "poor." Fifty-six out of 77 students (72.7%) felt that the WST was indeed a good writing test; 2 found it excellent (2.6%). 18 students (23.4%) felt that it was a poor writing test. A chi-square goodness of fit test indicated that the perceived level of student opinion about the test was statistically significant

(chi-square = 60.737, $df = 2$, $p < .05$).

Students thought less highly of the WST as a grammar test,[2] although 45 students (58.4%) rated it as good, compared to 29 students (37.7%) who rated it as poor. 2 students (2.6%) felt that it had excellent face validity. A chi-square goodness of fit test indicated that the perceived level of student opinion about the test was statistically significant (chi-square = 37.289, $df = 2$, $p < .05$).

Despite the fact that more than half the sample felt that the WST's writing and grammar[3] portions were good, students expressed dissatisfaction with the amount of time allotted for both parts of the test. In response to the question regarding whether there was enough time to do the essay portion of the WST, 56 students (72.7%) felt that there was not, while only 12 (15.6%) felt that there was, and 8 (10.4%) were not sure. However, statistical analyses indicated that the students significantly differed in terms of their opinions (chi-square = 56.000, $df = 2$, $p < .05$) about the time allotment for the writing test. In regards to the grammar[4] (multiple-choice) part of the WST, students were even more unhappy with the time allotment. Sixty-nine students (89.6%) felt that there was not enough time, compared to 5 (6.5%) who felt that there was, and 1 student (1.3%) who was not sure. A chi-square goodness of fit test indicated that there was also a statistically significant difference of opinion (chi-square = 116.480, $df = 2$, $p < .05$) on this point.

In terms of their opinion about the essay prompts (based on their previous experience in taking the WST), 36 students (46.8%) did not find them interesting, compared to only 24 (31.2%) who did. Fifteen students (19.5%) were not sure and 2 (2.6%) declined to give their opinion. This difference of opinion about the essay prompt was statistically significant also (chi-square = 8.880, $df = 2$, $p < .05$). Furthermore, 21 (27.3%) students of the sample population felt that the essay prompts used in the WST required too much knowledge of American culture, while 27 (35.1%) did not feel this way, and another 27 (35.1%) were not sure.

2 students (2.6%) declined to answer the question. A summary of the most important findings regarding subjects' perception of the face validity of the WST is as follows:

1. The majority of students (72.2%) felt that the WST was a good, though not excellent, writing test. Only 31.2% of the sample found the essay prompt interesting, and 27.3% felt that the essay prompt was too American culture-specific. Students were generally dissatisfied with the amount of time allotted for completing the essay portion of the WST.
2. Only 58.4% felt that the WST was a good grammar test.[5] Students were generally dissatisfied with the amount of time allotted for completing the essay portion of the WST.

Interpretation and Discussion

The findings indicate that the majority of students enrolled in LLD 99 classes in summer 2001 were nonnative English speakers. The data also show that the ESL students' perceived reading and writing proficiency in their na-

tive language was higher than their perceived English proficiency in these areas. Thus, these findings indicate that the English-language reading and writing ability of these students, at least according to their own self-perception, definitely needs to be improved. That the medium of instruction at the primary and secondary school levels correlated with passing WST scores puts ESL students, especially those who did not receive prior education in English, at a distinct disadvantage, compared to those who had such education, for passing. The finding that there were also 7 native speakers of English in the LLD 99 classes sampled was an indication that academic language ability is different from communicative language ability. In addition, though a majority of the sample population felt that the WST was a good writing test, it is possible that many of them were not familiar with the demands of academic writing and its genre due to insufficient length of exposure to academic writing in an English speaking environment. In other words, these students simply might not have experienced the language for a sufficient period of time to acquire the required skills in academic English. Research indicates that students need at least five years to be academically competent in a new language.

Furthermore, and perhaps even more importantly, ESL students might not be familiar with the desired rhetorical patterns in academic writing in English, as a majority of them had stated that their writing ability in the native language was better than their writing skill in English. It is also important to note here that a sizable portion of the test-taking population considered the essay prompt uninteresting. It is possible that the prompts provided were not able to activate the background knowledge of the test-taking population, though this could be only one of many factors that led to their previous failures. That they don't read a lot to improve their writing skills could also be another reason why they may not write what those scoring the WST exams might be looking for.

