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CHIEF OF STAFF

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Readers

Contact Editor, Dr. Woytak (ATFL-CD-AJ), *Applied Language Learning*

Defense Language Institute Foreign Language Center
Presidio of Monterey, CA 93944-5006

E-mail: aj@monterey.army.mil

Telephone: (831) 242-5638 DSN: 768-5638

Fax: (831) 242-5850

Webmasters

Natela Cutter
PFC Joshua Graves

Cover Design

Barney Inada

Graphics Consultant
Graphics and Layout

Elaine Koppany
AB Zachary Hodgens

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<i>San Jose State University</i> |
| J. Ward Keesling
<i>Defense Language Institute
Foreign Language Center</i> | |

Tactics Employed and Problems Encountered by University English Majors in Hong Kong in Using a Dictionary

Alice Yin Wa Chan

City University of Hong Kong

Building on the results of a small-scale survey which investigated the general use of dictionaries by university English majors in Hong Kong using a questionnaire survey and their specific use of dictionaries using an error correction task, this article discusses the tactics these students employed and the problems they encountered when using a dictionary. A total of 106 respondents participated in the questionnaire survey, and twenty-five volunteered to also participate in the error-correction workshops. A think-aloud approach was adopted in the workshops, whereby the students recorded their process of locating a target word, searching for the appropriate usage, and determining on the correct usage. Results show that though many students regularly consulted one or more dictionaries in their learning of English as a second language, their dictionary skills were often not adequate enough for them to cope with their learning demand. It is recommended that in order to promote learner autonomy, teachers should raise students' awareness of the usefulness of a dictionary and help them develop dictionary skills. Organizers of teacher training programs should also consider including the training of dictionary skills as one of the chief components in their programs so as to equip student teachers with the required knowledge of dictionary training.

A learner's dictionary is an indispensable self-learning tool, providing learners with invaluable banks of information about the language being learned, such as the meanings of a word, its pronunciations, synonyms, antonyms, collocations, and syntactic behavior. The correct usage of a word, often exemplified in example sentences or definitions, is also an important source of information. Dictionaries are useful not only to foreign learners, but also to non-native teachers of the language in coping with their teaching and marking needs. In an attempt to facilitate self-learning and to maximize use, dictionary compilers have strived to improve the coverage and presentation of their dictionaries. Examples are the change of the Oxford Advanced Learner's English-Chinese Dictionary (OALECD) from the adoption of non-transparent

grammatical codes such as VP6A, VP5A in previous editions to the use of more meaningful codes such as Tn (transitive verb), I (intransitive verb) in the fourth edition; and also the change of the Collins COBUILD English Language Dictionary (COBUILD) from the adoption of a one word, one entry policy in the first edition to the adoption of the super-headword structure in the second and third editions¹. However, it is doubtful whether learners, and even teachers, are aware of the potential usefulness of the dictionaries they regularly consult and the banks of knowledge dictionaries can provide them with, as complaints about the inadequacy and incomprehensibility of dictionaries are often heard in and outside of the classroom.

There have been several investigations into the use of dictionaries by learners of English as a second or foreign language, both in native English speaking countries and in non-native English speaking areas. Béjoint (1981) studied the language needs and reference skills of foreign students using monolingual English dictionaries; Neubach and Cohen (1988) studied students' processing strategies and problems encountered in the use of dictionaries; Nuccorini (1992) examined the different expectations Italian students of English and Italian teachers of English had in their dictionary use; Atkins (1997) examined what people actually did when they consulted their dictionaries for help with a translation; and Harvey and Yuill (1997) studied the role played by a dictionary in the completion of written tasks by foreign learners of English. More recently in the new millennium, Bogaards and van der Kloot (2001) studied the use of grammatical information in learners' dictionaries by Dutch learners of English. With regard to dictionary research in Hong Kong, Taylor (1988) conducted a survey on Hong Kong tertiary students' use of dictionaries and concluded that in order to make the best use of what was available to students, we had to take a closer look at students' actual use of dictionaries. Taylor and Chan (1995) investigated the role and use of dictionaries in the teaching and learning of English in Hong Kong primary schools and found that dictionaries were mainly used at home for doing homework. Research into the use of dictionaries for a specific task by Hong Kong ESL learners is, to the author's knowledge, very scarce.

This article reports on the findings of a small-scale research project which aimed at investigating the use of dictionaries in learning English as a second language by tertiary students in Hong Kong. As university English majors are among the most advanced students who would often use a dictionary for self-learning purposes, it was decided that only university English majors be included in this small-scale study. The instruments consisted of a questionnaire survey which probed into students' general use of dictionaries and a series of dictionary workshops which explored students' tactics and problems in using dictionaries for a specific task. Implications from the findings of the survey, as well as recommendations for helping students make the best use of a dictionary, will also be given.

The Questionnaire Survey

Methodology and Participants

The questionnaire survey was administered to 106 undergraduates on the BA Teaching English as a Second Language program at the City University of Hong Kong in 2000. The respondents were from nineteen to thirty-five years of age at the time of investigation, of whom twenty-two are male and eighty-four are female. A majority of them (96.3%) had learned English for over ten years, and a minority of them (3.6%) had been teachers and taught English for two to ten years. The questionnaire (see Appendix I) focused on the kinds of dictionaries these students used, their dictionary skills, the frequency of their use, the sorts of activities they most often used dictionaries for, the kinds of information they usually sought, their views on the usefulness and helpfulness of the dictionaries they were familiar with, the problems they often encountered, as well as their suggestions for improvement². In the following sections, I will discuss the results of the questionnaire survey.

Results

Dictionaries Used

About 71.7 % of the respondents used a monolingual dictionary in their study or work, but about 85% of them used a bilingualized dictionary^{3,4}. Many of them (31.6%) used a dictionary every day, but some of them (7.9%) used one only when necessary. A lot of them (42%) checked more than one dictionary when they were in doubt. Though about half of them had been taught how to use a dictionary before, many of them (46.7%) were taught dictionary skills only in their primary schools. COBUILD and Oxford Advanced Learner's Dictionary of Current English (OALD) were the most popular monolingual dictionaries students have (64.1%), while OALECD was the most popular bilingualized dictionary (55.3%).

Students' Familiarity with User's Guides

A majority of the respondents (68.9%) had never read the introduction or user's guide of the dictionary/ies they often used. Although most of the respondents who had read the user's guide before (69.7%) said that it was easy or very easy to read, only one respondent had read it thoroughly and about 21.2% had read it quite carefully. Most of the others (75.8%) said they had read it only cursorily.

Sorts of Activities Dictionaries were Used for

With regard to the sorts of activities the respondents most often used their dictionaries for (Q. 8, see Appendix I), translation came at the top of the list. 42.5% of the respondents ranked translation as the top priority, claiming that they most frequently used their dictionaries for doing translation work from the target language to the native language or vice versa. Written comprehension

and written composition came next: 34% of the respondents ranked these two activities as the top priority, and about the same percentage of respondents ranked them second. Oral comprehension and oral composition, on the other hand, were the least common sorts of activities for which the respondents used dictionaries. Only about 2.8% and 0.9%, respectively, of the respondents ranked these activities first; and 34% and 37.7%, respectively, of the respondents used their dictionaries for these two activities least frequently (see Table 1).

Table 1. *Sorts of Activities Students Used Dictionaries for*
(1=most frequent, 5=least frequent)

Activity	1	2	3	4	5	No Comment	Total
a. Translation	45 (42.5%)	14 (13.2%)	25 (23.6%)	3 (2.8%)	10 (9.4%)	9 (8.5%)	106 (100%)
b. Written comprehension	36 (34.0%)	35 (33.0%)	23 (21.7%)	3 (2.8%)	2 (1.9%)	7 (6.6%)	106 (100%)
c. Written composition	36 (34.0%)	33 (31.1%)	25 (23.6%)	5 (4.7%)	-	7 (6.6%)	106 (100%)
d. Oral comprehension	3 (2.8%)	2 (1.9%)	11 (10.4%)	38 (35.8%)	36 (34.0%)	16 (15.1%)	106 (100%)
e. Oral composition	1 (0.9%)	5 (4.7%)	7 (6.6%)	37 (34.9%)	40 (37.7%)	16 (15.1%)	106 (100%)

The results reflect, to a certain extent, one major limitation of the use of reference tools such as dictionaries, especially printed ones. It is not common for a person to carry a (printed) dictionary at all times, and even he/she does so, he/she may not want to check it while conversing with others. Checking a dictionary retrospectively may not be a common practice among less-motivated students either. It is thus not surprising that oral comprehension and oral composition, which require the use of dictionaries on the spot, were among the least common activities students used a dictionary for.

Kinds of Information Sought

As for the kinds of information the respondents usually sought (Q. 9, see Appendix I), akin to previous findings such as Quirk (1974), Tomaszczyk (1979), Béjoint (1981), Marelllo (1989), the meanings of a word were found to be the most common. About 88.7% of the respondents checked the meanings of a word most frequently. The usage of a word was also popular, with about 14.2% of the respondents ranking it first (and about 39.6% ranking it second). Lexical relations, however, were not widely consulted: the synonyms of a word and its antonyms were among the kinds of information least frequently looked up, with about 2.8% and 0.9% respectively choosing the item in question as the top priority. The collocation of a word, its pronunciations and spelling also ranked very low in the respondents' priority list. Only about 1.9%, 3.8% and 4.7 % respectively most frequently checked a dictionary for these kinds of information (see Table 2).

Table 2. *Kinds of Information Students Sought from Dictionaries*
(1=most frequent, 8=least frequent)

Purpose	1	2	3	4	5	6	7	8	No comment	Total
a. Checking the meanings of a word	94 (88.7%)	5 (4.7%)	2 (1.9%)	-	2 (1.9%)	-	3 (2.8%)	-	-	106 (100%)
b. Checking the pronunciations of a word	4 (3.8%)	18 (17.0%)	17 (16.0%)	12 (11.3%)	19 (17.9%)	11 (10.4%)	24 (22.6%)	-	1 (0.9)	106 (100%)
c. Checking the usage (e.g. grammatical information) of a word	15 (14.2%)	42 (39.6%)	19 (17.9%)	15 (14.2%)	11 (10.4%)	3 (2.8%)	1 (0.9%)	-	-	106 (100%)
d. Checking the synonyms of a word	3 (2.8%)	7 (6.6%)	17 (16.0%)	11 (10.4%)	33 (31.1%)	26 (24.5%)	8 (7.5%)	-	1 (0.9%)	106 (100%)
e. Checking the antonyms of a word	1 (0.9%)	2 (1.9%)	12 (11.3%)	7 (6.6%)	14 (13.2%)	33 (31.1%)	34 (32.1%)	1 (0.9%)	2 (1.9%)	106 (100%)
f. Checking the spelling of a word	5 (4.7%)	20 (18.9%)	32 (30.2%)	23 (21.7%)	6 (5.7%)	10 (9.4%)	10 (9.4%)	-	-	106 (100%)
g. Checking the collocations of a word	2 (1.9%)	6 (5.7%)	23 (21.7%)	28 (26.4%)	19 (17.9%)	11 (10.4%)	16 (15.1%)	-	1 (0.9%)	106 (100%)
h. Others: checking examples for reference	-	2 (1.9%)	-	-	-	-	-	-	104 (98.1%)	106 (100%)

Given that word meanings are most fundamental for translation work and the use of dictionaries for translation purposes was ranked first by the respondents (see Section SORTS OF ACTIVITIES DICTIONARIES WERE USED FOR), the result of this question was consistent with that of the previous question. It is, however, surprising to see that lexical relations and collocations, which are closely-associated with word meanings, have largely been ignored.

Most Useful Kind of Information

About 60.4% of the respondents regarded the definition of a word as the most useful kind of information in a dictionary, while only about 21.7% and 18.9% of the respondents regarded the examples and usage information respectively as the most useful (Q. 11, see Appendix 1).

Table 3. *Most Useful Parts of a Dictionary*
(1=most useful, 4=least useful)

	1	2	3	4	No Comment	Total
a. Headword	14 (13.2%)	10 (9.4%)	14 (13.2%)	63 (59.4%)	5 (4.7%)	106 (100%)
b. Definition	64 (60.4%)	20 (18.9%)	14 (13.2%)	5 (4.7%)	3 (2.8%)	106 (100%)
c. Examples	23 (21.7%)	42 (39.6%)	27 (25.5%)	10 (9.4%)	4 (3.8%)	106 (100%)
d. Usage information	20 (18.9%)	32 (30.2%)	38 (35.8%)	13 (12.3%)	3 (2.8%)	106 (100%)

Usefulness and Helpfulness of Dictionaries

Questions 15 and 16 of the questionnaire were concerned with the overall usefulness and helpfulness of the dictionaries that the respondents used. Despite there being no attempt before and during the implementation of the questionnaire survey to explain to the respondents the differences between the terms usefulness and helpfulness, it is interesting to note that the results of the two questions diverged: over half of the respondents (55.7%) regarded dictionaries as very useful to them in their learning or teaching of English as a second language, but fewer regarded them as very helpful⁵(only about 46.2%).

It is unclear, with the limited numerical data available from the questionnaire survey, how usefulness and helpfulness were viewed by the respondents, but the difference between the results of the two questions suggests that learners themselves did make a difference between the usefulness and helpfulness of a dictionary, and that *helpful* and *useful* were not considered synonyms, at least with reference to the use of a learner's dictionary.

For a dictionary to be useful, it should contain information that most users want to know; but for it to be helpful, the information should be able to help users perform their tasks (writing, speaking, reading, or translating) more smoothly and successfully. A dictionary may be useful but not helpful if the information contained is not precise or use-friendly enough to be able to help users perform their tasks, but the unhelpfulness may be due to users' inadequate dictionary skills. Further research into learners' dictionary skills is needed if we are to uncover the reasons for the divergent comments (cf. Section THE DICTIONARY WORKSHOPS).

Disappointment with Dictionaries

Most of the respondents had come across occasions on which their dictionaries let them down. Very often they were disappointed because the information was not clear (54.8%) or because the examples were not useful (40.6%)⁶. A number of respondents (38.6%) were disappointed with their dictionaries because of their difficulties in locating a wanted word. Surprisingly, there were no respondents who complained about the lack of usage information. Very few respondents (4.7%) were disappointed with the phonetic transcriptions given, and about 28.3% of them responded that they were never disappointed with the phonetic transcriptions.

Difficulties in Using Dictionaries

When asked what difficulties they had encountered in using a dictionary, the respondents expressed different views. Among the most salient views were failure to find a wanted word or the correct form of a wanted word, difficulties in understanding or recognizing the specific symbols used, in recognizing the part of speech of a word, in understanding the explanations given, and in decoding the pronunciation of a target word from the given transcriptions. Some respondents thought that the numerous definitions or examples given for a particular entry eluded them, so even after checking a dictionary, they

still could not figure out the appropriate meanings of a multi-senses word or the correct usage of a target item. Other respondents expressed their concern over the time needed for checking a dictionary and the impossibility of carrying a dictionary to school. All their lamentations point to a commonality: that students did encounter problems in their use of dictionaries, and there was a mismatch between their expectations and the amount of help they could get from their dictionaries.

Suggestions for Improvement

Different suggestions were given for improving the usefulness and user-friendliness of their dictionaries. Most respondents suggested that clearer definitions, more useful examples, and more information on the parts of speech of a word should be given. Information on the grammatical structure and usage of a word should be given in a comprehensible and organized way, such as using tables to represent grammatical rules and showing exceptions to the rules. Translations of a word (in a bilingual or bilingualized dictionary) should be more specific, and differences between synonyms of a word should be illustrated.

Some respondents were concerned about the clarity of the user's guides and suggested that, like some pocket electronic dictionaries, there should be video presentations on how to use the dictionaries. The usefulness of examples also aroused great concern. It was suggested that examples should illustrate the different uses of the target word, be contextualized, and contain minimal cultural differences. Others expressed their concern over the use of visual aids by suggesting that there should be more colorful pictures or figures.

Implications

The foregoing sections summarize the general use of dictionaries by university English majors in Hong Kong and their feelings towards the usefulness and helpfulness of learners' dictionaries. Some patterns of dictionary use emerge from the findings - although the participants in my study often used dictionaries in their study or work, many of them had not been taught dictionary skills before, and even if so, they were taught only in their primary schools, presumably because dictionary skills were among the least important teaching items on the priority list of most secondary and tertiary teachers, alongside such more important skills as reading, writing, speaking and listening. It is thus not surprising to find that many students, even at their university stage, were unable to make full use of the information contained in a dictionary to help them perform their writing and even reading or speaking tasks. Their grievances about their difficulties in recognizing even the parts of speech of a word (which should have been the most apparent and shown in practically all dictionaries) and in understanding the explanations/ symbols/ examples given are clear indicators of their lack of dictionary skills. Very few students had consulted the user's guide before using a dictionary. Many of them were interested only in the meanings of a word, and neglected other important

information such as its usage, syntactic behavior, functional, situational and collocational restrictions, and its association.

The Dictionary Workshops

To have a thorough understanding of students' use of dictionaries and the problems they encounter, we cannot rely on the results of a single questionnaire survey - other instruments such as observations and experimental studies are definitely needed (see e.g. Atkins, 1997; Béjoint, 1981; Harvey and Yuill, 1997; Neubach and Cohen, 1988; Nuccorini, 1992). In addition to the questionnaire survey, a series of dictionary workshops was carried out to investigate students' actual use of a dictionary for a specific purpose. As is known in the literature and mentioned in previous sections, word meanings are most often sought when dictionaries are consulted. There have thus been a number of research studies investigating students' use of dictionaries for vocabulary acquisition in reading comprehension tasks (e.g. Bensoussan, 1983; Fischer, 1994; Knight, 1994; Luppescu and Day, 1993). Very few research studies, however, focus on students' exploitation of syntactic information to determine a word's usage in context (but see Bogaards and van der Kloot, 2001). Yet to students at the university level, mere knowledge of the meanings of a word (passive vocabulary) is insufficient - they have to be able to use it productively (active vocabulary) (Nation, 1990). Students themselves also claimed that they often used a dictionary for checking the usage of a word (cf. Section KINDS OF INFORMATION SOUGHT). It is because of the importance of active language knowledge and the gap in research that a series of dictionary workshops on word usage was designed.

Participants and Target Items Included

Of the 106 respondents of the questionnaire survey, twenty-five students volunteered to participate in the workshops, each of which lasted for about an hour to one and a half hours. The students were given a list of twenty-five erroneous sentences and asked to use the dictionary that they regularly consulted to help them make the corresponding corrections (see Appendix II). Most of the sentences were adapted from authentic examples the researcher gathered in the course of her teaching, while a few were specifically contrived for the study. Target items included, among others, some high-frequency problematic words such as *lack*, *despite*, *concern*, *afford*, *detail*, *anxious*. The areas of incorrect usage varied from the transitivity of verbs, countability of nouns, choice of verb forms, to the choice of prepositions. These areas were included because they are typically lexical areas with syntactic features which are clearly stated in a learner's dictionary and which are easy to locate. For instance, in COBUILD, a countable noun is specified as N-COUNT, an uncountable noun as N-UNCOUNT, a transitive verb as having the structure V n, and a ditransitive verb as V n n. Regarding the choice of prepositions and verb forms, the information is also very often explicit and easy to locate. The following examples extracted from COBUILD2 demonstrate this:

1. We each have a **notion of** just what kind of person we'd like to be.
oft N **of** n
- 2 There was a lot of **discussion about** the wording of the report.
oft N **of/about/on** n
3. It is **worth pausing** to consider these statements from Mr. Wigley.
worth -ing
4. Both the Americans and the Russians are **anxious to avoid** conflict in
South Asia.
ADJ to-inf

Methodology

Before the implementation of the dictionary workshops, the sentences to be corrected had been piloted with a group of four students, who were also university English majors at the time of piloting. It was found that the students could not identify the core problems of some of the sentences (e.g. sentences #13, #14 & #18) and were unsure about which word(s) they should look up in their dictionaries (e.g. sentences #7, #8 & #15). It was thus decided that in the actual experiment the words to be searched for should be given to the students as hints. A concurrent, think-aloud approach was adopted for collecting the participants' verbal reports which coincided in time with processing. The workshops were carried out in a language laboratory at different time slots convenient to the participants. The whole process of locating the target words, searching for the appropriate examples, determining on the appropriate examples or definitions, and making decisions on the correction of the given sentences, was tape-recorded in a language that the students felt comfortable with. Irrespective of the degree of difficulty different sentences presented to different students, all of them were asked to check their dictionaries for the usage of each and every item in the error correction task and record the way they made the corrections, so as to uncover whether, and if so how, their dictionaries helped them acquire new knowledge or confirm previous knowledge. A think-aloud approach, instead of retrospective interviews, was adopted because delayed retrospective reports 'may only have a tenuous relationship to the original attended information' (Kasper, 2000:336) and may not relate clearly to any specific observable behavior (Ericsson and Simon, 1984:xii).

