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A Case Study in Software Tools for Language Learning

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Submitted by:

Abe Daisuke

Dilsizian Armen

Strowe Zachary

Zhang Min

Submitted on Thursday, March 1st, 2007

Submitted to:

Professor Karen Lemone, Major Advisor

Professor Peet Creighton, Co-Advisor

Professor John Milton
Hong Kong University of Science and Technology

Abstract

This project evaluated the effectiveness of the *Check My Words* software in improving students' English writing skills. Professor John Milton from the Hong Kong University of Science and Technology developed this discovery-based learning software. The team concluded that the software improved students' English writing skills in a blended learning environment.

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Authorship

All four authors have contributed an equal amount of effort throughout this project. All members have spent an equal amount of time in searching for the relevant information, writing and reviewing the report and analyzing the data reported in this project.

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Executive Summary

Many students in Hong Kong lack sufficient English skills for effective communication in the business world. This is a potential problem when university graduates seek employment. The *Check My Words* language learning software was developed by Professor John Milton (2006), a professor at Hong Kong University of Science and Technology (HKUST), to aid students' English language learning. Our project was undertaken to evaluate the effectiveness of the *Check My Words* software.

The goal of this project was to determine whether the *Check My Words* software is an effective tool for improving students' written English. We addressed three objectives to accomplish this goal. To determine whether students' English writing skills improved over the course of the lessons, we conducted workshops with various ESL classes. For our second objective we identified the strengths and weaknesses of *Check My Words*. Finally, we measured student and teacher satisfaction with *Check My Words* by conducting a post-workshop survey of the students and by interviewing the teachers. Conducting this study helped enhance the learning experience for students using *Check My Words* and allowed Professor Milton to identify ways to improve his software tools before distributing them outside of HKUST.

To carry out our study, we conducted a three-week study involving students from various schools. The study consisted of three phases: the preparation phase, the experimental phase, and the post-experimental phase. In the preparation phase, we visited classrooms and demonstrated *Check My Words* to the students. We also distributed a test to evaluate the students' writing skills prior to their using *Check My Words*. In the second phase of

the study, the experimental phase, we conducted workshops in the classrooms we visited previously. We used the workshops to explain various features of *Check My Words* to the students and guided them through a workbook of activities aimed at introducing various features of the software. In the post-experimental phase of the study, we distributed a post-workshop test to the students and compared their results to those of the pre-workshop test.

By the end of this project, we hoped to establish whether the *Check My Words* software was an effective tool for improving students' written English. Based on our pre- and post-test comparison, we discovered that students who attended the *Check My Words* workshops improved their test scores. From this, we concluded that *Check My Words* helps improve students' English writing skills. We also concluded from our observations and survey results that university-level students are a better target audience for the software, and a blended learning environment appears to be necessary for students to efficiently use the software. Finally, the new educational reform in Hong Kong may ease the use of *Check My Words* by Hong Kong students.

1 Introduction

The English language is widely used throughout the world to facilitate trade, business and scientific advancements. Therefore, many countries begin teaching English to students at a very young age. However, this can prove to be an arduous task for countries with languages that differ greatly from English. Students may have a hard time learning the language, while instructors may have difficulty in teaching it. This results in students who leave the education system without a firm grasp of the English language, which may negatively affect their futures.

One example of this problem occurs in Hong Kong. English is an extremely important skill for businesses in Hong Kong as it is widely used for communication in international trade, financial services, and tourism. Mastering the English language is important to Hong Kong students since communicating effectively may be vital to their careers. However, many have a hard time fully grasping the language. This may be due in part to the traditional teaching methods utilized by many teachers, which focus almost exclusively on memorization of examination material. Many teachers do not make use of software tools in the classroom, which exist to enhance the learning process. Therefore, many students in Hong Kong are not exposed to potentially useful software-based learning aids.

Professor John Milton, director of English Language Courses for the College of LifeLong Learning at Hong Kong University of Science and Technology (HKUST) has created a set of software tools aimed at helping students learn the English language more effectively both in and out of class. This type of Computer Aided Language Learning (CALL) can relieve much of the workload for teachers since many common errors can be caught by the software before the work is submitted to the teacher. It also helps students retain information since they must discover the correct answer on their own. A recent study conducted by Professor Milton (2005) to assess the effectiveness of the *Check My Words* software has

shown that proper use of the software does in fact improve students' English as a Second Language (ESL) learning.