What is obvious from the findings is that students in the sample, both native and nonnative English speakers, preferred some strategies to others and that of a total number of 28 strategies studied, only 3 strategies, translating an unknown word in English into the native language, observing how classmates write essays, and focusing on learning grammar to improve one's writing skills were actually found to have some kind of significant relationship with the passing of the WST.

The students differed significantly in their use of a number of strategies; this may be an indication that not all students were familiar with all the strategies. Ideally, a majority of students' perceptions of strategy use would have indicated that they had been using all the strategies most of the time with significant differences among the three groups of responses (most of the time, some of the time, never). That there were not significant differences in their perceived levels of use is a disturbing finding. Even for strategies for which there were significant differences in the students' perceived levels of use, there were few strategies that the students said they used most of the time.

The data also clearly show that the students needed more time to complete both parts of the test. Fifty-six felt that they did not have enough time to

do the essay portion, while 69 felt that there was not enough time to do the grammar portion. The data, then, seem to imply that these students felt that, given more time, they could have done better on the WST.

In light of these findings, the authors wish to make several pedagogical suggestions to instructors who prepare students for the CSU writing requirement:

1. We recommend that students be given extensive practice in the use of the three strategies that were found to be correlated with passing scores on the WST: remembering a word's meaning by translating into the native language, observing how classmates write essays, and focusing on learning grammar. The failure of the other strategies to correlate with passing scores on the WST might be an indication that the students know the strategies but have not internalized them to the extent that using them has become second nature in their L2 academic writing process. It might be necessary for teachers to focus on teaching the students how to transfer the relevant strategies from their first language so as to make them second nature in the L2 academic writing process.
2. Since the findings indicated that 72.7% and 89.6% of the students felt that there was not enough time to take the essay and the multiple-choice portions of the WST, the authors feel that students would benefit from practicing the exam format with the allotted time. Thus, students should be encouraged to write in-class essays at least once a week and to take weekly mock multiple-choice exams modeled on the English subtest of the ACT. For essays, students should write in pen and not on the computer, since they would have to use a pen on the exam. When assigning essays and practice multiple-choice exams for homework, students can be required to use a clock and give themselves exactly 60 minutes for the essay and 45 minutes for the objective portion, which is the time they will have on the WST.
3. The findings indicate that students who had not received prior education in English ran a larger risk of failing the WST. Therefore, on the first day of class, teachers are encouraged to find out if their students received elementary or high school education in English. The teacher might spend additional time and energy on those who did not have English as the medium of instruction in their school; this teacher assistance could take the form of tutoring the student in English grammar and in teaching them to internalize the reading and writing strategies with which they might be familiar through their native language. In short, the teachers should inform the students that the reading and writing processes in both L1 and L2 are the same and that they should learn to transfer their strategies from their L1 to their L2.
4. The strategy of asking a teacher for examples of how unfamiliar vocabulary words can be used was one of the least popular strategies in the category of vocabulary comprehension and use. This finding suggests that students did not feel comfortable asking teachers questions of this nature. As such, on the first day of an LLD 98 or 99 class, teachers should emphasize the importance of vocabulary knowledge for the

WST and should encourage students to ask questions regarding the use of unfamiliar words. Finally, these instructors have a most noble purpose: to help their students pass through the stressful hurdle of the WST. With the proper combination of strategy use, cognitive skills in English, and practice in composing and writing a quality essay in 60 minutes, they can train LLD 98/99 students to pass the WST in greater numbers.

Limitations of the Study and Suggestions for Further Research

There are several limitations to this study. The first and most obvious is that the sample is biased due to its small size (N = 77) and the limited time during which the research was conducted—summer 2001. Future studies must span at least two or three semesters.

A second limitation is that the current survey does not consider that the terms "most of the time" and "some of the time" could mean different things to different people. For example, two students who both used a certain strategy 65% of the time might answer differently, one thinking that this percentage qualifies as some of the time, and the other surmising that this could be most of the time. This shortcoming became obvious only after the data were collected. However, even though this is a serious limitation of the study, we emphasize that the quality of this study was not compromised by an initial lack of definition provided for these terms. This was a pilot study with a limited scope, and the goal of any pilot study is to iron out such shortcomings in advance of a study done on a larger scale.