The adoption of think-aloud protocols is not new to dictionary research. Neubach and Cohen (1988), for example, investigated the processing strategies and problems learners encountered in the use of dictionaries; Jaaskelainen (1989) studied students' use of dictionaries in producing written translation from English into Finnish; Gu (1994) examined the vocabulary learning strategies of good and poor Chinese EFL learners; and Fraser (1999) explored the role of consulting a dictionary in reading and vocabulary learning. All these studies adopted a think-aloud approach to tap into participants' processing stages and strategies in performing various tasks using dictionaries: translating a word from one language to another, checking the meanings of a word, or committing a word to memory. While meanings, or meaning-related tasks, have been intensively and extensively focused on, the processing

mechanisms involved in deciding on the correct **usage** of a word has largely been ignored. The error correction task designed for the present study serves to fill this research gap.

Dictionaries Used

In order to ensure maximal familiarity with the dictionaries used in the experiment, the students were allowed to choose their favorite dictionaries⁷. Given that the focus of the experiment was on word usage, only printed dictionaries were permitted. Electronic dictionaries, though widely used in Hong Kong and very handy, have been found to suffer from inadequate coverage, insufficient grammatical, collocational and pragmatic information, and lack of examples (Nesi, 1999:58-59; cf. Taylor and Chan, 1994)⁸; so they were excluded. Apart from this restriction, the students were given absolute freedom in their selection of dictionaries. Twelve students (48%) chose OALD5, twelve (48%) chose COBUILD2, and one (4%) chose Longman Dictionary of Contemporary English (LDOCE3)⁹. Twenty-two of the recordings (81%) were made in Cantonese, the mother tongue of the majority of the participants, and/or a mixed code of Cantonese and English, despite the fact that all the dictionaries chosen were monolingual and the students were all university English majors. The remaining three students (S16, S23, S24), whose mother tongues were Indian, Cantonese, and Mandarin, made their recordings purely in English.

Results: Tactics Employed

Using Examples

Unlike other research studies which probed into students' use of dictionaries in doing reading comprehension tasks, this survey investigated students' use of dictionaries for checking the grammatical usage of a lexical item. Definitions, thus, are not as useful as examples. This is reflected in the way the participants performed the error correction task: most of them used examples, rather than definitions, to inform them of the correct usage of the lexical items, comparing the relevant parts or constituents of the given sentences (e.g. call him as Tommy, accompany with my father) with the examples (e.g. call the dog Mufty, accompany my father) to deduce the correct usage. The thinking processes of S21 and S23 showed this strategy¹⁰.

S21: Question 4 ...*They call him as Tommy.* (let me) look at the example. The dictionary says **I always wanted to call the dog Mufty for some reason. Call the dog Mufty**, so (we) will not say *call the dog as Mufty*.

S23: Question number two, I am finding the word *accompany* ... so now I find an example on the dictionary, **I must ask you to accompany me to the police station** ... so in other words this sentence is wrong because we ah the preposition *with* ..., the correct sentence will be: we cross out the preposition *with*, the sentence will be *I accompany my father to the concert*.

Another common strategy associated with the use of examples was to make a decision based on the absence of negative evidence in the dictionaries - since there were no examples which paralleled/equalled the structure of the given erroneous sentences, the sentences were deemed inappropriate and corrected based on the structure of the most similar (closest) example. The thinking process of S11 explicitly showed her use of this strategy.

S11: The first sentence is *opinion*. ... And I read the explanations in the dictionary. In addition to *in my opinion*, it uses, for example, *ask someone's opinion*, ... *a matter of opinion*, etc. But it does not show an example which is as strange as *according to*. Yes, in addition, there is also *be of the opinion that ...* **So the dictionary does not have examples using *according to opinion*. So I think this should be wrong.**

Of the 625 tokens of dictionary inspection (25 students doing 25 sentences each), a majority (69%) involved the use of examples, either successfully (as in the above examples) or unsuccessfully (see Section Results: DIFFICULTIES ENCOUNTERED) (see Table 4). No particular correlation between this strategy and the typology of errors could be established, as reliance on examples was found in the correction of nearly all the sentences. Successful application of information found in examples tended to, however, centre around sentence #1 (In my opinion rather than according to my opinion; 68% success rate), sentence #4 (call him Tommy rather than call him as Tommy; 52% success rate), and those with erroneous transitivity patterns, such as #2 (accompanied my father rather than accompanied with my father; 50% success rate), and sentence #7 (appreciate it rather than appreciate; 76% success rate).

Table 4. Results of Dictionary Workshops

Tactic Employed	Percentage of Participants
Using examples	69%
Using extra columns	8%
Using special features	7%
Difficulty Encountered	Percentage of Participants
Problems in understanding symbols and abbreviations	12%
Problems in interpreting or selecting examples	96%

Using Information in the Extra Column

Examples alone may not be able to help students identify the correct usage of a lexical item, as it may not be apparent to them which elements or constituents of the example sentences should be in focus. To confirm their

understanding of the examples, some students made use of other relevant information, such as the grammatical information presented in the extra column in COBUILD2. S15, for example, could not discern the correct usage of the word *afford* when reading the first few examples, in which the word was only used with a following noun. However, upon seeing the information V to-inf in the extra column, she deduced that the sentence *My father couldn't afford paying for my education* should be rewritten as *My father couldn't afford to pay for my education*.

S15: Question five: *My father couldn't afford paying for my education ...* (I) found *afford*: *If you cannot afford something, you do not have enough money to pay for it. My parents can't even afford a new refrigerator ...* not this one ... the first example says, beside it says **verb to infinitive**, so after *afford* is verb and then to. This sentence should be changed to ... *couldn't afford to pay for my education*.

The thinking process of S19 in looking up the word *worth* showed a similar phenomenon.

S19: Question number eighteen: *worth ...* the fifth definition in Cobuild, in the entry the fifth definition, they say, *if something is worth a particular action, or if an action is worth doing. ...* (It) should be *worth doing*, should be *ing*. The **grammatical column** also says, noun or *ing* should follow, gerund should follow. So (we) should not use *worth to see*, should use *worth seeing*.

Using information presented in the extra column was not widespread, apparently because only one dictionary, namely COBUILD2, has an extra column, and only twelve participants (less than half) consulted it. 16.7% of the thought processes of those who used COBUILD2 (about 8% of the total sample) were found to have involved the use of the extra column (see Table 4). Of these, using the given information to distinguish between infinitival and/or participial structures (e.g. sentence #5 *afford to pay* vs. *afford paying*; sentence #18 *worth seeing* vs. *worth to see*; sentence #22 *considering visiting* vs. *considering to visit*) occupied over half of the total number of extra column consultations.

Using Special Features

Special features such as boldface and underlining are useful in attracting readers' attention. OALD5, for instance, uses boldface to highlight certain features of a lexical item, e.g. derivations, verb transitivity patterns and related idioms. It was found from the dictionary workshops that many students who used this dictionary did pay attention to such special features and were able to locate the appropriate information fairly quickly and grasp the correct usage with ease. The use of boldface not only attracted participants' attention, but

also gave them confidence in their judgment. S13, for example, commented that because the phrase *in my opinion* was in bold, the answer to the first question should be *in my opinion* (not *according to my opinion*).

S13: For number one, because in the dictionary (I) see that ... *in my opinion* is in **bold**, the answer to the first question should be *in my opinion*.

S6: The first sentence is *in my opinion*. In the dictionary it is very obvious that the word (phrase) *in my opinion* is **in bold**, so I know the answer very quickly.

The use of special features was the least common among the three strategies employed (only about 7%) (see Table 4), presumably because the errors in question (and their corresponding correct forms) may not necessarily be highlighted in the dictionaries. For instance, the correct usage of *call* in sentence #4 (i.e. call somebody something) and that of *suggest* in sentence #19 (i.e. suggest that ...) are highlighted with boldface only in LDOCE3 but not in the other two dictionaries. Correlations between the use of special features and the typology of errors were thus hard to discern. However, it is interesting to note that the success rate of using special features (when they were really in focus) was very high: over 80% of the total number of attempts at using special features were successful.

Results: Difficulties Encountered

Notwithstanding the various strategies used in the look-up process, it was evident from the students' recordings that many of them did encounter different problems, ranging from their ignoring of the symbols and abbreviations given in the dictionaries, through difficulties in interpreting the examples, to reliance on an inappropriate example. These problems echoed many of the difficulties that they brought up in the questionnaire survey (cf. Section DISAPPOINTMENT WITH DICTIONARIES).

Problems in Understanding Symbols and Abbreviations

A number of students failed to identify the correct usage of a lexical item due to their inadequate knowledge of the functions of the symbols and abbreviations used in the dictionaries and/or their difficulties in understanding the symbols and abbreviations. A case in point is S1, who apparently had a partial understanding of the usage of the word *broadcast* (i.e. the same form without -ed is used as the past participle) after reading the examples given in COBUILD2, was daunted by the presence of the symbol V-ed (to refer to the past participle of a verb) presented in the extra column, mistook it as V + ed, and finally made a wrong judgment.

S1: The next word is *broadcast* ... *The news was broadcasted at 7:30 p.m.* ... If they (we) follow what the dictionary says, *broadcast* as a verb, then this example ... *is the concert will be broadcast live on television and radio.* Then another example it writes *CNN also broadcasts in Europe.* ... I think this example is quite interesting, because there writes *The concert will be broadcast live on television and radio.* That means although if the *be* is (followed by) *broadcast*, it is not like passive voice. **That means this will still not have *ed*.** I think, but I don't quite understand why the margin says ... *be* ... that says if *be* is followed by ***verb + ed + adv***, but it means *verb to be* is followed by *broadcast* then by *ed*. **So what does it mean? I don't quite understand this. So what should it be? ... So I don't know what it means.**

S6 and S11, on the other hand, could not figure out the correct usage of the words *accompany* and *baggage* respectively and complained that the information in the dictionary (OALD5) was inadequate, in spite of the presence of the symbols V n (to refer to the structural requirements of a transitive verb [a noun following the verb] like *accompany*) and U to indicate the uncountable feature of *baggage* at the beginning of the two entries in the dictionary.

S6: The second sentence is *accompany*. This time **it's not so obvious...**

S11: Then, number nine is *baggage*.... because (when I) look at the dictionary (and) its examples, *baggage*, all examples do not have *s*. **It does not say.**

About 12% of the total number of unsuccessful searches belonged to this category (see Table 4). While some abbreviations used in COBUILD2 puzzled the students, the non-transparent symbols used in OALD5 and LDOCE3 were often unnoticed.

Problems in Interpreting Examples

Having difficulty interpreting the information given in the examples was a very common problem among the participants. Despite the fact that the correct usage of a target item was explicitly shown in a relevant example and that the students did read the example concerned, some of them still had problems making a correct decision, because the examples per se did not show them how the examples could be compared with the erroneous sentences that they had to correct. S4, for instance, found a relevant example at the beginning (...call the dog Mufty for some reason), but failed to recognize its similarity with (call somebody something) and difference (without as) from the erroneous sentence (call somebody as something), then devoted her attention to other irrelevant examples (e.g. if you call out ...) and got exhausted.

S4: Question four, now (I'm) doing question four: *call ... if you call someone or something by a particular name you will get them a name or a title. ... call the dog Mufty for some reason; the call, call him as Tommy, call... if you call someone some particular things. ... And then, oh, I see ... the speech was interrupted ... call him or treat if you call out call call call...* Let me see. ... *calls*. I feel dizzy after reading this, very long, although (the entry is) very detailed, I am exhausted, very very exhausted at such a place. ... very detailed. There are even phrasal verbs.

S8, on the other hand, was distracted by some irrelevant examples (the word *details* used as subject, in *No details of the discussion have been given*) at the outset and failed to recognize the idiomatic use of *in detail* as an adverbial despite the presence of a relevant example (Mr. Gorbachev described in detail the events of Monday), apparently because she was unaware of the functions of the target item in the various examples. She, finally, declared that she still did not know the answer after checking the dictionary.

S8: Question 13: *I will tell you the problems in details.* ... But by looking up in the dictionary, after reading the explanations, I am still very confused, (I) don't know when (the sentence) should have *s*, when (the sentence) should not have *s*, because there are some examples with *s*, some without ... For example *No details of the discussion have been given*. This one has *s* ... but it also has some examples ... without *s*, such as *If you examine or discuss something in detail, you do it carefully and thoroughly. Mr. Gorbachev descibed in detail, without s, the events of Monday*. There is no *s* here, so after consulting the dictionary, **I still don't know. I don't know this question.**

Relying on an Inappropriate Example

On many occasions, students encountered problems in selecting a relevant example on which the appropriate usage of the target item could be based, for the reason that a lot of definitions and corresponding examples were found in the same entry. Without an adequate understanding of the different senses/functions of a word, the corresponding word classes and the corresponding syntactic requirements, some students misinterpreted the examples and based their judgment on an inappropriate or irrelevant example. S10, upon reading an example in which the verb *broadcast* was used in the active voice to show that BBC broadcasts different programmes all over the world, concluded that the verb should also be used in sentence #10 as an active verb (The news broadcasts at seven-thirty), ignoring the differences in the semantic functions of the subjects in the two sentences (BBC in the dictionary example as the agent, but the news in the erroneous sentence as the patient).

S10: (Let me) check number ten *broadcast*. *The BBC broadcasts all over the world*. Ah, not passive, so number ten should be *The news broadcasts at seven-thirty*.

S22 apparently had a similar problem. Having read that the word *anxious* had three meanings, she chose the first but inappropriate definition (anxious meaning very worried) instead of the last but appropriate meaning (wanting to do something) and made an inappropriate correction based on the irrelevant example, although she did read the relevant definition (anxious to do something) and went through the definitions and examples again to confirm her understanding.

S22: Now it is number six, (I'm) checking the word *anxious*. (I) found it. It is an adjective, and has three meanings. The first one is *very worried about something that may happen or may have happened so that you think about it*. ... And it states ... ***anxious to do something*** ... mm ... *We were anxious that it might be cancer*. So it is difficult to decide now, so (I) read once more. I think, after reading I think, (we) should use *about* ... Yes, yes, ... in the first explanation means *very worried about something that may happen or may have happened so that you think about it all the time*, so (it's) applicable to this number six. And this preposition *about* is added after it, so (the sentence) should be changed to *We were anxious about knowing whether he had arrived safely*.

Having difficulty selecting and interpreting examples was the most common problem encountered by the participants. Given that nearly 70% of the students used examples in one way or another in doing the error correction task (see Section USING EXAMPLES), it is not surprising that most unsuccessful searches were due to the participants' problems with the selection and/or interpretation of examples. Nearly all unsuccessful searches involving the use of examples were the results of the participants' difficulties in selecting and/or interpreting the information displayed in the various examples (see Table 4).

Implications and Recommendations

The findings of the dictionary workshops echoed those of the questionnaire survey, confirming that while most participants in the study, university English majors in Hong Kong, were accustomed to consulting one or more dictionaries in their learning of English, many of them did encounter some form of difficulty in their look-up process. The students whose dictionary skills were relatively more advanced (such as being able to use special features or the extra column, if present) benefited more from their dictionaries and could discern the usage of the target items more easily. Those who were not acquainted with the conventions of their dictionaries, in contrast, encountered many more problems and may even have been daunted by the (apparently too) rich information contained. Students' frequent lamentations that the actual usefulness of a

dictionary falls short of their expectations may probably be the result of their lack of proper dictionary skills. The intellectual effort participants required to accomplish the error correction task in the dictionary workshops clearly reveals such a deficiency—a lack of proper dictionary skills, coupled with inadequate knowledge of the target language, led to their unsophisticated handling of examples and even misunderstanding of (relevant, and useful) information. It is no wonder that, as discussed in Section USEFULNESS AND HELPFULNESS OF DICTIONARIES, though a number of respondents regarded dictionaries as very useful, much fewer (46.2%) regarded them as truly helpful. Many of them even thought that the information was not clear and the examples were not useful. Students' dictionary skills, if possessed, are often too weak and inadequate for them to cope with their learning demand.

To help students make the best use of dictionaries, teachers should, most important of all, raise their awareness of the usefulness of the user's guide (introduction, or usage notes). Without thoroughly pre-reading the user's guide and constantly referring to it for double-checking the meanings of symbols and abbreviations, learners will surely run into difficulties in interpreting them. The participants' insufficient pre-reading of user's guides (see Section STUDENTS' FAMILIARITY WITH USER'S GUIDES) and their problems in understanding the symbols and abbreviations the functions of which are clearly indicated in the user's guides of the dictionaries used (see Section PROBLEMS IN UNDERSTANDING SYMBOLS AND ABBREVIATIONS), undoubtedly reveal their deficiency and support my claim. One student (S6) when checking the word *baggage*, also noted the importance of understanding the meanings of the abbreviations before consulting a dictionary, affirming the need for pre-reading the user's guide

S6: The ninth question, (we) check *baggage*. *Baggage* itself actually I don't know is an uncountable noun, but it says here, ... rather obvious, because it writes the word *U*, meaning it is an uncountable, uncountable noun, but, ... **but before consulting (a dictionary) people have to be clear about the abbreviations.** i.e. *U* stands for uncountable noun.

One way of arousing students' awareness of the importance of the user's guide is to engage them in a competition in which they have to decode the symbols and abbreviations used in a dictionary (e.g. V n) as fast as they can by referring to the user's guide and to make up similar sentences modeling on the given sentence patterns.

Skills in interpreting examples are also important. In order that students be able to select an appropriate dictionary example to guide them use a word accurately, teachers should organize activities which focus on the syntactic behavior, as well as functional, situational and collocational restrictions, of different lexical items. Nation (1994:194) has suggested an activity which aims at developing students' productive use of a vocabulary item by drawing on specific lexical information such as word class, countability or transitivity. Such an activity, as well as error correction tasks similar to the one used in

the present study, with the teacher guiding students through the examples and helping them discern the relevant lexical information, should be useful.

Lexicographers, on the other hand, may consider utilizing the findings of dictionary research to enrich the content and enhance the user-friendliness of their dictionaries. Using transparent symbols and adopting special features may help to minimize users' intellectual effort in their look-up process. Not only should information such as the transitivity patterns of verbs, countability of nouns, valency requirements of adjectives¹¹ and complementation of nouns be included (as most dictionaries do), but they should also be presented intelligibly and conspicuously (e.g. by the use of boldface) to alert users to the significance, or even the presence, of such information. Common errors that second or foreign learners often make with regard to particular lexical items may also serve as signposts enlightening lexicographers as to the areas of usage that have to be or can be highlighted.

Limitations

Though insightful findings have emerged from the present study, its experimental design is not without flaws. Only one specific task - correction of erroneous sentences - was involved in the workshops, in which the participants were asked to consult a dictionary for checking the grammatical usage of a limited set of lexical items to correct a restricted category of target errors (e.g. transitivity of verbs, countability of nouns). Such a limited scope prevents the study from being comprehensive or representative, as learners are often engaged in other learning tasks (e.g. translation, comprehension) and have to deal with other learning areas (e.g. writing complex sentences, choosing an appropriate tense) in their learning of English as a second language.

Another limitation concerns the variety of dictionaries used in the workshops. The fact that different dictionaries were used in the error correction task may have had some effects on the range of tactics employed by different users. For example, the extra column, being a special attribute of COBUILD, is not available in the other dictionaries used. As such, it was difficult, if not impossible, to obtain consistent quantitative results of the tactics employed and problems encountered by the participants.

A lack of correlation between the results of the questionnaire survey and those of the error correction task is also one major limitation. As the identity of the respondents to the questionnaire was unknown due to anonymity constraints, it was impossible for the author to associate, for example, those who showed a lack of proper dictionary skills in the error correction task with those who admitted (in the questionnaire survey) having had difficulties using a dictionary. The contribution of the questionnaire survey thus seemed to be small: to portray a general picture of dictionary use by university English majors in Hong Kong and to form the foundation for the implementation of the error correction workshops.

There is, thus, no claim on the author's part for comprehensiveness or representativeness: The study is basically exploratory and the discussion of the results is essentially descriptive. Further research is needed to uncover the use of different types of dictionaries (e.g. printed, electronic; general, specialized) by students at different levels (e.g. tertiary, secondary) studying in different disciplines (e.g. Business, Law) working on different tasks and activities (e.g. free writing, translation). Correlational analyses between the various items of the questionnaire (e.g. the type of information sought and the type of frustrations felt), as well as those between the questionnaire and the workshops, could also be included. Though the scale of the study is small, the findings are to a certain extent indicative of the dictionary use of the learning population in Hong Kong, since university English majors are among the people whose English proficiency is relatively high and who would use dictionaries most often.