Another limitation of the study was that the survey did not take into account whether the instructors had familiarized students with all the strategies in the questionnaire. Also, even if the students had been taught all of them or knew them from their L1, they may not have internalized them in their L2 academic writing process. Learning or knowing about strategies is different from using them. Hence, it is possible that students could have been answering questions about strategies without discerning whether they were using them in their L2 academic reading or writing processes. It is possible that they were using them in their L1 reading and writing processes and not in their L2 academic reading and writing processes.

A further limitation of the study was that information was elicited from students through only one method—questionnaires in a self-report format in a survey design. An effort must be made to incorporate as many data elicitation methods as possible (e.g., observations, written and/or oral journals, etc.) as part of future studies so that there is less risk of biased results.

Though not serious, another small limitation of the present study has to do with the statistical techniques used to analyze the data. Only chi-square analyses and frequency distributions were used for these data since we were able to obtain only limited data in the present study. Future studies must make an attempt to collect data from at least 500 students so that discriminate and path analyses can be used for analyzing the data. If possible, qualitative data should also be collected through one-on-one interview to supplement the quantitative data. Other possible qualitative data might include observations

of how students use these strategies in the classroom.

The purpose of research studies like this one is to understand why some students fail the WST more than twice and how their success in university education can be ensured. It is in this perspective that suggestions have been made in spite of the limitations of the study.

Authors

Dr. Iris Thot-Johnson is a graduate of SJSU with an MA in TESOL. She has 14 years of foreign-language teaching and two years of ESL teaching experience. Dr. Thot-Johnson earned her doctoral degree in higher education from Claremont Graduate University and also holds a BA and MA in German.

Dr. Swathi Vanniarajan is coordinator of the MATESOL program at San José State University. His specializations include psycholinguistics, second language acquisition, and language testing.

Endnotes

[1] The names are listed in alphabetical order. For all purposes, both authors are to be considered first authors as far as this paper is concerned.

[2–5] The authors acknowledge that the objective portion of the WST is not actually a grammar test, but rather the English subsection of the ACT, as explained at the beginning of the article.

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Appendix A
Letter to Teachers

Dear LLD 99 Instructor:

My name is Iris Thot-Johnson and I am an MA TESOL student in the Department of Linguistics and Language Development at San José State University. As part of my MA thesis, I am conducting a survey on LLD 99 students' reading and writing strategies and their subsequent performance on the WST. The study attempts to get a glimpse of student attitudes towards the WST. Dr. Swathi Vanniarajan is my thesis advisor.

Please have your students fill out the survey and also please make sure that they answer all the questions as truthfully as they can. Completed surveys may be put into the plastic box marked **LLD 99 Surveys,** which will be located in the LLD office. Please do not hesitate to e-mail me at all if you have any questions concerning this project.

Thank you and I appreciate your cooperation.

Sincerely,
Iris Dolores Thot-Johnson

Appendix B
Letter to Survey Recipients

Dear LLD 99 Student:

You have been selected to participate in a study on the WST. The information will be kept confidential and the data will be analyzed anonymously. Please answer all of the questions as truthfully as you can.

The result of this study, which is part of my MA research at SJSU, will enable the LLD 99 instructors to better understand how the WST impacts students as well as how your reading and writing preferences help you in preparing for the WST.

Your participation is greatly appreciated. Good luck on your WST!

Sincerely yours,
Iris Dolores Thot-Johnson

Appendix C
Students' Reading and Writing Strategies and Their WST Performance

Please answer all the questions as accurately as possible. This information is being requested for research purposes and will remain confidential. Thank you for your participation.

Part A: Background Information

1. Name:
2. Social Security Number:
3. Gender: Male Female
4. Academic level: Undergraduate Graduate
5. What is your major?
6. What is your native language?
7. How would you describe your current reading ability in English?
    a. below average
    b. average
    c. good
    d. very good
    e. excellent
8. How would you describe your current reading ability in your native language?
    a. below average
    b. average
    c. good
    d. very good
    e. excellent
9. How would you describe your current writing ability in English?
    a. below average
    b. average
    c. good
    d. very good
    e. excellent
10. How would you describe your current writing ability in your native language?
    a. below average
    b. average
    c. good
    d. very good
    e. excellent
11. Was your elementary school education in English?
    a. Yes / No If yes, from which grade? From grade:___
12. Was your high school education in English?
    a. Yes / No If yes, from which grade? From grade:___