Conclusion

In this article, we have looked at a questionnaire survey which investigated the general use of dictionaries by university English majors in Hong Kong and a series of dictionary workshops which probed into their actual use of dictionaries for an error correction task. The results show that though students regularly consulted one or more dictionaries in their study or work, many of them encountered difficulties such as uncertainty in deciding on the correct item to be looked up; difficulties in interpreting examples, symbols and abbreviations; uncertainty in selecting relevant usage; and tendency to ignore useful and relevant information. It might be argued that students' problems in using a dictionary may be attributed to the less than user-friendly design and conventions of the dictionaries themselves, yet students' lack of proper dictionary skills is beyond dispute. While the responsibility for improving the design and content of dictionaries to facilitate learners' use should of course be shouldered by lexicographers, the responsibility for helping students make the best use of a dictionary should rest with teachers and educators. Students should be taught - even in their early stages of using a dictionary - the proper dictionary skills, which include not just abilities to locate a headword and its derivatives from among the alphabetically-listed entries, but also skills in making effective use of the user's guide, examples and definitions, symbols and abbreviations, as well as other relevant information given in the extra column, if present. Organizers of teacher training programmes should also consider including the training of dictionary skills as one of the chief components in their programmes, so as to equip student teachers with the required knowledge of dictionary training and to alert them to the importance of using dictionaries in promoting learner autonomy.

Notes

¹With the superheadword structure, a word like *mean*, which can be used as a verb, a noun or an adjective, has only one entry, but the entry is subdivided into several sections. At the top of each superheadword, a menu is given to show users exactly what sections the entry is divided into, and how they are ordered. (Collins COBUILD English Dictionary for Advanced Learners: Introduction, p.xii)

²The questionnaire used in this survey was adapted from Béjoint (1981), Hartmann (1983) and Quirk (1974).

³A bilingualized dictionary (e.g. OALECD) is a dictionary whose entries have been translated in full or in part into another language. Definitions and examples in the source language are also included. A bilingual dictionary, on the other hand, relates the vocabularies of two languages together simply by means of translation equivalents (Hartmann and James 1998; see also Hartmann 1994, James 1994, Marelllo 1998). Though a distinction is made between the two terms in this article, the term bilingual dictionary is used in the questionnaire to refer to both types of dictionaries, because most Hong Kong students are not aware of the differences between the two and regard the bilingualized dictionaries they regularly use as bilingual dictionaries.

⁴Since the focus of the questionnaire was on students' use of printed dictionaries, no attempt was made to investigate their use of electronic dictionaries. Further research is needed if students' use of electronic dictionaries is to be revealed.

⁵Respondents were asked to indicate their judgment of the usefulness and helpfulness of the dictionaries they regularly used by circling a point on the ten-point scale, point 1 being the least useful/helpful and point 10 the most useful/helpful. For ease of discussion, points 9 and 10 have been collapsed to denote very useful/helpful.

⁶Respondents were asked to indicate whether a particular occasion occurred frequently, periodically, occasionally or never. Again for ease of discussion, the options frequently and periodically have been collapsed to denote very frequent.

⁷In order to ensure that there were enough suitable dictionaries for students to choose during the workshops, the author had conducted a pre-survey with the twenty-five participants to inquire about their preference.

⁸Electronic versions of printed dictionaries such as OALECD, Cambridge Encyclopedia and The New Oxford Illustrated English-Chinese Dictionary in the form of IC cards were incorporated in a number of electronic dictionaries in Hong Kong (e.g. Instant-Dict) at the time of investigation. These electronic chips, though providing rich grammatical information, were practically the same as their printed ancestors and were also excluded from the experiment.

⁹At the time when the investigation was carried out, COBUILD2, OALD5 and LDOCE3 were the most up-to-date editions of the respective dictionaries available.

¹⁰S21 and S23, and most of the other participants in the study, used Cantonese or a mixed-code of Cantonese and English to record their thinking processes (see Section DICTIONARIES USED). For ease of discussion, only English transcriptions are given in this article.

¹¹The valency requirement of an adjective is the complements that it takes. For instance, the adjective *willing* takes a to-infinitive clause as its complement (He is willing to be honest), and the adjective *nice* takes, among others, a that-clause as its complement (It is nice that you could come) (Herbst, 1984).

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Appendix I : Questionnaire

This questionnaire aims to investigate the use of dictionaries by university English majors in Hong Kong. All the information collected will be analyzed for academic use only. Your cooperation will be highly appreciated.

Section A. Background Information

(Please circle where appropriate)

Age: 15-20 21-25 26-30 31-35 36-40 41 or above

Sex: _____

Years of learning English: _____

Years of teaching English (if any): _____

Major of your university study: _____

Section B. Dictionary Use

1. Do you use a monolingual dictionary in your study/ work?

a. Yes (Go to Question 2)

b. No (Go to Question 4)

2. How often do you use a monolingual dictionary in your study/work?

a. More than once a day

b. Daily

c. Weekly

d. Monthly

e. Infrequently

f. Others (Please specify: _____)

3. Which monolingual dictionary(ies) do you use? (You can tick more than one)

- a. Collins COBUILD English Dictionary
 - b. Oxford Advanced Learner's Dictionary
 - c. Longman Dictionary of Contemporary English
 - d. Others (Please specify: _____)
- (Please continue by answering Question 4 and others)

4. Do you use a bilingual dictionary?

- a. Yes (Go to Question 5)
- b. No (Go to Question 6)

5. Which bilingual dictionary do you use? (Please specify)

(Please continue by answering Question 6 and others)

6. Were you taught how to use a dictionary before?

- a. Yes (Go to Question 7)
- b. No (Go to Question 8)

7. When were you taught how to use a dictionary? (You can tick more than one)

- a. Primary school
- b. Secondary school
- c. Tertiary institution
- d. Others (Please specify: _____)

(Please continue by answering Question 8 and others)

8. For which sort of activity do you most often use your dictionary?

(Please rank: 1 = the most frequent, 5 = the least frequent)

- a. Translation
- b. Written comprehension
- c. Written composition
- d. Oral comprehension
- e. Oral composition

9. How would you rank your frequency of using a dictionary for the following purposes? (Please rank: 1 = the most frequent, 7 = the least frequent)

- a. Checking the meanings of a word
- b. Checking the pronunciations of a word
- c. Checking the usage (e.g. grammatical information) of a word
- d. Checking the synonyms of a word
- e. Checking the antonyms of a word
- f. Checking the spelling of a word
- g. Checking the collocations of a word
- h. Others (Please specify: _____)

10. Do you check more than one dictionary when you are in doubt?

- a. Very often
- b. Sometimes
- c. Occasionally
- d. Seldom
- e. Never

11. Which part(s) of a dictionary entry do you find useful?

Please rank the usefulness (1 = the most useful, 4 = the least useful)

- a. Headword
- b. Definition
- c. Examples
- d. Usage information

12. Have you ever read the introduction/user's guide in a dictionary?

- a. Yes (go to Question 13)
- b. No (go to Question 15)

13. How carefully did you study the introduction/user's guide?

- a. Thoroughly
- b. Quite carefully
- c. Cursorily

14. Do you find the introduction/user's guide easy to understand?

- a. Very easy
- b. Easy
- c. Difficult
- d. Very difficult

(Please continue by answering Question 15 and others)

15. How would you rank the usefulness of a dictionary in your learning or teaching of English? (Please circle the answer)

Very useful						Least useful			
10	9	8	7	6	5	4	3	2	1

16. How would you rank the helpfulness of a dictionary in your learning or teaching of English? (Please circle the answer)

Very helpful						Least helpful			
10	9	8	7	6	5	4	3	2	1

17. Can you think of an occasion when your dictionary let you down for some reason?

(Please tick where appropriate)

Frequently Periodically Occasionally Never

- a. The word was missing.
- b. The phonetic transcription could not be worked out.
- c. The usage information was not clear.
- d. The arrangement of the entry was too long or confusing.
- e. The examples were not useful.
- f. Others (Please specify: _____)

18. What difficulties have you encountered in using a dictionary?

19. Please give some suggestions for improving the dictionary you regularly use.

Appendix II: Dictionary Workshop

Choose ONE dictionary from the given set of dictionaries. Use it to examine the following erroneous sentences and make appropriate corrections. (The word to be looked up is given in brackets after each sentence.) (N.B. There is only ONE type of error in each sentence, and there are no errors on spelling or punctuation.)

Name of dictionary used: _____

- 1. According to my opinion, we should go swimming. (opinion)
- 2. I accompanied with my father to the concert. (accompany)
- 3. When she arrived my place, we listened to our favorite pop music. (arrive)
- 4. They call him as Tommy. (call)
- 5. My father couldn't afford paying for my education. (afford)
- 6. We were anxious for knowing whether he had arrived safely. (anxious)
- 7. I would appreciate if you could give me her address as soon as possible. (appreciate)
- 8. I told him that I wanted to read, but he didn't pay any attention at me. (attention)
- 9. All the passengers carry their own baggages. (baggage)
- 10. The news was broadcasted at 7:30 p.m. (broadcast)
- 11. The letter concerns about overcrowding. (concern)
- 12. I shall contact with her about it. (contact)
- 13. I will tell you the problem in details. (detail)
- 14. Due to this reason, they sold the business. (reason)

15. She was lack of parental care. (lack)
16. This form lists out the entry requirements. (list)
17. Many people oppose to the use of nuclear power. (oppose)
18. It is worth to see Beijing. (worth)
19. I suggested him to buy a new one. (suggest)
20. Despite the train was empty, he came and sat in front of me. (despite)
21. The Soviet Union comprises of fifteen union republics. (comprise)
22. We are considering to visit Switzerland next year. (consider)
23. The group was consisted of ten people. (consist)
24. I have little knowledge in statistics. (knowledge)
25. Some people think that the system is inferior than the old one. (inferior)

Author

ALICE YIN WA CHAN, Professor, Department of English and Communication, City University of Hong Kong. Specializations: Foreign language instruction, lexicology.

Hedging, Inflating, and Persuading in L2 Academic Writing

Eli Hinkel

Seattle University

This study analyzes the types and frequencies of hedges and intensifiers employed in NS and NNS academic essays included in a corpus of L1 and L2 student academic texts (745 essays/220,747 words). The overarching goal of this investigation is to focus on these lexical and syntactic features of written discourse because they effectively lend themselves to instruction in L2 academic writing courses.

The research discussed in this paper compares the NS and NNS frequencies of uses of various types of hedging devices and intensifiers in written academic prose: epistemic hedges (normally, relatively), lexical hedges (more or less, most), possibility hedges (in case, hopefully), down toners (a bit, simply), assertive pronouns (anyone, somebody), and adverbs of frequency (frequently, usually). In addition, the analysis also includes intensifiers, such as universal and negative pronouns (all, nothing), amplifiers (a lot, forever), and emphatics (extreme/-ly/, total/-ly/).

A detailed examination of median frequency rates of hedges and intensifiers in NS and NNS academic essays point to the fact that L2 writers employ a severely limited range of hedging devices, largely associated with conversational discourse and casual spoken interactions. These findings are further supported by a prevalence of conversational intensifiers and overstatements that are ubiquitous in informal speech but are rare in formal written prose.

Research into the meanings and uses of hedging and intensifying devices in English saw its heyday in the 1970s and 1980s, when a large number of publications emerged to discuss their functions in written and spoken discourse (e.g., Chafe, 1985, 1986; Chafe & Danielewicz, 1987; Hermeren, 1978; Huebler, 1983; Holmes, 1984). In pragmatics, research into various types of hedges has been primarily associated with politeness, vagueness, hesitation, uncertainty, and indirectness. The terms hedges and hedging generally refer to a large class of lexical and syntactic features of text that have the goal of modifying and mitigating a proposition (Leech, 1983; Levinson, 1983; Quirk, Greenbaum, Leech, & Svartvik, 1985).

In the 1990s, research on hedging emerged to account for the meanings, uses, and functions of politeness, vagueness, and mitigation in academic writing and other types of discourse. Many studies were based on the analyses of large written and spoken corpora of English, and to date, much has been learned about the uses of various hedging devices in written academic prose (Hoye, 1997; Kay, 1997; Pagano, 1994). In written text, hedging represents the employment of lexical and syntactic means of decreasing the writer's responsibility for the extent and the truth-value of propositions and claims, displaying hesitation, uncertainty, indirectness, and/or politeness to reduce the imposition on the reader (Hinkel, 1997; Swales, 1990; Swales & Feak, 1994).

In Anglo-American written academic prose, hedges are considered to be requisite with the general purpose of projecting "honesty, modesty, proper caution," and diplomacy (Swales, 1990, p. 174). According to Myers (1989), the uses of hedging are highly conventionalized in academic writing and appear to be particularly necessary in texts that include claim-making and/or expressing personal positions or points of view. However, the appropriateness of various types of hedges in specific contexts crucially depends on the norms of a particular discourse community (Swales, 1990). For instance, Stubbs (1996) found that the frequency of hedges in written prose differs substantially between such genre as newspaper news or travel reports, academic texts, and printed advertising. Channell (1994, p. 17) explains that in the academic and scientific communities, hedges have the function of face-saving devices to "shield" the writer from the commitment of the truth-value of the proposition. She emphasizes that L2 writers need to be specifically taught how to use hedging appropriately and to their best advantage.

In formal academic writing, hedging propositions and claims can take many forms, including the most common devices, such as epistemic hedges (*according to, actually*), lexical hedges (*about, in a way*), possibility hedges (*by chance, perhaps*), or vague indefinite pronouns (*someone, anything*). Similarly, intensifiers, e.g., universal pronouns (*nobody, everything*), amplifiers (*awfully, highly*), and emphatics (*exact, total*), are ubiquitous in spoken discourse and particularly in casual conversations (Brazil, 1995).

On the other hand, research on intensifiers has identified them as prevalent features of spoken and conversational discourse that have the function of heightening or lowering the effect of sentence elements or entire propositions (Leech, 1983; Quirk, et al., 1985), e.g., a definite truth, a great failure, a complete success. Like hedges, intensifiers can include a variety of lexico-syntactic devices, but most are associated with adjectival or adverbial modifying functions. In discourse, intensifiers have the function of exaggerating the actual state of affairs, reinforcing the truth value of the proposition, or emphasizing a part of or the entirety of a claim (Brown & Levinson, 1987; Levinson, 1983). In various languages, including English, the textual functions of intensifiers are not always dissimilar to those of hedges, when intensifiers serve to project added politeness, sincerity, and truthfulness (Brown & Levinson, 1987; Quirk, et al., 1985), e.g., *you were a great help, and I am really thankful*. In English,

as well as in many other languages, hedges and intensifiers are numerous and their meanings and contextual functions are usually complex.

A number of studies have also shown, for instance, that intensifiers are largely associated with the informal register and can be relatively rare in written academic text. In fact, Channell (1994, p. 90) explains that in English, the main discourse function of intensifiers is to play the role of exaggeratives and create hyperbole to avoid referring to the actual truth, except to highlight the fact that the described object or number is large or important in the perception of the speaker (e.g., *a huge amount of money*). Additionally, Leech (1983, p. 146) points out that exaggerations and hyperboles are prevalent in conversations because they embellish the truth-value of the proposition or claim and thus have the function of enhancing politeness or displays of interest, e.g., *That was a truly delicious meal!* In fact, Leech comments that hyperbole may be, in a sense, “a natural tendency of human speech.”

In their corpus-based study of L2 text, Hyland and Milton (1997, p. 183) have noted that for the L2 writers of academic essays in English, being able to “convey statements with an appropriate degree of doubt and certainty” represents a major problem. In fact, according to these authors, many L2 writers employ assertions and claims significantly more frequently than speakers of British English of similar age and educational level. Other investigations have similarly shown that L2 writers often produce formal written prose that appears to be overstated with many exaggerated claims due to the comparative prevalence of intensifiers and exaggeratives in contexts where hedging devices would seem to be more appropriate (Hinkel, 2002, 2003a).

To date, comparatively few studies have addressed specifically how trained NNS writers employ hedges and intensifiers in their written academic texts, although such an analysis can be useful in developing curricula for L2 writing instruction. The purpose of this study is to analyze the types and frequencies of hedges and intensifiers employed in NS and NNS academic essays included in a corpus of L1 and L2 student academic texts (745 essays/220,747 words). The overarching goal of this investigation is to focus on these lexical and syntactic features of written discourse because they relatively effectively lend themselves to instruction in L2 academic writing courses.

To begin, the paper will briefly review the uses and textual functions hedges and intensifiers in written discourse and writing instruction in English, as well as in rhetorical paradigms in writing in other languages, specifically, the L1s of participants in this study. Then, following the presentation of the specific types of hedges and intensifiers examined in the corpus analysis, the details of the student corpus, the study methodology, and results will be discussed at some length. The paper concludes with a few suggestions for teaching the uses of hedges and intensifiers in L2 academic writing classes.

Hedges and Intensifiers in Academic Prose and Writing Instruction in English

As has been mentioned, much research has been devoted to the importance of hedging in written academic prose (Bhatia, 1993; Chang & Swales, 1999; Myers, 1989, 1996; Swales, 1971, 1990). In addition, the need for teaching L2 academic writers to employ hedging devices appropriately has been highlighted in teacher training materials and textbooks published in the past decade. For instance, in his book for teachers of academic writers, Jordan (1997) includes a substantial section on diverse types of hedging in formal written prose and constructs a detailed classification of hedges that range from “shields” to “approximators” and “compound hedges” and that can be taught to L2 learners at practically any level of proficiency (p. 240-241). The author further points out that intensifiers need to be used sparingly or avoided altogether because in academic contexts, writers “need to be cautious” in their claims or statements. Similarly, Dudley-Evans and St. John (1998) discuss the functions and uses of hedging in formal writing and explain that academic writers often employ various types of hedging devices to distance themselves from the claims expressed in their text, as well as “soften” and mitigate their statements (p. 76). Dudley-Evans and St. John further point out that “learners need to be able to appreciate the role of hedging” in academic and professional genres and that the teaching of the functions and uses of hedges requires special attention.

However, despite the prominent role of hedges in research and materials for teachers of L2 academic learners, most student textbooks for composition and writing mention hedges very briefly or not at all. For example, in popular writing guides for university-level students, hedges, often called “limiting modifiers” (Beason and Lester, 2000; Hacker, 2002; Lunsford, 2003), are not discussed in detail, beyond the effects and meanings associated with their placement in a sentence. Most widely-adopted instructional texts specifically for L2 academic writers do not mention limiting modifiers or hedges of any type (Holten and Marasco, 1998; Leki, 1999; Smalley, et al., 2000; Raimes, 1999, 2004; Reid, 2000a, 2000b). Furthermore, none of these instructional texts geared specifically for L2 writing and composition include any information dealing with the pitfalls of employing intensifiers in formal writing or their casual conversational properties.

The reasons that the uses of hedges and the inappropriateness of intensifiers have not found their place in writing and composition instruction do not seem to be entirely clear, particularly in light of the research findings that both these types of textual features are often misused in learners’ L2 academic writing (Channell, 1994; Hinkel, 1997, 1999, 2002, 2003a; Jordan, 1997).

Hedges and Intensifiers in Written Discourse in non-Anglo-American Rhetorical Traditions

Hedging propositions and claims in order to decrease one's responsibility for their truth-value and to project politeness, hesitation, and uncertainty is a characteristic of many rhetorical traditions. For instance, in Chinese written prose, hedging devices have a prominent function of marking the writer's attitude to a proposition or claim (Biq, 1990). Thus, to reduce the writer's responsibility, hedges are often intended to be ambiguous and can perform several discourse functions simultaneously, thus shifting the responsibility for inferring contextual meanings to the reader (Oliver, 1972). For this reason, hedges are considered to be requisite in Chinese written discourse.

The functions of an elaborate framework of hedges, and doubt, uncertainty, and vagueness markers in Japanese are described in the work of Maynard (1997) and McGloin (1996). According to these authors, in Japanese discourse hedges often play a role similar to the role they play in English. Hedges are a very common characteristic of Japanese discourse, especially when they refer to possibility or probability. In light of the fact that their number is comparatively large and their meanings are diverse, several can be employed in a proposition, depending on the writer's assessment of a potential imposition on the reader (Maynard, 1993).

Similar to the complex system of hedges in Chinese and Japanese, in Korean, hedges are employed as a strategy to minimize potential divergences of opinions, and lexical, phrasal, and structural hedges can be employed to make propositions or claims more or less polite, vague, or indeterminate (Park, 1990). In Korean, the use of hedges can involve a great deal of subtlety and deep understanding of contextual or situational politeness in discourse (Hwang, 1987). The Vietnamese rhetorical tradition closely adheres to classical Confucian rhetoric, and many similar features are found in Vietnamese and Chinese written prose (Nguyen, 1987; Taylor, 1995).

According to Chafe (1994) the construct of indefinite reference and/or attribution is far more complex and frequent in written discourse in such languages as Indonesian and Japanese than in English because only entities that are essential to the discourse flow are definitively marked. In these, as well as other languages, such as Korean and Japanese, indefiniteness markers can be highly diverse and have many different functions. Speaking broadly, in Chinese, Japanese, Korean, Vietnamese, and Indonesian writing, the rhetorical purpose of hedges, uncertainty markers, and vague impersonal references is to reduce the writer's responsibility for the truth-value and factuality of a proposition by attributing the claim to someone else (e.g., *a wise man once said that ...*), presenting it as a vague general truth or commonly held opinion (e.g., *people say that ...*), and displaying uncertainty and hesitation (Hinds, 1983, 1990; Oliver, 1972; Yum, 1987).

Although exaggerations and overstatements are considered to be inappropriate in formal Anglo-American writing (Channell, 1994; Leech, 1983),

they are considered acceptable in persuasive writing in Confucian and Koranic rhetorical traditions. In classical Chinese rhetoric, which is common in Japanese, Korean, and Vietnamese writing, as well as Chinese (Hinds, 1984, 1990; Nguyen, 1987; Taylor, 1995; Tsujimura, 1987) exaggerations and overstatements may be seen as a device of added persuasion and indirectness (Oliver, 1972). In many languages, including Chinese, Japanese, Korean, Vietnamese, and Arabic, amplification is seen as a valid and eloquent rhetorical device to convey the writer's power of conviction and/or desirability (Connor, 1996; Sa'adeddin, 1989; Tsujimura, 1987; Yum, 1987; Zhu, 1996), as well as intensity and emphasis (Taylor, 1995). In traditional Korean rhetoric, writers are inherently vested with the authority to persuade and can rely on various forms of ethos and overstatement if they deem it necessary (Yum, 1987).

In general terms, classical Arabic prose does not place a high value on hedges and understatements, and amplification and exaggeration are considered to be an appropriate means of persuasion. For instance, Connor (1996) and Sa'adeddin (1989) cite a number of studies that describe Arabic rhetorical expression as amplified and overassertive. They explain that in various types of Arabic prose, the oral tradition finds many manifestations in writing, including rhetorical overstatement for the purpose of persuasion.

As has been mentioned, intensification and amplification represent one of the marked features of L2 writing. For example, based on his corpus analysis of NS and NNS formal writing, Lorenz (1998) attributes the comparative over-use of intensifiers in L2 student writing to cross-cultural differences in the functions of hyperboles in written argumentation, as well as what he calls "over-zealousness." According to the author, many L2 writers "anxious to make an impression and conscious of the limitations of their linguistic repertoire ... might feel a greater need than native speakers to stress the importance" of what they have to say (p. 59). However, hyperbolic and inflated style can be damaging to L2 writers in terms of evaluations of their writing because it usually creates an impression of "unnatural" communication and particularly so, with weaker writers. Lorenz concludes that judicious uses of rhetorical emphases must be taught to avoid intensification that can be "semantically incompatible [and] communicatively unnecessary" in the contexts of academic argumentation.

The Study

This study examines the ways in which speakers of such languages as English, Chinese, Japanese, Korean, Indonesian, Vietnamese, and Arabic employ hedges and exaggeratives in their L2 academic essays. Specifically, the study focuses on the median frequency rates of uses of various types of hedging devices and intensifiers in L1 academic essays of NSs and L2 academic essays of NNSs. The six hedging devices examined in this study include: epistemic hedges (e.g., *clearly, mostly, relatively*), lexical hedges (e.g., *kind of, maybe*), and possibility hedges (e.g., *perhaps, possibly*); downtoners (e.g., *a bit, nearly, partly*); assertive pronouns (*any-* and *some-* words); and adverbs of frequency

(e.g., *often, frequently, usually, occasionally*). In addition, three types of intensifiers are also included: universal pronouns (*every-* and *no-* words), amplifiers (e.g., *extremely, completely, totally*), and emphatics (e.g., *sure/for sure, no way*). By means of analyzing usage frequencies of these lexical features taken together, the study discussed in this paper undertakes to investigate whether NS and NNS students employed various types of hedges and intensifiers similarly in argumentation/exposition university essays, commonly required for placement and diagnostic testing of students' writing skills.

The Students

The essays analyzed in the study were written by 745 NS and NNS students during routine placement and diagnostic tests in four U.S. universities. All students were admitted to and enrolled in their degree programs. The 626 NNSs students who wrote the essays had attained a relatively high level of English language proficiency, sufficient for a university admission, and their TOEFL scores ranged from 533 to 620, with a mean of 593. They included 117 speakers of Chinese, 109 speakers of Japanese, 101 of Korean, 111 of Indonesian, 96 speakers of Vietnamese, and 92 of Arabic.

Of the NNS students, 82% were holders of U.S. associate degrees earned in various community colleges, and were admitted as transfers at the junior level in four-year comprehensive universities. These students had received three or more years of ESL and composition instruction in the U.S.: they had completed at least a year in academic intensive programs, as well as two years of academic college training. The remainder included 14% first-year students and 4% graduate students. The first-year students had graduated from U.S. boarding schools, and the majority had spent a minimum of three years in the U.S. The graduate students had also completed their ESL training in U.S. English for Academic Purposes programs and had resided in English-speaking countries for periods between 18 and 32 months. The 119 NS students were graduates of U.S. suburban high schools in three states on the east and west coasts and the Midwest and were enrolled in required first-year composition/writing classes.

The Data

The prompts for NS and NNS essays were identical in every way (see below). The essay corpus simply consists of placement and diagnostic tests routinely administered to all students, and for this reason, no attempt was made to differentiate NSs or NNSs by gender or age. All students were given one class period (50 minutes) to write the essays.

The students wrote their essays in response to assigned prompts that were modeled on the Test of Written English, administered by the ETS, and MELAB, as well as those found in many writing/composition textbooks. In such prompts, as in those in this study, the intention is to elicit writing samples by providing context based on experiences typical of most young adults be-

gining their studies in U.S. universities. All essay prompts were designed to elicit essays in the rhetorical mode of argument/exposition with the purpose of convincing/informing an unspecified general audience (e.g., Beason & Lester, 2000; Hacker, 2002; Leki, 1999).

The essays were written in response to one of three prompts:

1. Some people believe that when parents make their children's lives too easy, they can actually harm their children instead. Explain your views on this issue. Use detailed reasons and examples.

2. Many people believe that grades do not encourage learning. Do you agree or disagree with this opinion? Be sure to explain your answer using specific reasons and examples.

3. Some people choose their major field of study based on their personal interests and are less concerned about future employment possibilities. Others choose majors in fields with a large number of jobs and options for employment. What position do you support? Use detailed reasons and examples.

Of the total, 246 essays were written on Prompt (1), 240 on Prompt (2), and 259 on Prompt (3). The distribution of essays among the three prompts were proximate for students in each L1 group, as presented in Table 1.

Table 1. *Distribution of Student Essays by Prompt*

<i>L1 Group</i>	<i>Prompt 1</i>	<i>Prompt 2</i>	<i>Prompt 3</i>
	<i>Parents</i>	<i>Grades</i>	<i>Major</i>
<i>NSs</i>	44	36	39
<i>Chinese</i>	39	39	39
<i>Japanese</i>	32	35	42
<i>Korean</i>	32	33	36
<i>Indonesian</i>	35	35	41
<i>Vietnamese</i>	34	30	32
<i>Arabic</i>	30	32	30
<i>TOTALS</i>	246	240	259

Data Analysis

The hedges and intensifiers of each type in L1 and L2 essays were counted separately to obtain median frequency rates of use in the essays for each group of speakers: NSs, Chinese, Japanese, Korean, Indonesian, Vietnamese, and Arabic. To determine whether NS and NNS students similarly employed hedging devices and intensifiers, the occurrences of epistemic, lexical, and

possibility hedges, assertive pronouns, frequency adverbials, downtoners, universal pronouns, amplifiers, and emphatics in student essay texts were tagged and counted by hand. Then the number of words in each essay was counted, and computations were performed to calculate the percentage rate of each feature use. For example, NS essay #1 for Prompt 1 consisted of 300 words and included 6 epistemic hedges (*according to, likely, normally*), i.e., $6/300 = 2\%$, and 3 assertive pronouns ($3/300 = 1\%$). The calculations were performed separately for each feature and in each essay.¹

Because the number of essays written to each prompt by each L1 group of students were similar, the analysis of frequency rates of cohesion devices in students' texts was carried out based on pooled data for all essays combined. The Mann-Whitney U Test was selected as a conservative measure of differences between the NS and NNS data. The Mann-Whitney U Test compares two sets of data based on their ranks below and above the median, e.g., NS median frequency percentage rates of emphatics are compared to those in essays of Chinese, then to those of Japanese speakers, then to those of Korean speakers, etc.). Median frequency rates of 0.00 imply that fewer than half of the essays include a particular type of hedge or intensifier. However, even in such cases, if, for example, a particular hedging device or intensifier is identified in three essays of one set and in fourteen essays in another, the usage frequency values of these features may be significantly different.

Common Hedging Devices

The types of hedges discussed in this study rely on the systems outlined in Brown and Levinson (1987), Huebner (1983), and Quirk et al. (1985) and are limited to those identified in the students' writing.

Epistemic hedges: *according to (+noun), actually, apparent(-ly), approximate(-ly), broad(-ly), clear(-ly), comparative(-ly), essential(-ly), indeed, likely, most (+ adjective), normal(-ly), potential(-ly), probable(-ly), rare(-ly), somehow, somewhat, theoretically, the/possessive pronoun very (+superlative adjective + noun, e.g., the/his/their very best/last minute/moment/dollar/penny/chance), unlikely.*

Lexical hedges: *(at) about, (a) few, in a way, kind of, (a) little + noun, maybe, like, many, more or less, more, most, much, several, something like, sort of.*

Possibility hedges: *by (some/any) chance, hopefully, perhaps, possible, possibly, in (the) case (of), if you/we know/understand (what [pronoun] mean(s)), if you catch/get/understand my meaning/drift, if you know what I mean (to say).*

In English, epistemic and lexical hedges represent the largest classes of mitigation and softening devices. According to Levinson (1983), epistemic modification refers to the limitations of the speaker's/writer's knowledge that the listener/reader can infer from text or context. Epistemic adjectives and adverbs are among the most common hedging devices in published academic texts (Hyland, 1998, 1999), and among these, adverbs are more numerous than

adjectives. Unlike epistemic hedges that can modify entire propositions, lexical hedges, such as quantifiers of nouns (e.g., *many, several*) or vague adverbial and adjectival partitives (e.g., *much/a lot better, sort of delicious*) modify and delimit the meanings of nouns, adjectives, and adverbs (Quirk et al., 1985; Greenbaum & Quirk, 1990).

In various classifications, possibility hedges can also include those with meanings of probability, and the distinctions between them are a matter of judgment (Palmer, 1986, 1990). It is important to note that some of the hedges in this class can be highly conversational and presumptive in contexts where the shared knowledge between the writer and the reader is presupposed (but not necessarily accurately assessed) (Hinkel, 1997; Moon, 1994), e.g., *if you understand what I mean, if you can catch my meaning/drift*. When possibility hedges are employed in their presuppositional meanings, both spoken and written texts can lead to misinterpretations (Chafe, 1994).

Downtoners: *at all, a bit, all but, a good/great deal, almost, as good/well as, at least, barely, basically, dead (+ adjective), enough, fairly, (a) few, hardly, in the least/ slightest, just, (a) little (+ adjective), merely, mildly, nearly, not a (+ countable noun, e.g., thing/person), only, partly, partially, practically, pretty (+ adjective), quite (+adjective), rather, relatively, scarcely, simply, slightly, somewhat, sufficiently, truly, virtually.*

The function of downtoners is the opposite of that of amplifiers (see below), i.e. to scale down the intensity of verbs and adjectives in text (Quirk et al., 1985). The purpose of downtoners in formal academic prose is to restrict the meanings and reduce the qualitative and emotive implications of verbs, adjectives, and abstract nouns (Hyland, 1998, 1999). Such downtoners as *a bit, basically, pretty, or really*, are rare in formal academic writing because they are usually associated with conversational discourse and the informal spoken register (Hinkel, 2002).

Assertive pronouns: *any-* words (*anybody, anyone, anything*), *any, some-* pronominals (*somebody, someone, something*), *some*.

Assertive pronouns modify nouns and noun phrases (Greenbaum and Quirk, 1990; Quirk et al., 1985), and assertive forms with *some-* or *any-* can have positive or negative presuppositions, respectively. According to Channel (1994) and Huebler (1983), the meanings and functions of assertives are similar to those of hedges.

Adverbs of frequency²: e.g., *annually, daily, frequently, monthly, per day/hour/year occasionally, often, oftentimes, seldom, sometimes, sporadically, regularly, usually, weekly*. For example, *Parents who work all day usually spoil their children because they hope that money will cover up their guilt. Children seldom want money instead of their parents.* (Arabic)

Adverbs of frequency ubiquitously function as hedges in spoken and written text. Based on the findings of her corpus analysis, Channel (1994) specifies that the meanings of frequency adverbs are inherently vague and that they are used in similar contexts as other indefinite quantifiers, vague partitives, and lexical hedges. She also notes that frequency adverbs vary in the degrees of their formality and, for example, *sometimes* and *often* are far more conversational than *seldom* and *occasionally*.

Common Intensifiers

In general terms, intensifiers have textual functions that are converse to those of hedges. In conversational discourse, including a hyperbole allows the writer to make a point without being precise (Channel, 1994) because exaggerations and inflated statements are not intended to be taken literally. According to Leech (1983, p. 148), however, hyperboles and exaggeratives can be particularly inappropriate in formal prose because their usage “brings about a distortion of the truth” and thus damages text’s credibility.

Universal and negative pronouns: *all, each³, every-* pronominals (*everybody, everyone, everything, every, none, no one, nothing*).

Universal and negative indefinite pronouns, such as *every-* and *no-* words, are marked exaggeratives, and they are hardly ever encountered in academic writing in English (Halliday & Hasan, 1976). Universals and negatives mark the extremes of the continuum of meanings expressed by indefinite pronouns (see also Assertive Pronouns above).

Amplifiers: *absolutely, a lot* (+ comparative adjective), *altogether, always, amazingly, awfully, badly, by all means, completely, definitely, deeply, downright, forever, enormously, entirely, even* (+ adjective/noun), *ever, extremely, far* (+ comparative adjective), *far from it, fully, greatly, highly, hugely, in all/every respect(s)/way(s), much* (+ adjective), *never, not half bad, positively, perfectly, severely, so* (+adjective/verb), *sharply, strongly, too* (+ adjective), *terribly, totally, unbelievably, very, very much, well*.

Amplifiers represent a large class of intensifiers, i.e. adverbs that modify gradable adjectives or verbs and heighten their scalar lexical intensity (Quirk et al., 1985). In academic writing in English, such extreme amplifiers as *always* and *never* mark overt exaggerations, and their inclusion in formal prose is not considered to be advisable (Smoke, 1999).

Emphatics: *a lot* (+ noun/adjective), *certain(-ly), clear(-ly), complete, definite, exact(-ly), extreme, for sure, great, indeed, no way, outright, pure(-ly), real(-ly), such a* (+ noun), *strong, sure(-ly), total*.

In text, the purpose of emphatics is similar to that of amplifiers and has the effect of reinforcing the truth-value of a proposition or claim or the strength of the writer's conviction. The usage of emphatics does not necessarily imply that the sentence element that it modifies is necessarily gradable, but it becomes gradable when used with emphatics (Quirk et al., 1985). In spoken or written discourse, emphatics mark an informal register and are more characteristic of speech and conversational genre than of formal written prose (Chafe, 1985, 1994).

Results and Discussion

The results of the analysis of hedging devices are demonstrated in Table 2. As the findings of the analysis show, in NNS essays, the employment of hedging devices presents a mixed picture. While the academic texts written by Chinese, Japanese, Korean, and Indonesian speakers included epistemic hedges at median rates (from 0.79 to 0.91) significantly higher than those encountered in the essays of novice NS writers (0.47), speakers of Arabic and Vietnamese employed significantly fewer of these textual features (median frequency rates 0.30 and 0.38, respectively). In the case of lexical hedges, the writing of Japanese, Indonesian, Vietnamese, and Arabic speakers included significantly lower median rates of hedging (from 0.27 and 0.51) than the NS prose (the median rate 0.60). The median rates of lexical hedges in the academic prose of Chinese and Korean speakers were largely similar to those in NS prose.

It is interesting to note that possibility hedges were not particularly popular in L1 and L2 essays alike, and fewer than half of all essays in any group contained these types of hedges (median frequency rates 0.00).

Speaking broadly, the median frequency rates of the three types of hedges imply that L2 academic prose contained fewer hedging devices than that of NS writers. In addition, however, L2 prose of, for example, Chinese, Japanese, Korean, and Indonesian speakers, seems to rely extensively on epistemic (e.g., *according to*, *actually*, *most*, *normal(-ly)*) but not other types of hedges. To some extent, this finding may evince shortfalls in L2 writers' vocabulary and lexical ranges, when many L2 essays seem to recycle the same types of hedges repeatedly.

1. I actually disagree that grades do not encourage learning. According to my opinion, by the grade system instructors can realize which teaching skill is better for students, and which students need more attention. Normally, each student has his or her weak points, and without grading, many students do not do their best. Actually, grades can measure how well students achieve in their courses and control their school life. (Korean)

Table 2. Median Frequency Rates for Hedging Devices

NS and NNS Academic Essays %

Features/LIs	NSs	CH	JP	KR	IN	VT	AR
<i>Epistemic hedges</i>	0.47	0.91*	0.80*	0.85*	0.79*	0.38*	0.30*
<i>Range</i>	3.40	3.69	4.38	3.90	3.67	3.23	2.13
<i>Lexical hedges</i>	0.60	0.69	0.51*	0.55	0.27**	0.48**	0.30**
<i>Range</i>	4.63	5.63	3.53	12.50	1.74	2.65	2.13
<i>Possibility hedges</i>	0.00	0.00	0.00*	0.00*	0.00	0.00	0.00
<i>Range</i>	1.36	1.89	0.57	1.14	0.70	0.65	1.20
<i>Downtoners</i>	0.47	0.35*	0.39*	0.34*	0.47	0.35*	0.48
<i>Range</i>	3.80	3.33	4.17	2.34	2.96	2.26	3.19
<i>Assertive pronouns</i>	0.38	0.87**	0.93**	0.89**	0.93**	0.52*	0.77**
<i>Range</i>	2.22	7.14	6.77	7.07	6.29	2.63	6.38
<i>Frequency adverb.</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.28*
<i>Range</i>	1.87	2.65	1.60	1.92	1.80	1.36	4.02

** 2-tailed $p \leq 0.05$

Note: all comparisons are relative to NS text.

* 1-tailed $p \leq 0.05$

In (1), the short excerpt from a student text includes four hedges, all of which are epistemic, and with the hedge *actually* repeated twice in four sentences. In addition, despite the writer's uses of hedges in each sentence (*actually*, *according to*, *normally*, and *actually*), the text does not appear to project "proper caution," or hesitation when advancing its claims (e.g., "students would not do their best if grades were not assigned" or "grades can measure student achievement and control"), as is requisite in written academic prose (Swales, 1990). Rather the example in (1) seems to point to the writer's restricted lexical range.

On the other hand, while the NS excerpt in (2) does not exhibit a great deal of academic sophistication, the hedging devices employed in this example clearly appear to be more diverse and varied than those in (1).

2. *A grade is essentially an overall view of what one has learned. It also may indicate how one performs in a certain area while under stress. Presently, students devote their free time to studying and learning because they need high grades to allow them to go forward in life. The grade may help the student, as well as a mentor; determine strengths and weaknesses. In the case of weak students, a grade may challenge them to strive and do their very best.* (NS)

Like in (1), the excerpt in (2) argues for the importance of grading for learning and is similarly short. The NS text consists of five sentences with three hedges, and among them two epistemic (*essentially* and *their very best*) and one possibility (*in the case of*). An additional consideration in the usage of hedges in the prose of both NSs and NNSs is that even among the hedges in the same class, the amount of lexical complexity can differ broadly. For instance, *actually* or *according to* are often encountered in conversational discourse and spoken interactions, while such items as *essentially* or *in (the) case of* are frequently associated with formal register and written academic prose (Holmes, 1988; Leech, et al., 2001). Thus, the combined uses of diverse types of hedging devices, as well as more lexically complex individual hedges in NS writing, can project an overall impression of greater lexical complexity, compared to the types and quality of hedges in NNS academic essays. This observation is further supported by the findings dealing with NS and NNS employment of downtoners and assertive pronouns.