Part B: Reading and Writing Strategies

Vocabulary

13. When you come across an unknown word while reading in English, do you look up the unknown word in a dictionary (either English or bilingual)?
    Yes / No If yes: a. Most of the time b. Some of the time
14. When you come across an unknown word while reading in English, do you try to guess the meaning of the unknown word based on the context?
    Yes / No If yes: a. Most of the time b. Some of the time
15. When you come across an unknown word while reading in English, do you ask your teacher for examples of how to use the word?
    Yes / No If yes: a. Most of the time b. Some of the time
16. When you look up an unknown word in a dictionary while reading in English, do you look it up only if it is important?
    Yes / No If yes: a. Most of the time b. Some of the time
17. When reading in English, do you pay attention to how a word is used?
    Yes / No If yes: a. Most of the time b. Some of the time
18. When you are trying to learn a new word in English, do you try to remember its meaning by translating it into your native language?
    Yes / No If yes: a. Most of the time b. Some of the time
19. When you are trying to learn a new word in English, do you try to remember its meaning by remembering the context in which it occurs?
    Yes / No If yes: a. Most of the time b. Some of the time
20. While writing term papers on the computer, do you use a spell checker?
    Yes / No If yes: a. Most of the time b. Some of the time
21. When you are trying to learn the spelling of a new word in English, do you try to remember it by writing it down one or more times?
    Yes / No If yes: a. Most of the time b. Some of the time
22. When you don't know the exact word you want while writing in English, do you attempt to use a different word that has a somewhat similar meaning?
    Yes / No If yes: a. Most of the time b. Some of the time
23. When you don't know the exact word you want while writing in English, do you consult the thesaurus?
    Yes / No If yes: a. Most of the time b. Some of the time
24. When you don't know the exact word you want while writing in English, do you give up what you want to say?
    Yes / No If yes: a. Most of the time b. Some of the time

Comprehension

25. When you don't understand a paragraph while reading in English, do you reread it?
    Yes / No If yes: a. Most of the time b. Some of the time
26. When you read in English, can you distinguish the relevant and important details from the irrelevant and unimportant details?
    Yes / No If yes: a. Most of the time b. Some of the time

27. When you read an article, a story, or a news item in English, do you make connections or comparisons between your own experiences and those of the characters?
    Yes / No If yes: a. Most of the time b. Some of the time
28. When you start to read an academic essay in English, can you make predictions about what the essay will contain in the second half?
    Yes / No If yes: a. Most of the time b. Some of the time
29. When you read a chapter in a textbook or a journal article, or an academic essay in English, can you summarize the information after you have read it in order to remember it?
    Yes / No If yes: a. Most of the time b. Some of the time

Grammar

30. When you read in English, do you pay attention to how sentences are grammatically constructed?
    Yes / No If yes: a. Most of the time b. Some of the time
31. When writing term papers on the computer, do you use a grammar checker?
    Yes / No If yes: a. Most of the time b. Some of the time
32. While proofreading your written essays, do you notice any grammar mistakes?
    Yes / No If yes: a. Most of the time b. Some of the time

Improving Writing Skills

33. Before you start writing an academic essay, do you make an outline?
    Yes / No If yes: a. Most of the time b. Some of the time
34. In order to improve your writing skills, do you decide in advance what to write about?
    Yes / No If yes: a. Most of the time b. Some of the time
35. In order to improve your writing skills, do you decide in advance what content to put in which paragraph?
    Yes / No If yes: a. Most of the time b. Some of the time
36. In order to improve your writing skills, do you read a lot of books?
    Yes / No If yes: a. Most of the time b. Some of the time
37. In order to improve your writing skills, do you focus on learning grammar (either by enrolling in grammar classes or on your own)?
    Yes / No If yes: a. Most of the time b. Some of the time
38. In order to improve your writing skills, do you observe how essays are written by your classmates?
    Yes / No If yes: a. Most of the time b. Some of the time
39. In order to improve your writing skills, do you show your writing to another person?
    Yes / No If yes: a. Most of the time b. Some of the time
40. In order to improve your writing skills, do you revise what you have written more than once?
    Yes / No If yes: a. Most of the time b. Some of the time

Part C: The Writing Skills Test (WST)