Hoye (1997) explains that among downtoners, various items are distinct in the degree of their formality, lexical complexity, and frequency of usage. For example, such items as *at all*, *almost*, *at least*, *basically*, (a) *few*, *enough*, *hardly*, *just*, (a) *little*, *only*, *simply*, and *quite* are prevalent in the informal register and conversational discourse. On the other hand, formal and lexically-advanced downtoners, such as *fairly*, *mildly*, *partly*, *partially*, *scarcely*, *virtually*, are predominant in formal and written discourse. Leech, Rayson, & Wilson (2001) found, for instance, that *just* and *quite* seldom occur in formal written discourse, while *basically*, *few*, *little*, and *quite* are extremely common in conversation.

Although Indonesian and Arabic speakers employed downtoners at median frequency rates (0.47 and 0.48, respectively) similar to those encountered in NS texts, overall, other L2 essays includes them significantly less frequently (median rates from 0.35 to 0.39). More interestingly, however, such items as *at all*, *almost*, *basically*, *just*, *only*, *little*, and *few*, were prevalent in L1 and L2 student writing, although more lexically advanced downtoners, such as *merely*, *relatively*, and *sufficiently* were rare.

3. *Only a few people choose voice studies as their major because there are no jobs in it.* (Chinese)

4. *In Japan, my major was international economics, but I just couldn't make myself study for it.* (Japanese)

5. *I don't want to choose electrical engineering as my major at all, but my parents are totally upset about it.* (Korean)

6. *If I am choosing a major simply because there a lot of opportunities and a lot of money coming from that job, but I don't really enjoy what I am doing, then I can never be happy.* (NS)

In (3-6), L1 and L2 writers alike employed the types of downtoners that are commonly associated with informal and conversational discourse, e.g., *only*, *just*, *at all*, and *simply*, rather than those found in formal academic prose. In light of earlier research findings (Hinkel, 2002; Shaw and Liu, 1998), the prevalence of lexically simple and conversational downtoners in student writing is not particularly surprising. L2 learners who have a great deal of exposure to L2 interactions and informal discourse in English-speaking countries usually employ L2 conversational features at far higher frequencies than formal lexical and syntactic constructions found largely in formal academic texts.

Similarly, assertive pronouns, such as *anybody*, *anything*, *someone*, and *something*, are so lexically vague that they are often considered to be inappropriate in written academic prose (Channell, 1994). However, their median frequency rates in L2 writing of NNS in all groups (0.52 to 0.93) significantly exceeded those in L1 essays of NSs (0.38).

7. *Someone who really spoils their children and buys them anything they want does not care about them deeply.* (Indonesian)

8. *When somebody gives me bad advice, I ask my parents about it* (Arabic)

9. *My parents always say that if I work hard for something, I can get it, and I'll do anything to get my goal.* (Japanese)

On the other hand, in NS texts, assertive pronouns were far less common. In fact, many NS novice writers developed their texts without relying on the vague and conversational assertives to a great extent.

10. *Responsible parents prepare their children for the future, and those who indulge their offspring are doing them a dis-service in the long run.* (NS)

11. *When parents raise their children, they need to keep in mind that their decisions are important for the well-being of the next generation.* (NS)

It would be difficult to see assertive pronouns as lexically sophisticated hedging devices, and the comparatively high rates of their occurrences in NNS essays point to the shortfalls in the L2 writers' accessible range of means to mitigate generalizations and claims in their prose. According to Greenbaum and Quirk (1990), assertive pronouns, such as *anything*, *someone*, and *anybody*, are largely avoided in formal discourse in English.

In line with earlier noted distinctions among more formal and less formal types of downtoners, the adverbs of frequency also differ in the rates of their occurrence in conversational or written discourse. In fact, a majority of L1 or L2 writers alike (with the exception of Arabic speakers) did not employ frequency adverbs in their essays (median rates of 0.00) possibly because those that are often encountered in spoken interaction are actually relatively few (e.g., *occasionally* and *sometimes*), while such items as *seldom* and *rarely* are highly infrequent (Channell, 1994).

On the whole, the data in Table 2 demonstrate that the frequencies and types of hedges in L2 academic writing are severely restricted and limited to those that are associated with casual spoken interactions (Hinkel, 1997, 1999, 2003a; Holmes, 1988; Hyland & Milton, 1997). As has been mentioned, the findings of this study are not particularly surprising, given that even in the case of academically-bound students, conversational discourse constitutes their preeminent venue of exposure to L2 and its discourse functions. Furthermore, because the uses and meanings of various hedging devices do not seem to be addressed in instruction in any degree of depth (if at all), it is not obvious that L2 academic writers can actually learn to employ them appropriately in the context of L2 formal writing.

In addition to a demonstrable lack of lexically-advanced hedging, NNS writers' essays seem to be prone to exaggerations and overstatements, possibly due to the high rates of universal pronouns, amplifiers, and emphatics in their texts. The data in Table 3 show that in NNSs' prose, the median frequency rates of the three types of intensifiers associated with exaggeration and inflation of the actual state of affairs (Quirk et al., 1985) significantly exceed those of NS novice writers.

The median frequency rates of universal pronouns (e.g., *nobody*, *nothing*, *everyone*, *everybody*) in L2 texts were 50% or higher (0.65 to 1.17) than those in L1 prose (0.44) of NSs.

12. *Everybody* wants to get as high education as he or she can. ... *Everyone* wants to get a good grade on tests and exams because grades mean a lot for students. (Korean)

Table 3. Median Frequency Rates for Maximizers in NS and NNS Academic Essays

Features/LIs	NSs	CH	JP	KR	IN	VT	AR
Universal pron.	0.44	0.89**	0.85*	1.17**	0.67*	0.91**	0.78**
Range	3.04	5.71	6.67	4.35	5.20	4.58	5.77
Amplifiers	1.70	3.21**	3.04**	3.18**	2.70**	2.36	3.23
Range	5.46	10.11	12.28	11.06	9.80	8.22	14.29
Emphatics	1.04	2.60**	2.67**	2.00**	2.27*	2.49**	4.12**
Range	4.26	7.50	10.85	8.64	7.91	6.25	13.01

** 2-tailed $p \leq 0.05$

Note: all comparisons are relative to NS text.

* 1-tailed $p \leq 0.05$

13. *Nobody goes to a university to be a bank clerk for the rest of his life, and nobody says, I want to get a C in this class.* (Japanese)

14. *If you have no interest in this field, you will learn nothing from your classes. Can you do this job well even you get a degree in it? Everybody can't.* (Chinese)

The uses of universal pronouns in L2 academic writing, as in examples (12-14) can project a hyperbolic and inflated impression (Leech, 1983), when the text appears to overstate claims with the goal of enhancing its persuasive qualities. As has been mentioned, in various rhetorical traditions other than Anglo-American, exaggeration and overstatement represent a valid rhetorical means of conveying the power of the writer's conviction and obvious evidential truths (Connor, 1996; Yum, 1987).

However, in keeping with the Anglo-American rhetorical tradition of avoiding the extremes of the graded scale in making claims (Chafe, 1986, 1994), NS students tended to rely less on such universal pronouns as no- and every- words.

15. *For most people, getting education is important because they seek more choices in life, and making a living in the world today can be difficult.* (NS)

16. *Working in a field of study that interests you holds your attention because it is something you like, you will apply yourself and do a good job.* (NS)

In (15-16), NS novice writers express ideas proximate to those found in NNS prose, e.g., that education is important most people and that one should choose a major that is of interest to him or her. However, based on the data in Table 3, the NS writers' claims appear to be hedged rather than overstated with the similar goal of projecting added persuasion and authorial credibility (Swales, 1990).

The disparity between the NS and NNS uses of intensifiers seems to be striking when it comes to the median frequency rates of amplifiers and emphatics. For instance, the rates of emphatics, such as *a lot*, *complete(-ly)*, *real(-ly)*, and *total(-ly)*, in NNS essays were two to four times greater than in those of NSs. In fact, it is the combined usage of amplifiers and emphatics that serves to impart a particularly overstated and exaggerated character to L2 academic text. For example, in (17), the generalization and assertions appear to be inflated to such an extent that, if taken literally, the writer's claims seem to be more incredible than persuasive.

17. *I always admire people who totally know their personal interests completely and choose their major field of study based on the interests. It is really a happy study, never a responsibility, a task, or even drudgery. Considering the Nobel prize winners, the same exact fact holds for every profession, for example, Bill Gates. Everyone wants to do what they totally love. But I think an important reason why a lot of people are miserable in their jobs is that they don't know their interests at all. If a person always does what others, such as his parents, his teachers, and his best friend, expect them to do, they will completely lose their ability to find out their own interest and then will spend the rest of their lives in great error. (Chinese)*

In this excerpt, the writer employs various means of intensification to convey her high degree of conviction within the constraints of her limited academic vocabulary. Hence, her text includes a relatively high frequency of amplifiers and emphatics (11 in a 131-word passage, on average about two per sentence) often considered to be inappropriate in formal academic writing (e.g., Channell, 1994; Jordan, 1997; Swales, 1990). It is important to note that practically all intensifiers identified in (17) predominate in casual conversational and highly informal registers, e.g., *always*, *totally*, *a lot*, *really*, and are rarely encountered in any other types of spoken genres, not even to mention those associated with formal writing (Brazil, 1995; Leech, Rayson, & Wilson, 2001).

On the other hand, NS writers, whose vocabulary ranges seems to be greater than those of NNSs, are able to express their ideas without relying on intensifiers to the same extent.

18. *Today's world presents us with far more choices than in the old days of our parents and grandparents. So, in many cases, it is difficult for young people to make good choices if they don't know themselves well. There are many reasons why people choose to study certain subjects. The two main reasons are the interest or love of a subject and the other is looking forward to future employment options. Both reasons have benefits and negative aspects. The benefits of choosing your area of study through your interests are doing what you enjoy. If you are interested in what you study, most often you are excited to learn, and therefore, learn more. Positives don't normally come without negatives. For about every positive aspect of going with your interests, there is also a negative. By going with your interest, you might be choosing a field of study that is exhausted, and there might not be room for a career, and you could be financially unstable.* (NS)

The essays of many NSs, such as the example in (18), contained markedly fewer amplifiers and emphatics than NNS texts. In (18), as in (17), the writer similarly advances the claims that many students are ambivalent about their choices of majors, that making such choices is difficult, and that to make a good choice, individuals need to know themselves first. However, in addition to a comparatively lower rate of intensifiers, the NS text in (18) also includes a number of hedges (e.g., *in many cases, many reasons, often, normally*) that also serve to create a general impression of academically-appropriate hesitation and a reduced degree of commitment to the text's claims. It would be difficult to argue that the NS text includes highly sophisticated and advanced lexis. However, on the whole, the text seems to take a balanced approach to developing its argument that most choices of majors have positives and negatives that need to be examined.

Conclusions and Implications for Teaching

In general terms, an examination of median frequency rates of hedges and intensifiers in NS and NNS academic essays points to the fact that L2 writers employ a severely limited range of hedging devices, largely associated with conversational discourse and casual spoken interactions. These findings are further supported by a prevalence of conversational intensifiers and overstatements in the L2 writing that are ubiquitous in informal speech but are rare in formal written prose.

Despite the fact that various researchers of academic writing and L2 learners' texts have pointed to the need for instruction in the uses and functions of hedges and intensifiers in English (Channell, 1994; Holmes, 1988), it ap-

pears that these desirable or inappropriate features of L2 writing, respectively, are hardly ever addressed in instruction on written academic genres and text. This particular shortfall in the teaching of L2 writing may be particularly discouraging, given that hedging devices and intensifiers represent sentence- and phrase-based and relatively discrete lexical and syntactic features of academic text (Chang & Swales, 1999).

Furthermore, as earlier research demonstrated, even academically-bound L2 learners who pursue their language study in English-speaking countries obtain far more experience with and exposure to informal and conversational language varieties than formal written and academic register (Shaw and Liu, 1998; Hinkel, 2002, 2003b). Hence, these learners become well-versed in the uses of various informal features commonly found in spoken interaction rather than those that are valued in the written academic genres. It seems that NS novice writers without a great deal of background in producing academic writing are better prepared to employ these lexical and syntactic features in their academic essays than NNSs with years of academic L2 training. However, as numerous researchers and methodologists have noted, a lack of necessary skills in constructing formal academic text places NNS university degree-bound students at a great disadvantage when they compete for grades and academic achievement in the same courses and on par with NS students (e.g., Hinkel, 1997, 2002, 2003a, 2003b; Holmes, 1984 1988; Johns, 1997; Jordan, 1997; Dudley-Evans & St. John, 1998).

The teaching of the importance of hedging in L2 academic prose may require persistence and consistency on the behalf of the teacher because the need to hedge propositions and claims to show an appropriate amount of hesitation and uncertainty in writing is a textual feature more specific to the Anglo-American rhetorical tradition than to others. However, unlike the meanings and functions of various hedging devices, their contextual uses do not need to become very complicated. For instance, the uses of frequency adverbs, such as *often*, *frequently*, or *usually* are relatively easy to explain and practice. In addition, to increase L2 writers' accessible ranges of hedging devices, the frequency markers can be combined with somewhat more complex epistemic and possibility hedges that are often seen as more lexically advanced: the teaching of contextually flexible items, such as *likely/unlikely*, *probable/probably*, *possible/possibly* and *perhaps*.

Most importantly, however, L2 writing instruction needs to make L2 academic writers focus on the key differences between the types of lexical and syntactic features that differentiate formal written and informal conversational registers (Jordan, 1997). Thus, in addition to emphasizing the role of hedging devices in academic prose, L2 writing instruction must address those features that are considered to be undesirable and that should be avoided, e.g., *completely*, *really*, *totally*, and *no way*. To this end, the teaching of L2 writing needs to help L2 writers to expand their vocabulary and accessible ranges of lexicon that can provide them means of expressing their ideas without relying on intensifiers to develop effective rhetorical persuasion. In practical terms, the inflated quality of the text may not be complicated to edit by omitting or

replacing various pronouns, and modifying adjectives and adverbs that taken together, amount to overstated prose and exaggerated claims.

Notes

¹Reynolds (2001) carried out an empirical investigation of word and lexical repetition in L2 writing. The results of his study demonstrate that in L2 written, repetition does not necessarily reflect a higher or lower degree ESL writing development. Reynolds's type/token analysis of lexis in almost 200 NS and NNS essays shows that in L2 prose, repetition occurs in T-unit clusters and depends on the essay discourse organization pattern, as well as the cultural and linguistic backgrounds of NNS writers. According to the author's findings, in L2 academic texts, significantly higher repetition values were identified in longer T-units (but not longer texts) produced by more advanced L2 writers or by speakers of particular L1s. The discourse functions of repetition in L2 writing are examined in detail in Reynolds (1995).

²Always and never refer to the extremes of the graded scale among frequency adverbs. In spoken or written discourse, these adverbs function as amplifiers (see Amplifiers). The meanings of always and never are distinct from those of other frequency adverbs they are "precise" (Chafe, 1994, p. 116)

³The frequency counts of pronouns *all/each* included only in their rare occurrences as elliptical pronominals (e.g., *all study hard because they want to have career possibilities*). The adjectival uses of *all/each* (e.g., *all students*) were not included in frequency counts of universal pronouns.

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Author

ELI HINKEL, Director, Culture and Language Bridge Program, Seattle University, Seattle, WA 98122, Email: elihinkel@yahoo.com. Specializations: L2 text analysis, L2 pragmatics, and L2 writing.

Developmental Sequences of L2 Communication Strategies

Marian J. Rossiter
University of Alberta

This paper reports a study that investigated the development of second language (L2) communication strategies (code-switching, all-purpose words, word coinage, approximation, and circumlocution) over time. In the study, 8 adult learners in a full-time English as a second language program provided oral narrations of an eight-frame picture story at Time 1 and again 15 weeks later. I examined the transcripts of the 4 learners who demonstrated improvement over time. All communication strategies in the narratives at Times 1 and 2 were identified, coded, and quantified. Linguistic analyses of the narratives revealed an overall decrease in the use of the communication strategies over time, but an increased use of circumlocution. The study provided further evidence of a hierarchical order in the development of L2 oral communication strategies.

Learner-centred studies of second language acquisition have shown evidence of developmental stages in linguistic structures such as question formation (Lightbown & Spada, 1997; Pienemann et al., 1988; Spada & Lightbown, 1993), relative clauses (Doughty, 1991), possessive determiners (J. White, 1998), adverb placement (L. White, 1991), and negation (Weinert, 1994). However, little research has been undertaken to examine the possibility that strategic competence, like grammatical competence, might also reflect developmental sequences.

Many correlational studies to date have found a direct association between perceived use of learner strategies and second language (L2) proficiency (e.g., O'Malley & Chamot, 1990; Oxford, 1996). Students with advanced language proficiency have reported higher levels of overall strategy use and frequent use of a greater number of categories of strategies (Oxford, 1996), although other research has suggested that the difference in performance lies in the appropriateness of the strategies used (Abraham & Vann, 1987; Vann and Abraham, 1990).

The study described below investigates the existence of patterns in the development of oral communication strategies. Communication strategies are actions taken by speakers

(a) to compensate for breakdown in communication due to limiting conditions in actual communication (e.g., momentary inability to recall an idea or grammatical form) or to insufficient competence in one or more of the other areas of communicative competence; and (b) to enhance the effectiveness of communication... (Canale, 1983, p. 11).

Much communication strategy research has been devoted to the definition of strategies and to the development and elaboration of taxonomies (see Dornyei & Scott, 1997). Most studies have focused on *achievement* (compensatory) strategies (e.g., paraphrase, code-switching, and word coinage), as opposed to *reduction* (avoidance) strategies (e.g., topic avoidance, message abandonment) (Faerch & Kasper, 1983).

Only a few researchers (Chesterfield & Chesterfield, 1985; Haastrup & Phillipson, 1983) have examined developmental sequences in the use of oral second language strategies. Chesterfield and Chesterfield (1985) studied the strategy development of 14 Mexican American children in bilingual classrooms during their pre-school and first grade years. Observations were made at the beginning and end of both the pre-school year and first grade. Researchers, as participant observers, audio-taped children's classroom discourse and took field notes of their behaviour as they participated in events (e.g., group and independent activities, meal-time, recess) over a number of days until the time observed equalled the number of hours in a normal school day. Analyses of the field-notes and audio-taped classroom discourse resulted in the identification of a number of L2 strategies (based on Bialystok, 1981; Rubin, 1981; Tarone, 1983) that were employed by the children to develop their linguistic and sociolinguistic competence. Although the rates of development differed, the authors found evidence to suggest that the most frequently used strategies developed in the following hierarchical order: repetition, memorization, formulaic expressions, verbal attention-getters, answering in unison, talking to self, elaboration, anticipatory answers, monitoring, appeal for assistance, request for clarification, and role play. The authors noted that "at least for young children in bilingual classrooms, there is a natural order to the development of second language strategies" (Chesterfield & Chesterfield, 1985, p. 56). Their study, however, focused on interactive and learning strategies as opposed to achievement strategies.

Haastrup and Phillipson (1983) conducted research to investigate the communication strategies used by eight adolescent Danish learners of English to overcome difficulties during a 20-minute conversation with a native speaker of English. A comparison of the data from all eight learners, in addition to detailed mini-profiles of two of the participants, supported the existence of a continuum of communication strategies: first language (L1)-based strategies (e.g., code-switching, literal translation) were classified as least effective and interlanguage (L2) strategies (e.g., approximation, circumlocution, word coinage) as most effective. The authors did not, however, provide evidence regarding the relative effectiveness of the individual L2 strategies observed.

Two recent studies have examined the effectiveness – rather than the development – of communication strategies. In a concept-identification study, Chen (1990) concluded that the linguistic-based communication strategies (e.g., approximation, circumlocution) produced by high-proficiency learners were more effective than the knowledge-based strategies (e.g., cultural characteristics, examples, similes, repetition, paralinguistics) used by lower-level learners. In a study by Littlemore (2003), English native speaker judges were asked to rate the effectiveness of names or descriptions provided by French learners of English as a foreign language for 15 items (e.g., holly, slug). Analyses of the data showed that circumlocution strategies (e.g., "It has a red part at the top and a white part at the bottom" for "radish") were judged to be most effective; they provided details regarding individual features of an item, and the purpose, action, location, and/or emotions associated with it that diminished the possibility of misinterpretation.

The ability to use communication strategies effectively has been incorporated into the criteria of several major speaking tests. The American Council for the Teaching of Foreign Languages (ACTFL) speaking scale descriptors for Advanced level include the ability to employ paraphrasing, circumlocution, illustration, and rephrasing; failure to successfully use communication strategies such as circumlocution is considered characteristic of foreign language users at the Intermediate level (Breiner-Sanders, Lowe, Miles, & Swender, 1999). Key “lexical resource” descriptors in the International English Language Testing System (IELTS) speaking test include “the ability to circumlocute (get around a vocabulary gap by using other words) with or without noticeable hesitation” (IELTS, 2005, p. 12). The ability to use strategies to maintain and repair interaction / production is a scoring criterion of other popular tests, testifying to the recognition of the importance of strategic competence in speaking (Educational Testing Service, 2001; University of Cambridge Local Examinations Syndicate, 2000).

Given this recognition of L2 strategy use in high stakes oral proficiency tests, and the assertion that communication strategies enable learners to maintain interaction and thereby benefit from increased exposure to (and intake from) the L2, strategic competence is of continuing interest to both second language teachers and researchers. The study reported below examines the development over time of specific oral communication strategies (code-switching, all-purpose words, word coinage, approximation, and circumlocution) and their relative relationship to learners’ L2 communicative success.

Method

Participants

The data in this study come from the control group in a larger research project (Rossiter, 2001). The participants were eight adult intermediate-level learners of ESL representing a variety of native language backgrounds. The four males and four females had an average age of 35.6 years. They were attending full-time classes for 25 hours a week. They received 16 weeks (approximately 300 hours) of regular full-time communicative ESL instruction and participated in narrative tasks administered twice by the author separated by a period of 15 weeks; these were the only learners in the control group who completed both tasks. After the 2-minute picture story task was administered, the teachers were directed not to include picture narratives in their instruction for the next 15 weeks, in order to avoid any possibility of a practice effect.

Materials

The learners narrated an eight-frame picture story (Rollet & Tremblay, 1975). The narrative depicted a couple who bought a small house in the country from a real estate agent. The husband fell from a ladder while he was painting the walls and had a lot of difficulty digging in the garden. Because there was no running water in the house, his wife had to carry pails of water from the well. Later, when she asked her husband to bring in kindling for the fireplace, he hurt his knee chopping wood. Finally, the couple decided that it was too much work living in the country, so they put their house up for sale, packed their bags, and moved back to the city.

Procedure

The learners were given a minute to examine the picture story and were then asked to describe it at Time 1 (T1) and Time 2 (T2) to an interlocutor seated behind a low barrier. The interlocutor’s task was to identify the pictures one by one and to place them in the order in which each learner described them. The oral productions were audio-taped and transcribed.

Data analysis

To determine a measure of communicative success (see Derwing, 1989), I collected baseline data for the picture story task from nine native speakers (NS) who independently recorded their versions of the same picture stories administered to the learners. The most pivotal or most salient elements named by the majority of the NS participants were designated *essential* to each of the eight frames in the picture story (see Tomlin, 1984); each essential element described in a transcript merited one point, and an understanding of the overall intention or gist of the story merited an additional five points. Out of a total possible score of 18 points (a total of 13 for the essential elements in eight frames, plus 5 points for gist), I calculated success for the narratives of each of the learners in this study using this scoring system, and I then transformed them to percentages. Each narrative transcript thus received a success rating.

Table 1. *Greatest Gains in Narrative Success Scores Between Times 1 and 2*

<i>Participant</i>	<i>Time 1 score</i>	<i>Time 2 score</i>	<i>Success gain score</i>
A	39%	94%	55%
B	17%	67%	50%
C	39%	78%	39%
D	50%	67%	17%

At Time 1, the narratives of four of the participants in this study were judged to be successful (100%, 100%, 94%, and 94%), and four productions were classified as unsuccessful (39%, 17%, 39%, and 50%). At Time 2, however, the initially unsuccessful learners achieved successful ratings of 94%, 67%, 78%, and 67%, respectively (see Table 1). Their gains in success served as a measure of improvement in communicative effectiveness over time, and the narratives of these learners at Times 1 and 2 were examined to determine how this improvement was reflected in the use of communication strategies. All instances of code-switching, all-purpose words, word coinage, approximation, and circumlocution (see Table 2) in the picture descriptions of all eight learners at Times 1 and 2 were identified, coded, and quantified.

Table 2. *Communication Strategies Used in Narrative Descriptions*

Code switching: Use of an L1/L3 word and its L1/L3 pronunciation to replace an L2 concept; e.g., *réclame* for *advertisement*.

All-purpose word: Use of a general word in place of a more specific one; e.g. *stuff*.

Word coinage: Use of L2 rules to create a word that does not actually exist in the L2; e.g., *whobody* for *anybody who*.

Approximation: Use of a synonym or superordinate to replace a related concept; e.g., *colors* instead of *paint*.

Circumlocution: Use of an illustration or description of the characteristics of an item or an action; e.g., *change place for living* for *moving*.

Results

Analysis of the data showed an overall decrease in the use of achievement strategies over time. In particular, learners used fewer instances of all-purpose words, word coinage, and approximation at Time 2; there was, however, an increase in the use of circumlocution (see Table 3).

Table 3. *Type and Frequency of Strategies and Appropriate Lexis at Times 1 and 2*

<i>Communication Strategy</i>	<i>Frequency (T1)</i>	<i>Frequency (T2)</i>
Code-switching	1	1
All-purpose words	3	0
Word coinage	1	0
Approximation	5	4
Circumlocution	1	4
Total strategies	(11)	(9)
Appropriate lexis	0	9

Upon closer examination, the narratives provide evidence of the development of communication strategies and L2 vocabulary. As shown in Table 4, all instances of all-purpose words, approximations, and circumlocution used at Time 1 by the learners were replaced by appropriate vocabulary at Time 2. This is illustrated in the data of Participant A:

- Example 1 T1: They're standing in front of something to warm up.
 T2: They are in front of their fireplace.

Table 4. Use of Communication Strategies at Times 1 and 2

Learner	Success gain scores	Time	Code switching	All purpose word	Word coinage	Approximation	Circumlocution	Appropriate Lexis
A	55%	1		X ₁ X ₂ X ₃		X ₄	X ₅	
		2				Y ₁		X ₁ X ₂ X ₃ X ₄ X ₅
B	50%	1			X ₁	X ₂ X ₃		
		2				Y ₁	X ₁	X ₂ X ₃
C	39%	1				X ₁ X ₂		
		2					Y ₁ Y ₂ Y ₃	X ₁ X ₂
D	17%	1	X ₁					
		2	Y ₁			X ₁ Y ₂		

Note. X= new information presented at T1: old information presented more effectively at T2. Y = new information presented at T2

Participant B used correct lexis at Time 2 for two instances of approximation at Time 1, and, in this example, replaced word coinage with circumlocution, which was more detailed and effective:

Example 2 T1: ... carrying two pail with water from the... water place to house.
 T2: ... to take the water from... I don't know... is cold water... is not water pump, but something like hole... and there is water inside.

Participant C replaced all instances of approximation by the appropriate lexis at Time 2. The communication strategies that this learner used at Time 2 consisted exclusively of circumlocution, which was more elaborate and demonstrated greater linguistic resources; furthermore, all instances of circumlocution at Time 2 referred to new ideas that were not present in the T1 production of participant C:

Example 3 T2: One family decide to change place for living. (move)
 Example 4 T2: He didn't have... something for split wood. (an axe)
 Example 5 T2: They went to ... one office who can help him for... buying house. (a real estate agency)

Participant D replaced code-switching at Time 1 (Serbo-Croatian “kofa”) with the more effective use of approximation in English (“box” for “pail”) at Time 2. Elaboration of events at Time 2 gave rise to a need for communication strategies to express new information, but participant D was the only learner to use an L1-based strategy (code-switching) again at Time 2. Of the strategies examined here, circumlocution was used exclusively by the other participants when compensatory strategies were required to achieve communicative goals at Time 2.

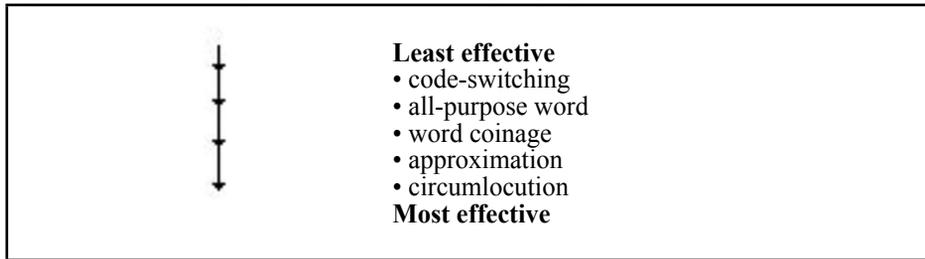
The types of communication strategy used by individual speakers varied somewhat in the narrative productions. Although all participants used approximation (at Time 1), participant A was the only learner to use all-purpose words extensively (at Time 1); participant B was the only learner to use word coinage (at Time 1); participant C used circumlocution more extensively than the others (at Time 2); and participant D alone used code-switching (both at Times 1 and 2) in the narratives. In all the productions, we see improvement over time in the lexis used to describe events in the narrative; that is, strategies at Time 1 are all replaced by more effective strategies or by the correct vocabulary at Time 2. Furthermore, new information at Time 2, with the exception of Participant D, was presented using more effective strategies than those used to present new information at Time 1.

Discussion

Several studies (Chen, 1990; Poulisse, 1990; Poulisse & Schils, 1989; Yoshida-Morise, 1998) have shown that, as learners' language proficiency increases, their need for communication strategies to prevent communication breakdown appears to decline. Evidence in this study of a reduction in communication strategies over 15 weeks of full-time second language instruction appears to support these findings. Communication strategies at Time 2 were necessitated only by the expression of new ideas, or by further elaboration of ideas presented at Time 1. These are represented in the data, for the most part, by paraphrase, which comprises word coinage, approximation, and circumlocution (Tarone, 1978), and which tended to be more effective than code-switching and all-purpose words. Interestingly, participant D, the only learner to use an L1-based strategy (code-switching) at Time 2, was also the one with the smallest gain score in success.

According to Tarone (1978) and Green and Oxford (1995), successful students are likely to choose circumlocution or approximation over other strategies more frequently than are unsuccessful students. Circumlocution was the most effective strategy used by Littlemore's (2003) participants; findings from Haastrap and Phillipson (1983) suggested that paraphrase had the greatest potential for facilitating successful communication. Circumlocution and approximation are, in fact, the most common strategies used in the narratives at Time 2 by the learners in this study. They are also the most frequent strategies found in the productions of the four learners who were judged to be successful at Time 1 based on the content of their narratives. Circumlocution showed the greatest increase in use over time in the narratives of the four initially unsuccessful learners examined here. As Bialystok (1990) has suggested, strategies such as circumlocution make heavier linguistic demands on learners and may be too sophisticated for learners at earlier stages of proficiency.

Figure 1. *Continuum of communication strategies proposed*



Conclusion

Although the number of participants in this study is small, the results confirm suggestions from earlier studies that there is indeed a hierarchical order in the development of oral communication strategies over time by learners of English as a second language.

Despite the encouragement to teach second language learners to employ communication strategies (e.g., Berry-Bravo, 1993; Cohen, Weaver, & Li, 1998; Grenfell & Harris, 1999; Oxford, 1990), inconclusive findings on the effectiveness of communication strategy instruction highlight the need for more direct evidence from the classroom. Although there has been some increase in instructional materials that promote strategy development, they are not commonly available. For example, out of a total of 40 texts surveyed, Faucette (2001) found that only 9 textbooks and 8 teachers' resource books included communication strategies. In the student texts, she identified communication strategy instruction on circumlocution (7), approximation (1), word coinage (1), and, surprisingly, message abandonment (2). Overall, however, she found exercises for strategy training disappointing. In the eight teachers' resource books, Faucette found a greater incidence of achievement strategy activities, focusing on circumlocution (7), approximation (4), word coinage (1), and topic avoidance (1). Here, the tasks were varied and more interactive; there was, however, a paucity of guidelines for implementing the suggested strategy instruction. Further activities for teaching communication strategies, often accompanied by procedures for doing so, can be gleaned from research studies conducted in L2 classrooms (e.g., Chen, 1990; Dörnyei, 1995; Faerch & Kasper, 1983, 1986; Fernández Dobao, 2002; Littlemore, 2003; Paribakht, 1985; Rossiter, 2003; Salamone and Marsal, 1997; Scullen & Jourdain, 2000), but journal articles – and the time to read them – are not readily available to teachers in many settings. For those teachers who seek them out, suggestions for communication strategy instruction include descriptions of abstract figures, inkblots, (un)familiar objects, and abstract concepts; word definitions; information gap crossword puzzles; riddles; picture narrations; find the difference tasks; map tracing; and assembly tasks, all of which can easily be adapted for particular language classes (see Yule, 1997, for further examples).

When selecting communication strategies to teach, instructors would be ill-advised to waste precious classroom time teaching reduction strategies such as message abandonment, which come naturally to most second language users when they are faced with communication breakdown, even though, as Faucette noted, these are included in some texts. Nor does it seem necessary to teach code-switching and word coinage, neither

of which leads to an increased acquisition of English vocabulary. A small number of all-purpose words can facilitate communication, but these are often found in lexical frames for circumlocution (e.g., 'It's stuff that you use to...'). Circumlocution and approximation are, in the end, most likely to compensate for linguistic gaps in learner productions and to reduce opportunities for miscommunication. These are the achievement strategies on which teachers should focus if they wish to improve learners' strategic competence; in the process, learners will acquire lexical chunks and frames that can be used to further enhance their overall communicative competence.

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Author

MARIAN J. ROSSITER, Assistant Professor and TESL Coordinator, Department of Educational Psychology, University of Alberta, Edmonton, Alberta, Canada T6G 2G5. Email: marian.rossiter@ualberta.ca Specializations: L2 learner strategies, speaking fluency, second language acquisition, classroom-based research.

Reviews

The Handbook of Applied Linguistics. (2004). Edited by Alan Davies and Catherine Elder. Malden, MA: Blackwell. Pp. 866.

Reviewed by JOHN S. HEDGCOCK
Monterey Institute of International Studies

A substantial and comprehensive volume geared principally toward researchers, *The Handbook of Applied Linguistics* provides readers with a current, expansive survey of the field's primary strands of inquiry. Part I, "Linguistics-Applied (L-A)," presents material that "looks inward" by endeavoring "to explicate and test theories about language itself" (p. 11). In contrast, Part II, "Applied-Linguistics (A-L)," introduces research that "looks outward, beyond language in an attempt to explain, perhaps even ameliorate social problems" (p. 11). Each part of this weighty tome contains 16 chapters authored by an impressive slate of applied linguists from around the world, with each part comprising smaller sections linked by theme.

This architecture exemplifies the editors' philosophical and ideological position that applied linguistics now constitutes a discipline quite independent of (but strongly influenced by) general linguistics. To their credit, Davies and Elder explicitly acknowledge the risks associated with organizing the book according to the L-A/A-L divide: ". . . [W]e accept that the division is not safe and is in some cases problematic" (p. 13). Indeed, readers may find the editors' joint and individual introductions to contain controversial arguments concerning the status of applied linguistics and its subdisciplines. Nonetheless, the field's practitioners will certainly welcome this provocative and informative contribution to the professional dialogue. Due to the sheer size of *The Handbook of Applied Linguistics*, a complete critical review of the volume's 32 entries would be impractical. This review therefore addresses the book's 11 sections in a somewhat holistic manner, with a view toward offering meaningful glimpses into its rich content.

In the "Introduction to Part I: Linguistics-Applied (L-A)," Alan Davies establishes the links among the initial chapters, which pivot around the precept that L-A involves linguists who "wish to validate a theory." The six sections reflect "a cline from closest to the linguistics of language to the more distant connection" (p. 19). Accordingly, Chapter 1, "Language Descriptions," by A. J. Liddicoat and T. J. Curnow, provocatively claims that, although linguistics need not drive the practice of applied linguistics, the pursuit of the latter should be grounded in the knowledge and tools of the former. A. Kirkness's "Lexicography" chapter follows along the linguistics-to-applied linguistics progression by highlighting the profound value of lexical analysis in nearly all "applied" pursuits, including the development and use of dictionaries in research on language and language learning.

The three chapters in Section 2 focus squarely on approaches to language use. In Chapter 3, "Second Language Acquisition and Ultimate Attainment," D. Birdsong reasserts the centrality of second language acquisition (SLA) studies in applied linguistics, maintaining the now-orthodox position that the chief function of SLA should not be to inform language pedagogy, but rather to characterize language, language development processes, and learning outcomes—a view clearly supportive of the L-A orientation. Chapter 4, "Language Corpora," situates corpus analysis as central to the work of both L-A and A-L practitioners, noting the substantial contributions of corpus-based research to language instruction, lexicography, translation studies, stylistics, forensic linguistics, and psycholinguistics. In Chapter 5, H. Trappes-Lomax defines and exemplifies discourse analysis by concentrating on five "focal issues": interaction, context, function, instrumentalities, and text. Trappes-Lomax presents a compelling case for the "linguistic turn" in the social sciences, in which we see discourse analysis practiced by researchers in many fields.

Section 3 clusters chapters highlighting links between language and language users. These chapters appropriately address research domains that are still underrepresented in the L-A/A-L literature, including sign language (Sutton-Spence and B. Woll, Chapter 6), language attitudes (H. Giles and A. C. Billings, Chapter 7), and language attrition (M. S. Schmid and K. de Bot, Chapter 8). Applied linguists with extensive knowledge of the field's more well-traveled territory will find valuable insights in these entries. In Chapter 9, C. Kramsch traces the evolution of the field's presuppositions about language, cognition, and culture; she effectively examines the post-modern, relativist orientation that predominates today. R. Gardner sheds further light on language and language users in his chapter on conversation analysis, where he skillfully appraises the roles of accountability, reflexivity, and indexicality in the process of creating meaning through linguistic structure.

Continuing the *Handbook's* movement from a purely linguistic focus, Section 4 introduces the functional applications of language, directing the reader's attention more decisively toward language use. Thus, in "Language and the Law" (Chapter 11), J. Gibbons surveys four problem-sources associated with forensic studies: genre, the "writtleness" of legal documents, technical features of legal discourse, and the "interpersonal arena," which entails power imbalances in legal discourse. S. Ehrlich likewise grapples with power differentials in her chapter on language and gender, claiming that sexism generates sexist language and that sexist language simultaneously constructs sexist beliefs and practices. Congruent with the sociological premises introduced by Kramsch (Chapter 9) and Gardner (Chapter 10), Chapter 11 carefully reminds the reader that our identities and worldviews are inextricably tied to the language we use. Chapter 13, the final installment in Section 4, tackles the thorny task of defining stylistics, which J. McRae and U. Clark systematically connect with language use, not only in terms of literary form and convention, but also in terms of sociocultural context.

Section 5 continues the *Handbook's* progression toward A-L, shifting the focus toward concerns traditionally viewed as outside the realm of linguistics or even L-A. J. Joseph, in "Language and Politics" (Chapter 14), excavates the precept that language inevitably shapes the social judgments of language users. That many of our judgments are unfair resonates with the power imbalances explored in previous chapters, notably those of Gibbons (Chapter 11) and Ehrlich (Chapter 12). K. Bolton similarly discusses politics and power in Chapter 15, which problematizes the notion of "World Englishes" in the L-A/A-L discourse, suggesting that the construct may require a major reconceptualization. Part I concludes with the single chapter of Section 6, K. Rajagopalan's "The Philosophy of Applied Linguistics." In addition to serving the rhetorical function of bridging the L-A sequence of Part I and the A-L series in Part II, this chapter summarizes, synthesizes, and compares key moments in the history of applied linguistics, the current state of which he describes (not uncontroversially) as a post-applied linguistics. A critical-historical essay such as this might conventionally be positioned in an introductory section, but this chapter serves exceedingly well as a transitional piece.