41. When are you planning to retake the WST? (Please enter date)
42. What do you think of the WST as a writing test?
    Excellent Good Poor
43. What do you think of the WST as a grammar test?
    Excellent Good Poor
44. Do you think that there is enough time (60 min.) to do the essay part of the WST?
    a. Yes, there is enough time to do the essay part of the WST
    b. No, there is not enough time to do the essay part of the WST
    c. I'm not sure if there is enough time to do the essay part of the WST
45. Do you think that there is enough time (45 min.) to do the grammar part of the WST?
    a. Yes, there is enough time to do the grammar part of the WST
    b. No, there is not enough time to do the grammar part of the WST
    c. I'm not sure if there is enough time to do the grammar part of the WST
46. Does the essay prompt (content-wise) interest you?
    a. Yes, the essay prompt interests me
    b. No, the essay prompt doesn't interest me
    c. I'm not sure if the essay prompt interests me
47. Is the essay prompt (content-wise) too American-culture specific?
    a. Yes, the essay prompt is too American-culture specific
    b. No, the essay prompt is not too American-culture specific
    c. I'm not sure if the essay prompt is too American-culture specific
48. Do you have a hard time writing with pen and/or pencil?
    a. Yes, I have a hard time writing with pen and/or pencil
    b. No, I don't have a hard time writing with pen and/or pencil
    c. I'm not sure if I have a hard time writing with pen and/or pencil

Thank you very much for participating in this research study!

Erratum

In the last issue of *The CATESOL Journal*, our printer inadvertently omitted Appendix D through G of the following article:

Thot-Johnson, I. D., & Vanniarajan, S. (2002). Students' Reading and Writing Strategies and Their WST Performance. *The CATESOL Journal, 14*(1), 73-101.

We include the tables in this issue along with an apology to the authors and to our readers.

Mark Roberge and Kate Kinsella,
Co-Editors, *The CATESOL Journal*

Appendix D
Reading and Writing Strategies: Vocabulary Comprehension and Use

Sample Population Perceptions With Regard to Frequency of Use (Never, Some of the Time, and Most of the Time) and WST Pass Rate										***Group Differences Chi-Square***		***Chi-Square Values Between Dependent Variable (WST Pass Rate) and Independent Variables (Strategies)***			
Strategy	***Never Used***			***Some of the Time***			***Most of the Time***			***Chi-Square***	***P<0.05 df=2***	***Pearson Chi-Square***	***df***	***Sign***	***P<0.05***
	#	***Pass***	***%***	***#***	***Pass***	***%***	***#***	***Pass***	***%***						
Looking up unknown word	7	2	28.6	53	16	30.2	16	6	37.5	46.921	Yes	.336	2	.845	No
Guessing word's meaning	2	0	0.0	28	8	28.6	45	15	33.3	37.520	Yes	1.093	2	.579	No
Asking teacher for examples	54	17	31.5	19	5	26.3	4	3	75.0	51.299	Yes	3.652	2	.161	No
Looking up important word	20	5	25.0	30	9	30.0	25	10	40.0	2.000	No	1.241	2	.538	No

Appendix D (continued)

Paying attention to word's use	18	5	27.7	26	12	46.2	30	7	23.3	3.027	No	3.545	2	.170	No
Remembering word's meaning by translating into NL	24	12	50.0	13	3	23.1	38	8	21.1	12.560	Yes	6.223	2	.045	Yes
Remembering word's meaning by context	22	6	27.3	28	9	32.1	25	8	32.0	.720	No	.169	2	.919	No
Using spell checker	3	0	0.0	11	3	27.3	60	20	33.3	77.216	Yes	1.570	2	.456	No
Remembering spelling by writing word down	25	11	44.0	20	8	40.0	31	5	16.1	2.395	No	5.866	2	.053	No
Using different word with similar meaning	8	4	50.0	19	3	15.8	47	17	36.2	32.784	Yes	3.828	2	.147	No
Consulting thesaurus	25	7	28.0	29	9	31.0	21	9	42.9	1.280	No	1.246	2	.536	No
Giving up what one wanted to say	45	16	35.5	25	7	28.0	7	2	28.6	28.156	Yes	.472	2	.790	No
Total	253	85	33.6	301	92	30.6	349	110	31.5						