Introduced by co-editor Catherine Elder, Part II of the *Handbook* opens with a provocative chapter by co-editor A. Davies, titled "The Native Speaker in Applied Linguistics." In addition to surveying conventional understandings of the native speaker (NS) idea or norm, Davies questions the value of the NS concept in applied linguistics research. Also featured in this chapter is a discussion of the ethics of NS privilege, which is tied to questions of identity and power (cf. Chapters 11, 14, and 15). Chapter 18 pursues the related issue of language minorities, which J. Edwards notes is a relevant focus in numerous allied disciplines; he argues persuasively that A-L should make the treatment and needs of linguistic minorities central to its academic mission and moral agenda. Ostensibly presenting a thematic shift, J.D. Brown's chapter, "Research Methods for Applied Linguistics: Scope, Characteristics, and Standards," takes up the diversity thread of the preceding chapter by emphasizing the widely divergent methods of inquiry available to L-A/A-L professionals, all of which necessitate the sensitive application of ethical standards of practice.

Section 8 converges on language learning, a phenomenon that has remained at the gravitational center of L-A/A-L since the field's inception. W. Littlewood's survey chapter, "Second Language Learning," explicates one of the classic aims of applied linguistics, namely, to account for language learning processes — sometimes with the goal of enhancing educational outcomes and improving the quality of instruction. In Chapter 21, leading SLA authority R. Ellis presents a careful synthesis of research and theory on individual differences in L2 learning, a research domain that has received considerable attention in the literature over the years. Ellis calls for a more comprehensive, socially-situated model of SLA, as does G. Barkhuizen in Chapter 22, "Social Influences on Language Learning." Extending his appeal beyond that of Ellis to social dimensions such as social class and ethnicity, Barkhuizen offers an even-handed review of influential models of SLA (e.g., acculturation, social identity, and so forth), suggesting that the research agenda should focus on how language learners interact with their sociocultural environments. This section appropriately concludes with E. Williams's account of current literacy studies. Although he adopts a decidedly psycholinguistic orientation in his survey, he links his arguments to the sociological and cultural strands introduced elsewhere in this volume, bringing to bear multiple ideologically-oriented research traditions in literacy studies.

Also hewing to the pedagogical orientation of A-L, Section 9 features state-of-the-art chapters on principles and practices in language instruction (particularly ELT); as such, it will appeal not only to researchers but also to classroom teachers. B. Adamson's "Fashions in Teaching Methodology" (Chapter 24) takes an unmistakably critical (if not skeptical) stance in characterizing pedagogical models that have shaped language education, arguing for a relativist, contextualized approach to methods application. The next two chapters, "Computer Assisted Language Learning (CALL)" by P. Gruba and "Language Teacher Education" by R. Johnstone, similarly analyze domains of professional activity where we see practical intervention by A-L. Expanding this section's educational focus, H. Basturkmen and C. Elder explore the fundamental aspects of communication that should be featured in language for specific purposes (LSP) instruction. In "Bilingual Education," H. Lotherington rounds out the chapter sequence by examining an impressive range of socioeducational contexts for simultaneous instruction in multiple languages. Section 9 coheres remarkably well, thanks to the contributors' consistent exposition of the political and ideological underpinnings of instructional practice and the role of A-L in enhancing them.

The contents of Section 10 represent a thematic shift, although the purposive focus here is as practical as that of Sections 2 and 9. Adopting an explicitly A-L perspective, for example, A. Pauwels ("Language Maintenance") poses compelling questions about how and why languages are maintained. Pauwels, like J. Lo Bianco in his chapter, "Language Planning as Applied Linguistics," invites readers to consider the pragmatic steps and policy actions that stakeholders should take to preserve endangered languages, promote the ethical treatment of minority-language speakers, and legitimize language study in the eyes of both the public, government authorities, and other decision-makers. An influential authority on language assessment, T. McNamara caps Section 10 in his chapter, "Language Testing." Unquestionably situated at the "strong" end of the A-L continuum, language testing relies on multiple disciplines (e.g., psycholinguistics, discourse analysis, educational measurement) in the construction of instruments designed to achieve practical aims such as evaluating learner proficiency, classroom instruction, educational policy, and so on. In line with the preceding entries in this section and with the contents of the entire *Handbook*, McNamara's chapter is deeply concerned with the political and moral implications of disciplinary practices such as policy implementation and testing, areas where A-L intervention is particularly appropriate.

A. Pennycook's chapter, "Critical Applied Linguistics," comprises the totality of Section 11 and serves as an epilogue to this impressive and expansive volume. Appropriately, this final essay presents the reader with philosophical and ethical challenges, which Pennycook articulates by drawing from disciplines as wide-ranging as critical discourse analysis, critical literacy, critical pedagogy, gender studies, queer theory, and

postcolonial studies. “Welcomed by some and rejected by others,” critical perspectives in applied linguistics, according to Pennycook, have generated “some of the most interesting and creative work in the field” (p. 784). Not uncharacteristically, Pennycook charges members of the L-A/A-L community with accepting responsibility for the ethical and socioeducational implications of the field’s work. Critical applied linguistics, he argues, is “not about the mapping of a fixed politics onto a static body of knowledge, but rather is about creating something new” (p. 803).

The editors and authors of *The Handbook of Applied Linguistics* have succeeded in compiling a current, comprehensive overview of applied linguistics that makes an exceptionally valuable contribution to the field. Much more than a conventional handbook, which one might consult as an authoritative reference guide, this immensely rich volume will acquaint its readers with the most current thinking and research in the field’s disparate knowledge pockets. The *Handbook* provides a welcome and rather exceptional combination of attributes: Broadly-ranging chapters that reflect careful scholarship and provocative argumentation, as well as a systematic, unified sequence reflecting remarkable coherence.

Fossilization in Adult Second Language Acquisition (2003). By ZhaoHong Han. Multilingual Matters Ltd. Pp. 201. ISBN 1-85359-687-6 (hbk) ISBN 1-85359-686-8 (pbk)

Reviewed by SWATHI VANNIARAJAN
San Jose State University

ZhaoHong Han (2003) makes an attempt in this important book to capture the various aspects of fossilization in adult second language acquisition. The book, divided into eight chapters, starts with an introductory chapter on fossilization and ends with a concluding chapter that provides suggestions for additional research. The interim chapters attempt to study the process and the product of fossilization by reviewing and summarizing the research experiments conducted in this area. In general, the author attempts to find answers to the following four questions: 1. what is fossilization and how we can best define it? 2. why does fossilization occur? 3. how do researchers study fossilization? and 4. can instruction prevent fossilization from occurring in adult second language learners? In the words of the author, “the book synthesizes the major research on the topic, provides a conceptual framework for interpreting various manifestations of lack of learning, and explores the relationship between instruction and fossilization” (p.ix). In essence, the ultimate goal of the author, in her own words, was “to offer a principled perspective on adult L2 learners’ lack of ability to fully acquire the target language” (p.4). It is not an exaggeration to say that the book has indeed attempted to do all of these.

Though fossilization as a term occurred in Selinker (1972), the term by itself has never been precisely defined. For Selinker and Lamendalla (1978:187), fossilization can be defined as “a permanent cessation of IL learning before the learner has attained L2 norms at all levels of linguistic structure and in all discourse domains in spite of the learner’s positive ability, opportunity, and motivation to learn and acculturate into target society.” The author’s definition of fossilization is that it is the premature stabilization of learning “despite continuous exposure to input, adequate motivation to learn, and sufficient opportunity of practice” (p.170). The difference between the two definitions is that while Selinker and Lamendalla consider fossilization as more of a global process and a permanent cessation of learning in all domains and all subsystems implying that fossilization is permanent and is not permeable to external influences including instruction, Han considers it more of a local process and that it may start with stabilization. As such, she contends that during its initial stages, fossilization is permeable to external and internal influences such as instruction and motivation. Yet another difference between Selinker (1972) and Han is that unlike Selinker (1972) who identified only five processes for the cause of fossilization such as interlanguage

transfer, transfer of training, use of learning strategies and communication strategies, and overgeneralization, Han claims that fossilization is a result of a multitude of factors. However, like Selinker (1972), she also thinks that fossilization is inevitable in adult second language acquisition. In fact, in her view, fossilization is a hallmark of what characterizes the ultimate attainment of every adult second language learner. The thesis of her argument is that “under the cognitive and biological constraints, adult learners are *preconditioned* (italics the author’s) to fossilize with asymptotic performance as the characteristic behavioral reflex” (p.9).

Han, furthermore, adds that fossilization has three facets: cross-learner variation, inter-learner variation, and intra-learner variation. For this reason, she claims that fossilization should be conceptually analyzed at both macroscopic (cross-learner variation) and microscopic levels (inter-learner and intra-learner variation) to understand the general causal factors for differential success across and within learners. In the author’s opinion, at the macroscopic level, the process is factored by both L1 influence and the critical period, and at the microscopic level, by various factors related to the learner including their background, prior language learning experience, and cognitive processing styles, setting (environment), and input.

Han identifies two types of fossilization: local and global. When fossilization occurs at the level of structures, she calls it ‘local fossilization’; in contrast, when it occurs at the overall competence level of the learners, she calls it ‘global fossilization.’ In her opinion, local fossilization is the norm (p.106) and that certain linguistic features within an interlanguage system are more prone to fossilization than others. Generally speaking, linguistic items that have low communicative value and items that are linguistically and cognitively complex tend to fossilize sooner than others; also, phonological items may fossilize earlier than syntactic items due to the early closure of their sensitive period. In short, one of the major claims that the author makes is that fossilization is modular by nature and that it does not permeate the entire language nor does it debilitate any learner completely from learning. Success and failure coexist in each and every individual learner’s interlanguage (p.173).

Han then attempts to explore why fossilization occurs. After an extensive review of research experiments and their findings, she speculates that fossilization can be a product of many factors, such as the result of an absence of instruction, the nature of corrective feedback, teaching and learning modes, learners’ readiness, input characteristics, learners’ cultural background and their degree of willingness to acculturate, lack of input and reinforcement, lack of learner attention, learners using inappropriate learning strategies, learners’ inability to handle linguistic complexity, adult inability to access universal grammar, automatization before accuracy, interlanguage system’s failure to set parameters specific to L2 due to incomplete L1 setting, proximity between L1 and L2, interference from L1, learners’ reluctance to take risks, end of learner sensitivity to language data, mature adult cognitive system, transfer of training, undue learner focus on content and communication, processing constraints, available opportunities to use the target language, the inherent formal, functional, and perceptual complexity of a given feature of the target language, and inability or reduced ability of neurons in the adult brain to make new connections or modifications to the existing ones. Though there seems to be a lot of factors, in the author’s opinion, the primary role is played by the sensitive period and that the effects of sensitive period are intricately tied up with cognitive, affective, and social factors including, but not limited to, L1 transfer. For example, according to the author, once the L2 learners are beyond the sensitive period, they will have a low sensitivity to L2 input and therefore will suffer from reduced ability to benefit from exposure to input. In short, in the opinion of the author, age acts in concert with native language influence and other psycho-cognitive and social factors in manufacturing fossilization.

The author, furthermore, states that the role of L1 is not limited to transfer alone. According to her, learners’ different L1s result in differential instantiations of UG principles in their L2s and so inter-learner differential success in L2 is inevitable. In addition, L1 transfer may impose cognitive and processing constraints on L2 learning

in such a way that it may pervasively and profoundly curtail the learner's ability to fully attain native-like competence: "Knowledge of an L1 is in and of itself a potent source of fossilization in adult L2 learning, and hence a source of the observed general lack of success across the L2 learning community" (p. 85). In summary, "the same L2 may present differential challenges to individual learners from different L1 backgrounds, and that features within the same target language may present differential challenges to an individual learner" (p.104).

Based on the review of the designs of the research experiments conducted on various aspects of fossilization, Han divides the research methods that are used to study fossilization into two types: product perspectives and process perspectives. According to her, the product perspectives favor cross-sectional studies and their goal is to explore whether or not the learners' fossilized system can be defossilized; the process perspectives, on the other hand, favor longitudinal and pseudo-longitudinal research methods and their goal is to identify intra-learner differential success. The methods that have been generally used to study intra-learner fossilization are what are called, 1. Typical error approach, 2. Advanced learner approach, 3. Corrective feedback method, and 4. Length of residence approach. The typical error method is generally used to identify the kinds of L1 based errors L2 learners make; advanced learner approach is a method used to study what makes adult learners to be insensitive to input and instruction; corrective feedback is an exploratory method used to study whether instruction can overcome fossilization; and the length of residence approach is used to study whether the items that have fossilized in the learner's system can be restructured to native norm with time and corrective feedback. In the author's opinion, each of the above research methods has its own limitations. For example, there is no research basis for adopting five years of residence as the index of ultimate development that researchers use in the length of residence approach. Also, as she rightly points out, what matters is the intensity and not the length of interaction, and so there is no justification for accepting five years of residence in the target language speaking country as an index of ultimate attainment.

The last section of the book attempts to answer the question whether instruction can prevent fossilization. Han starts the discussion with a cautionary note that though instruction is generally believed to be "facilitative" (p.126), the assumption that instruction can prevent fossilization is largely a speculation and lacks empirical validity. Some of the most prominent speculations are that focused L2 instruction can produce large target-oriented gains and that explicit types of instruction are more effective than implicit types (Norris & Ortega 2000), that instruction will be effective only for items for which the learner is ready (Ellis 1994), and that instruction provided focused attention is a causal variable and is necessary for both acquiring complex form-function mappings and speeding up the language learning process (Ellis 2002). The author's speculation, in this regard, is that instruction may generally help only when the learner is ready and is also determined to learn grammar. She adds that it is also important that adequate opportunities are made available to the learner for production. In general, according to the author, pedagogically speaking, explicit instruction can raise learners' consciousness by facilitating noticing (i.e., drawing learners' attention to specific linguistic features in the input) and comparison (i.e., helping learners see the difference between what they noticed in the input and what they produced in the output) (p.144). Therefore, in principle, explicit instruction should be able to drive learning overcome fossilization. However, she adds that whether or not explicit instruction will be effective depends not only on the nature of instruction but also on a large number of other variables such as L1-L2 proximity, learner motivation, opportunities available for using the language outside the class, learners' ability to notice the difference between the output and the input, teacher personality, and so on.

The major strengths of the book are in its ambitious attempt to be comprehensive and in its review of findings of the relevant research experiments. The author should also be commended for providing, wherever necessary, commentary highlighting the strengths and the weaknesses in the conduct of these research experiments. In spite

of these great strengths, the book, however, suffers from many weaknesses. A major weakness of the book is in the way the author conceptualizes fossilization; the author equates incomplete acquisition of a second language with fossilization, and this is a questionable assumption. Also, though the author claims at the outset that it is not her intent “to suggest that L2 learning should be measured against the competence of a monolingual native speaker (NS)” (p.5), it is this that the author does throughout the book and it is another major setback. Furthermore, the concluding chapter would have improved a great deal if only the author had succinctly summarized her position on fossilization; rather, the feeling that one gets after reading the book is that the author does not have a consistent position at all on fossilization. For example, the author states that L2 ultimate attainment is not isomorphic with fossilization (p. 7) but throughout the book, this is the definition that the author provides. Another weakness of the book is in the author’s failure to recognize regional varieties of a language as legitimate varieties and that the ultimate goals of learners can vary from situation to situation. Recall in this regard Selinker (1972) calling the Indian variety of English as a fossilized English instead of acknowledging it as a legitimate variety of its own due to ecological reasons. Lastly, in my opinion, the only area that the author confidently touches on and speaks with authority is the role of L1 in second language acquisition. All the other areas, she merely touches on, or makes one time reference only, and thoroughly fails to develop and work on them. For example, the author states at the end of chapter 2 that she has argued that “fossilization occurs locally rather than globally, and that it is an observable process, with the product only being inferable” (p.23). Nowhere in the chapter had she presented elaborative arguments as to why fossilization should be considered local and how it is an observable process, especially in light of her statement that fossilization is a cognitive mechanism consisting of many sub-cognitive processes.

Also, though the book is written in a clear style and is easy to follow, there are times when it is difficult to infer whether the author is summarizing the viewpoints of others or her own. Finally, though the author states repeatedly that L2 acquisition is not a simple process, by implicitly claiming that fossilization is the result of the adult learner’s failure to access universal grammar that results in the play of other variables in the L2 acquisition process, the author is making a strong assumption that the whole process of second language is nothing but simple; in a way, it is tricking the unwitting readers into accepting that adult L2 learners can never attain nativelike proficiency in their target language since they do not have access to universal grammar. Unfortunately, the process of second language is not as simple as the author wishes it to be. It is for this reason, in my opinion, the book can be claimed to be merely an extension of Selinker’s (1972) paper ‘interlanguage.’ Also, it is for this reason that the book is controversial, especially for its overall conceptualization.

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Teaching Language: From Grammar to Grammmaring. (2003). By Diane Larsen-Freeman. Boston: Thomson/Heinle. Pp. 170.

Reviewed by LAI WONG

Defense Language Institute Foreign Language Center

Grammar teaching is as old as language teaching, especially foreign/second language teaching. Methods of teaching grammar are heavily influenced by teachers' views of grammar and of language, in general. In her book, *Teaching Language: from grammar to grammaring*, Diane Larsen-Freeman challenges conventional views of grammar and invites teachers to think about what they mean by "language," "grammar," and related concepts. By challenging grammar as a set of rules and forms, the author suggests that grammar is a skill and a dynamic process rather than an area of knowledge.

The book contains eleven chapters, falling under three sections. *Teachers' Voices* presents interesting and inspiring viewpoints on grammar and grammar teaching from experienced language teachers of various educational communities. This is very informative because it opens a window for both experienced and novice teachers to the perspectives of other teachers around the world. *Frameworks* is a comprehensive review of contemporary research and theories on second language acquisition and introduces the author's own unconventional beliefs about language, grammar and grammar teaching. *Investigations* invites readers to reflect on their beliefs and explore their own perspective on grammar and grammar teaching.

In the first two chapters, the author sets out to examine various definitions of language and their powerful effects on syllabus, teaching theories and teaching practices. Then the author points out the key problem in language learning, *the inert knowledge problem*, which occurs when students have a good command of language forms but are not able to use the forms when communicating. The opening question asked by the author is whether grammar is a matter of drilling, requiring memorization, or a dynamic process of interaction. Grammar is more than an area of knowledge, she argues; it is primarily a skill that needs to be practiced in meaningful interaction and appropriate language use. In the author's words, grammar is dynamic, complex, rational, systemic, and flexible.

In chapters 3 and 4, the author discusses her hypothesis that language, including grammar is a skill and a dynamic process, rather a static area of knowledge. The three dynamisms of language, *over-time dynamism*, *real-time dynamism* and *organic dynamism*, demonstrate that language changes over time and language use is a dynamic process that requires users to make choices about language use. The three dynamisms are very unique characteristics of language, which provide a fresh point of view about language and grammar. In chapter 4, by using a pie chart, the author introduces her new interpretation and approaches to form, meaning and use by asking how language is formed, what it means, when and why it is used. The author pinpoints that in the real world teachers are more inclined to emphasize one or two of the three dimensions and not choose what to teach based on the understanding of language as a whole. This is because teachers do not have sufficient knowledge to address the three wedges. Thus, she suggests that teachers work on improving their knowledge of the these wedges and teach them. This suggestion is very insightful because of two reasons. First, it is not always true that teachers who are native-speakers know why a grammar structure is formed the way it is formed. Second, for teachers who are not native speakers, they may have less knowledge of *use* than of *form* or *meaning*. Readers can use this pie chart and the author's innovative approaches to develop their skills of teaching grammar.

In chapters 5, 6 and 7, the author discusses in details: *Form*, the relationships of a rule and the reason a rule is used; *Meaning*, the grammatical choice that language users have to make to express their meanings; and *Use*, the appropriate discourse that language users choose in order to be socially appropriate. Larsen-Freeman points out that when learners understand why a rule is used, the rule will make more sense to them. Often, students will try to use the grammar structure they just studied in class

in a wrong context. The reason might be that teachers do not explain the use fully. In addition to this reason, in my teaching, I have observed another reason why students do not use a structure or a Chinese word correctly. Some teachers simply translate a Chinese word into English, ignoring the fact that both the meaning and the use of the Chinese word may not exactly be the same as that of the English word. This is a trap in teaching foreign languages. The author, therefore, suggests that activities should be designed to guide learners to explore and induce the rationale themselves in order to compensate for the insufficient attention to teaching meaning and use of structure paid by both textbooks and instruction.

The discussions of chapters 8, 9, and 10 focus on “the big three” practices of teaching grammar: consciousness-raising, output practice and giving feedback. In each chapter, the author reviews the literature of second language acquisition and the pedagogies for “the big three.” The “essential criteria for designing output practice activities” and the “characteristics of effective feedback” are useful guides for practitioners.

The last chapter is the core where the author answers the three key questions of the book: What is grammar? When to teach grammar? How to teach grammar? The author begins with defining grammaring as “the ability to use grammar structures accurately, meaningfully, and appropriately.” Discussing when to teach grammar, the author suggests that teachers should free themselves from teaching grammar structures based on the order of an adopted grammar textbook. The sequence of grammar teaching is better considered as a checklist of grammar rather than a sequence of teaching because prior sequencing conflicts with the nature of grammaring. This requires teachers to be highly aware of teachable moments and proactive in creating activities where grammar patterns are needed. In practice, it is very challenging for teachers to teach grammar in a more natural order. However, teachers should be ready to teach a grammar structure when students are ready to learn. By doing so, teachers can motivate students and consequently maximize the effectiveness of teaching and learning. The author also shares her belief that teaching a grammar structure should be spaced over a longer period of time, which allows students more time to absorb, experience and discover. As for how to teach grammar, the author’s suggestion is to teach students how to learn grammar by changing their perspective of grammar and equipping them with tools of learning. The reader can try out the tools with their students in their teaching practice and develop tools of their own. As a teacher, this reviewer has already tried out the tools with her students and found them very useful.

This book provides a forum where readers are informed about a wide range of established viewpoints on grammar and grammar teaching, as well as the author’s unique and deep understanding of grammar and grammar teaching. At the same time, readers are also guided to explore their own perspective on language, grammar and grammar teaching. Thus, the book serves well the author’s intention of cultivating teachers’ inquiries about language and guiding readers to approach language and language teaching in different ways.

The most significant contribution of the book to the profession is that it provides readers with a set of tools to approach grammar teaching. As a language teacher, this reviewer believes the most useful tool is the principles for designing activities in teaching grammar. Both experienced and new teachers will find the principles very useful and helpful. Therefore, this book is valuable as both a textbook and a reference book in pre- and in-service teacher training.

The book would be more helpful, though, if it had more examples of activities designed to teach specific grammar structures. However, this drawback does not in any way affect its usefulness. In sum, this is a very informative, inspiring and valuable source for language teachers and teacher educators.

Towards Faster, Bigger, and Better Computers

Lidia Woytak
Academic Journals

The Conference *The Next 50 Years in Computing* took place on 27 August 2004 in the Barbara McNitt Ballroom of the Navy Postgraduate School, the site of the luxurious Hotel Del Monte. The conference participants of today, just like the hotel guests of yesterday, walked into the ballroom through the impressive hallways featuring marble floors, hand-carved 19th century mirrors, and sun-reflecting chandeliers. During breaks, they could step out onto the balconies glowing in California-programmed sunshine to make that one important cell call, or to step further down into the meticulously maintained English gardens...to reflect.

Rear Admiral Patrick Dunne, NPS Superintendent, welcomed the participants to the conference. He noted that the conference organizers divided the content of the presentations into two major sessions, morning and afternoon. The history of computing was the subject of the morning session and the future of computing of the afternoon session.

Dr. Christine Cermak of Navy Postgraduate School opened up the morning session titled, "Looking Back: On the Occasion of the 50th Anniversary of NPS Computing." She talked about growing impact of computers on society. She also introduced the guest speaker, Dr. Mark Pullen of George Mason University, and the morning panelists, Professors Doug Williams, Dave Norman, Don Brutzman of NPS. They described the first 50 years of computing in the United States with emphasis on the achievements of instructional technology architects at Navy Postgraduate School.

Dr Mark Pullen stated that the roots of computer science came from applications in defense. During the WW2, the Army and the Navy conducted digital computing for ballistic tables and code breaking. In 1946 the US Army unveiled the Electronic Numerical Integrator and Computer (ENIAC), the world's first operational, general purpose, computer.

Looking back, pioneers working with computing devices had to overcome many obstacles. They had no programming and no standardization to rely on. Grace Murray Hooper, a pioneer of standardization, and John Von Neumann, a pioneer of software, contributed greatly to the notable progress of the 50s and the 60s. The 70s, however, brought a slowdown. A rebound took place in the 80s, followed by a full development in the 90s, and onward into the 21st century.

Dr. Pullen pointed out that the scientific and technological breakthroughs of defense are followed by applications of these breakthroughs in the private sector. Thus, the private sector comes up with the improved defense-based miniaturized products based on defense applications. He noted that integrated circuit technology, computer chips, was invented by Fairfield Industries under a defense contract.

The NPS panelists also reiterated that the beginnings of computing were challenging. Computers were expensive, capable of processing only a limited number of operations. For example, a \$55,000 computing machine could process 100 operations per second. Moreover, the machine had to be operated by a person titled *a computer*, usually a secretary whose tasks were feeding the machine and writing down the results. One of the speakers even joked that soon after landing at the NPS from Scotland, he married a "computer."

Navy Postgraduate School pioneered in the efficient use of computers. It was the first to move from single-user machines to multi-access time-sharing, and the first to provide free computer use to faculty and students at a time when all institutions charged for every minute of computer use.

The background of majority of pioneer computer specialists was in mathematics and logic. Prof Don Brutzman devoted his speech to one such pioneer, Richard Wesley Hamming. Professor Hamming, the author of “The Art of Science and Engineering”, is famous for his contribution to information theory on error detection and correction. His name has been used to coin such terms as *Hamming Code*, *Hamming Distance* (conceptual and numeric), and *Hamming Window*. For his inventions, he was awarded Turing Prize. After retiring from NPS, he spent his retirement days in Pebble Beach.

Professor Brutzman shared his memories of Hamming from his student days at the Navy Postgraduate School. He remembered that Professor Hamming would tell his students that the purpose of computing is insight, not numbers. Hamming would stimulate thinking of his students by asking: “How do you think about a problem?” He would guide them: “To perform great work, study masters;” or “Luck favors the prepared mind;” or “If you do not work on important work, it is not likely you do important work.” Sometimes he would bring laughter into the classroom by saying: “If the prediction that an airplane can stay up depends on the difference between the two sets of data, then I do not want to fly in it.”

During the afternoon session each speaker focused on the emerging trends in his field of computing. The speakers addressed such topics as architecture of digital objects, return to supercomputer, transition from one-time sale pitch to a subscription service, injecting learning into computerized games, and a multi-layered adjustment to the exponential growth of computing.

Dr. Greg Papadopoulos of Sun Microsystems pointed out that we are undergoing a revolution in computers. He presented a table illustrating an exponential growth in 1990-2020 units of connectivity, community, and awareness from millions into billions. He also made the audience aware of the differences in meaning between the terms *make, own, and sell* in reference to digital objects.

He also talked about the expansion of variety of remote services. According to him, many businesses will attempt to switch from one-time sale to an on-going subscription of a customer. As an example, he cited a car sale in which the seller would be willing to transfer a car almost for free for a signup to a monitoring service. Right now, for example, one can already receive free TV stereo equipment for a signup to a satellite programming company.

The next speaker, Dr. Michael Zyda of Navy Postgraduate School described future developments in simulation. He identified three types of simulation as virtual, constructive, and live and further described its use in games. He noted that in the future the games are going to resemble reality strongly. He also noted a growing trend in using games for instruction. For more information, he recommended a visit to his website, <http://movinstitute.org>

Dr. Bud Tribble of Apple discussed the future of interfaces. He pointed out to the future challenges associated with finding more space for processing, storage, and networking. Tribble stated that switching from a two-dimensional virtual area to a three-dimensional virtual space could create additional space. Further he noted that introducing a placeless document could save space. One would be able to retrieve such a document by its history including the name of its author and the time when it was created.

Dr. Tribble also noted that the ways of reducing amount of memory needed in processing graphics are being explored. Currently they take took much memory.

The subsequent speaker, Dr Christopher Jehn of CRAY talked about progress of Federal Government in Computing. He stated that about 10 years ago a supercomputer was replaced with a cluster of multiprocessors. Because these clusters have not been reliable, he strongly recommended, a revitalization of high-end computers. He further elaborated that many countries favor a supercomputer over clusters of microprocessors. He noted that, for example, Japan’s super computer *Earth Simulator* created a breakthrough in computing. Due to its success, subsequently this supercomputer was used in design of Japanese cars.

Finally, Dr. Jehn described a Federal Plan for use of super computers in cryptanalysis, modeling, and simulations. According to him, in the past microprocessors have not adequately performed these tasks.

The presentations were followed by questions and a discussion among the speakers and the participants. The participants indicated through questions and a follow-up discussion that they found the Conference interesting and stimulating.

In summary, the conference offered a broad view of computing; from its modest concrete beginnings in the forties to the future multidimensional abstract vistas.

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General Information

Calendar of Events*

2005

- Modern Language Association (MLA)**, 27–30 December, Washington, DC. Contact: MLA, 10 Astor Place, New York, NY 10003-6981; Fax (212) 477-9863, Email: convention@mla.org Web: www.mla.org
- American Association of Teachers of Slavic and Eastern European Languages (AATSEEL) and American Council of Teachers of Russian**, 27–30 December, Washington, DC. Contact: AATSEEL, Kathleen E. Dillon, Executive Director, PO Box 7039, Berkeley, CA 94707-2306; Email: aatseel@earthlink.net Web: www.aatseel.org
- International Association of Teachers of Czech (IATC–NAATC)**, 27–30 December, Washington, DC. Contact: Hana Pichová, Executive Officer, Slavic Languages and Literatures, University of Texas at Austin, PO Box 7217, Austin, TX 78713-7217; Email: pichova@mail.utexas.edu Web: www.language.brown.edu/NAATC/index.html

2006

- Southern Conference on Language Teaching (SCOLT)**, 16–18 February, Orlando, FL. Contact: Lynne McClendon, Executive Director, SCOLT, 165 Lazy Laurel Chase, Roswell, GA 30076; (770) 992-1256, Fax (770) 992-3464, Email: lynnemcc@mindspring.com Web: www.valdosta.edu/scolt
- Georgetown University Roundtable on Linguistics**, 3–5 March, Washington DC. Contact: Kendall King, Department of Linguistics, Georgetown University, Box 571051, 37th and O Streets, NW, Washington, DC 20057-1051; (202) 687-5956, Email: Natalie.Schilling-Estes, Email: ns3@georgetown.edu
- Central States Conference on the Teaching of Foreign Languages**, 9–11 March, Chicago, IL. Contact: Patrick T. Raven, Executive Director, CSCTFL, PO Box 251, Milwaukee, WI 53201-0251; (414) 405-4645, Fax (414) 276-4650, Email: CSCTFL@aol.com Web: www.centralstates.cc
- Teachers of English to Speakers of Other Languages (TESOL)**, 15–19 March, Tampa Bay, FL. Contact: TESOL, 700 S. Washington Street, Suite 200, Alexandria, VA 22314; (703) 836-0774, Fax (703) 836-7864, Email: conventions@tesol.org Web: www.tesol.org
- Northeast Conference on the Teaching of Foreign Languages (NECTFL)**, 30 March–2 April, New York City. Contact: Northeast Conference, Dickinson College, PO Box 1773, Carlisle, PA 17013-2896; (717) 245-1977, Fax (717) 245-1976, Email: nectfl@dickinson.edu Web: www.nectfl.org
- Southwest Conference on Language Teaching (SWCOLT)**, 6–8 April, Phoenix, AZ. Contact: Audrey Cournia, Executive Director, SWCOLT, 1348 Coachman Dr. Sparks, NV 89434; (775) 358-6943, Fax (775) 358-1605, Email: CourniaAudrey@cs.com Web: www.swcolt.org

- Association for Asian Studies (AAS)**, 6–9 April, San Francisco, CA. Contact: AAS, 1021 East Huron St., Ann Arbor, MI 48104; (734) 665-2490; Fax (734) 665-3801, Email: anmtg@aasianst.org Web: www.aasianst.org
- American Educational Research Association (AERA)**, 8–12 April, San Francisco, CA. Contact: AERA, 1230 17th St., NW, Washington, DC 20036-3078; (202) 223-9485, Fax (202) 775-1824 Web: www.aera.net
- International Conference on English Instruction and Assessment**, 22–23 April, Taiwan. Contact: Department of Foreign Languages and Literature, National Chung Cheng University, 168 University Rd., Min-Hsiung Chia-Yi, 621, Taiwan, R.O.C.; ++ 886-5-2721108, Fax ++886-5-2720495, Email: admada@ccu.edu.tw Web: <http://www.ccunix.ccu.edu.tw/~flccu/>
- National Council of Less Commonly Taught Languages (NCOLCTL)**, 27–30 April, Madison, WI. Contact: NCOLCTL, 4231 Humanities Building, 455 N. Park Street, Madison, WI 53706; (608) 265-7903, Fax (608) 265-7904, Email: ncolctl@mailplus.wisc.edu
- International Reading Association (IRA)**, 30 April–4 May, Chicago, IL. Contact: International Reading Association, Headquarters Office, 800 Barksdale Rd., PO Box 8139, Newark, DE 19714-8139; (302) 731-1600, Fax: (302) 731-1057, Web: www.reading.org
- Language Acquisition and Bilingualism**, 4–7 May, Toronto, Canada. Contact: Conference, 234 Behavioural Sciences Building, York University, 4700 Keele Street, Toronto, ON, Canada, M3J 1P3; Email: labconf@yorku.ca Web: <http://www.psych.yorku.ca/labconference/index.html>
- Computer-Assisted Language Instruction Consortium (CALICO)**, 16–20 May, Honolulu, HI. Contact: CALICO, Southwest Texas State University, 214 Centennial Hall, 601 University Drive, San Marcos, TX 78666; (512) 245-1417, Fax (512) 245-9089, Email: info@calico.org Web: www.calico.org
- American Association for Applied Linguistics (AAAL)**, 17–20 June, Montreal, Canada. Contact: AAAL, 3416 Primm Lane, Birmingham, AL 35216; (205) 824-7700, Fax (205) 823-2760, Email: aaaloffice@aaal.org Web: www.aaal.org
- Language Testing Research Colloquium (LTRC)**, 29 June – 1 July, Melbourne, Australia. Contact: Email: ltrc2006-info@unimelb.edu.au Web: www.languages.unimelb.edu.au/ltrc2006
- American Association of Teachers of French (AATF)**, 5–8 July, Milwaukee, WI. Contact: Jayne Abrate, AATF, Mailcode 4510, Southern Illinois University, Carbondale, IL 62901-4510; (618) 453-5731, Fax (618) 453-5733, Email: abrate@siu.edu Web: www.frenchteachers.org
- EUROCALL**, 4–7 September, Granada, Spain. Contact: Tony Harris, Email: tharris@ugr.es Web: www.eurocall-languages.org/index.html
- European Second Language Association (EUROSLA)**, 13–16 September, Istanbul, Turkey. Contact: Web: www.eurosla2006.boun.edu.tr/
- American Translators Association (ATA)**, 2–5 November, New Orleans, LA. Contact: ATA, 225 Reinekers Lane, Suite 590, Alexandria, VA 22314; (703) 683-6100, Fax (703) 683-6122, Email: conference@atanet.org Web: www.atanet.org

- American Council on the Teaching of Foreign Languages (ACTFL)**, 17–19 November, Nashville, TN. Contact: ACTFL, 700 S. Washington St., Suite 210, Alexandria, VA 22314; (703) 894-2900, Fax (703) 894-2905, Email: headquarters@actfl.org Web: www.actfl.org
- American Association of Teachers of German (AATG)**, 17–19 November, Nashville, TN. Contact: AATG, 112 Haddontowne Court #104, Cherry Hill, NJ 08034; (856) 795-5553, Fax (856) 795-9398, Email: headquarters@aatg.org Web: www.aatg.org
- Chinese Language Teachers Association (CLTA)**, 17–19 November, Nashville, TN. Contact: CLTA Headquarters, Cynthia Ning, Center for Chinese Studies, Moore Hall #416, University of Hawaii, Honolulu, HI 96822; (808) 956-2692, Fax (808) 956-2682, Email: cyndy@hawaii.edu Web: clta.osu.edu
- National Network for Early Language Learning (NNELL)**, 17–19 November, Nashville, TN. Contact: Mary Lynn Redmond, NNELL, PO Box 7266, A2A Tribble Hall, Wake Forest University, Winston-Salem, NC 27109; Email: nnell@wfu.edu Web: www.nnell.org
- American Association of Teachers of Turkic Languages (AATT)**, 17–20 November, Boston, MA. Contact: Erika H. Gilson, 110 Jones Hall, Princeton University, Princeton, NJ 08544-1008; Email: ehgilson@princeton.edu Web: www.princeton.edu/~turkish/aatt/

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- Central States Conference on the Teaching of Foreign Languages**, 8–10 March, Kansas City, MO. Contact: Patrick T. Raven, Executive Director, CSCTFL, PO Box 251, Milwaukee, WI 53201-0251; (414) 405-4645, Fax (414) 276-4650, Email: CSCTFL@aol.com Web: www.centralstates.cc
- Teachers of English to Speakers of Other Languages (TESOL)**, 21–24 March, Seattle, WA. Contact: TESOL, 700 S. Washington Street, Suite 200, Alexandria, VA 22314; (703) 836-0774, Fax (703) 836-7864, Email: conventions@tesol.org Web: www.tesol.org
- Association for Asian Studies (AAS)**, 22–25 March, Boston, MA. Contact: AAS, 1021 East Huron St., Ann Arbor, MI 48104; (734) 665-2490; Fax (734) 665-3801, Email: annmtg@aasianst.org Web: www.aasianst.org
- American Educational Research Association (AERA)**, 9–13 April, Chicago, IL. Contact: AERA, 1230 17th St., NW, Washington, DC 20036-3078; (202) 223-9485, Fax: (202) 775-1824 Web: www.aera.net
- American Council on the Teaching of Foreign Languages (ACTFL)**, 16–18 November, San Antonio, TX. Contact: ACTFL, 700 S. Washington St., Suite 210, Alexandria, VA 22314; (703) 894-2900, Fax (703) 894-2905, Email: headquarters@actfl.org Web: www.actfl.org

Information for Contributors

Statement of Purpose

The purpose of *Applied Language Learning (ALL)* is to increase and promote professional communication within the Defense Language Program and academic communities on adult language learning for functional purposes.

Submission of Manuscripts

The Editor encourages the submission of research and review manuscripts from such disciplines as: (1) instructional methods and techniques; (2) curriculum and materials development; (3) testing and evaluation; (4) implications and applications of research from related fields such as linguistics, education, communication, psychology, and social sciences; (5) assessment of needs within the profession.

Research Article

Divide your manuscript into the following sections:

- Abstract
 - Introduction
 - Method
 - Results
 - Discussion
 - Conclusion
 - Appendices
 - Notes
 - References
 - Acknowledgments
 - Author

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Identify the purpose of the article, provide an overview of the content, and suggest findings in an abstract of not more than 200 words.

Introduction

In a few paragraphs, state the purpose of the study and relate it to the hypothesis and the experimental design. Point out the theoretical implications of the study and relate them to previous work in the area.

Next, under the subsection *Literature Review*, discuss work that had a direct impact on your study. Cite only research pertinent to a specific issue and avoid references with only tangential or general significance. Emphasize pertinent findings and relevant methodological issues. Provide the logical continuity between previous and present work. Whenever appropriate, treat controversial issues fairly. You may state that certain studies support one conclusion and others challenge or contradict it.

Method

Describe how you conducted the study. Give a brief synopsis of the method. Next develop the subsections pertaining to the *participants*, the *materials*, and the *procedure*.

Participants. Identify the number and type of participants. Specify how they were selected and how many participated in each experiment. Provide major demographic characteristics such as age, sex, geographic location, and institutional affiliation. Identify the number of experiment dropouts and the reasons they did not continue.

Materials. Describe briefly the materials used and their function in the experiment.

Procedure. Describe each step in the conduct of the research. Include the instructions to the participants, the formation of the groups, and the specific experimental manipulations.

Results

First state the results. Next describe them in sufficient detail to justify the findings. Mention all relevant results, including those that run counter to the hypothesis.

Tables and figures. Prepare tables to present exact values. Use tables sparingly. Sometimes you can present data more efficiently in a few sentences than in a table. Avoid developing tables for information already presented in other places. Prepare figures to illustrate key interactions, major interdependencies, and general comparisons. Indicate to the reader what to look for in tables and figures.

Discussion

Express your support or nonsupport for the original hypothesis. Next examine, interpret, and qualify the results and draw inferences from them. Do not repeat old statements: Create new statements that further contribute to your position and to readers understanding of it.

Conclusion

Succinctly describe the contribution of the study to the field. State how it has helped to resolve the original problem. Identify conclusions and theoretical implications that can be drawn from your study.

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Place detailed information (for example, a table, lists of words, or a sample of a questionnaire) that would be distracting to read in the main body of the article in the appendices.

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- Dulay, H., & Burt, M. (1974). Errors and strategies in child second language acquisition. *TESOL Quarterly*, 16 (1), 93-95.
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Acknowledgments

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