Appendix E
Reading and Writing Strategies: Reading Comprehension

Sample Population Perceptions With Regard to Frequency of Use (Never, Some of the Time, and Most of the Time) and WST Pass Rate										*Group Differences Chi-Square*		*Chi-Square Values Between Dependent Variable (WST Pass Rate) and Independent Variables (Strategies)*			
Strategy	*Never Used*			*Some of the Time*			*Most of the Time*			*Chi-Square*	*P<0.05 df=2*	*Pearson Chi-Square*	*df*	*Sign*	*P<0.05*
	#	*Pass*	*%*	*#*	*Pass*	*%*	*#*	*Pass*	*%*						
Rereading a paragraph	2	1	50.0	12	4	33.3	61	19	31.0	79.760	Yes	.328	2	.849	No
Distinguishing relevant and important details	14	1	7.1	25	9	36.0	34	13	38.2	8.247	Yes	4.798	2	.091	No
Making comparisons between self and characters in reading	24	7	29.2	28	10	35.8	25	8	32.0	.338	No	.256	2	.880	No
Making predictions about second half of essay	28	10	35.7	30	1	33.3	19	5	26.0	2.675	No	.473	2	.789	No
Summarizing information in reading	12	3	25.0	38	13	34.2	25	7	28.0	13.520	Yes	.489	2	.783	No
Total	100	32	32.0	164	50	30.5	188	54	28.7						

Appendix F
Reading and Writing Strategies: Grammatical Ability

Sample Population Perceptions With Regard to Frequency of Use (Never, Some of the Time, and Most of the Time) and WST Pass Rate										*Group Differences Chi-Square*		*Chi-Square Values Between Dependent Variable (WST Pass Rate) and Independent Variables (Strategies)*			
Strategy	*Never Used*			*Some of the Time*			*Most of the Time*			*Chi-Square*	*P<0.05 df=2*	*Pearson Chi-Square*	*df*	*Sign*	*P<0.05*
	#	*Pass*	*%*	*#*	*Pass*	*%*	*#*	*Pass*	*%*						
Paying attention to grammatical constructions	26	9	34.6	30	11	36.6	21	5	23.8	1.584	No	1.014	2	.602	No
Using grammar checker	16	6	37.5	11	3	27.3	47	14	29.8	30.838	Yes	.419	2	.811	No
Noticing grammar mistakes	6	1	16.6	38	14	36.8	31	9	29.0	22.640	Yes	1.183	2	.553	No
Focusing on learning grammar	17	11	64.7	36	10	27.7	22	3	13.6	7.760	Yes	12.061	2	.002	Yes
Total	65	27	41.5	115	38	33.1	188	54	28.7						

Appendix G
Reading and Writing Strategies: Improving Writing Skills

Sample Population Perceptions With Regard to Frequency of Use (Never, Some of the Time, and Most of the Time) and WST Pass Rate										*Group Differences Chi-Square*		*Chi-Square Values Between Dependent Variable (WST Pass Rate) and Independent Variables (Strategies)*			
Strategy	*Never Used*			*Some of the Time*			*Most of the Time*			*Chi-Square*	*P<0.05 df=2*	*Pearson Chi-Square*	*df*	*Sign*	*P<0.05*
	#	*Pass*	*%*	*#*	*Pass*	*%*	*#*	*Pass*	*%*						
Making an outline	20	8	40.0	30	8	26.6	27	8	29.6	2.052	No	.987	2	.610	No
Deciding in advance what to write about	8	4	50.0	28	11	39.3	40	10	25.0	20.632	Yes	2.708	2	.258	No
Deciding in advance what content to put where	17	5	29.4	31	13	41.9	28	7	25.0	4.289	No	2.032	2	.362	No
Showing writing to another person	26	7	26.9	31	9	29.0	19	8	42.1	2.868	No	1.328	2	.515	No
Revising more than once	9	1	11.1	43	15	34.9	23	8	34.8	23.360	Yes	2.051	2	.359	No
Observing how classmates write essays	20	10	50.0	31	13	41.9	24	2	8.3	2.480	No	10.282	2	.006	Yes
Reading to improve one's writing skills	37	12	32.4	31	11	35.5	7	1	14.3	20.160	Yes	1.186	2	.553	No
Total	139	47	33.8	225	80	35.6	168	44	26.2						