Professor Milton wanted to determine whether the *Check My Words* software can be useful to a wider range of students than his small sample at HKUST. The *Check My Words* software is one piece of a larger software suite of English language learning tools. As the software has not been tested with a larger group of students at HKUST nor with secondary schools, Professor Milton wished to verify its usefulness in these situations and to identify any areas that may need improvement.

The goal of this project was to determine whether the *Check My Words* software is an effective tool for improving students' written English. We used three objectives to accomplish this goal. For our first objective, we conducted workshops with various ESL classes to determine whether students' English writing skills improved over the course of the lessons. For our second objective we identified the strengths and weaknesses of *Check My Words*. Finally, we measured student and teacher satisfaction with *Check My Words* by conducting a post-workshop survey of the students and by interviewing the teachers. Conducting this study helped enhance the learning experience for students using the *Check My Words* software and allowed Professor Milton to identify ways to improve his software tools before distributing them outside of HKUST.

2 Background

In order to better explain the issues involved with Hong Kong's educational system and software evaluation, we covered background information among four primary categories. In this chapter we discuss computer aided learning as it applies to teaching English as a foreign language, discovery based learning, the present and future educational system of Hong Kong as it applies to English instruction, and the medium of instruction in Hong Kong. The information about computer aided learning relates directly to Professor Milton's software, and his software incorporates a discovery based learning process. By comparing a discovery based approach to the teaching methods currently used in Hong Kong, we are able to evaluate the strengths and weaknesses of each approach.

2.1 Computer Aided Language Learning

Computer Aided Language Learning (CALL) refers to any software designed and used for language related purposes. The term includes, but is not limited to, electronic dictionaries, concordancers, authoring tools, computer-aided assessment, and translation tools (CALL@Hull, 2006). The subset of CALL that we are interested in is language teaching/learning software.

Because CALL automates much of the learning process, it relieves the teacher of a significant amount of work involved in making corrections for students. Ideally, CALL software will catch common errors before the teacher sees the students' work. This results in the teacher having

more time to prepare for classes and to help students with specific questions. In addition, Milton (2006) says that students are more likely to remember the material since they achieve the correct answer on their own.

2.1.1 History of CALL

Mark Warschauer (1996) groups the gradual development of CALL over the last 30 years into three different phases. He refers to these phases as behavioristic CALL, communicative CALL, and integrative CALL.

Behavioristic CALL, “conceived in the 1950s and implemented in the ‘60s and ‘70s,” (Warschauer, 1996, Behavioristic CALL) is based on repetitive language drills. The computer provides the student with tasks to perform. The rationale behind this phase was that repetitive training is beneficial or essential to learning. A computer is perfect for the repetitive drill approach because it does not get bored with the material, provides immediate feedback, and allows students to proceed at their own pace outside of class.

Behavioristic approaches to language instruction began to be “rejected at both the theoretical and pedagogical level” (Warschauer & Healey, 1998, The History of CALL) in the late 1970s. Simultaneously, communicative CALL, the second phase of CALL, began to develop. This approach focused on students’ interactions with each other rather than their own machines.

Warschauer (1996) defines integrative approaches to CALL as approaches based on multimedia resources and the Internet. The advantage of this approach is that it integrates multimedia technology so that the learner can learn from reading, writing, speaking, and listening. In addition, the multimedia resources are linked together and the learner has access to explanations or exercises. By pointing and clicking, the learner can find his/her own path through the resources.

2.1.2 Check My Words

The *Check My Words* language learning software developed by Milton (2006) is an example of the integrative approach to CALL. According to Milton, *Check My Words* makes use of the latest internet and artificial intelligence technologies to aid students in correcting sentence level lexico-grammatical errors. It also links to four online resources: *Google News*, *Google Search*, *Word Neighbors Collocations*, and *JustTheWord Collocations*. These resources are used to find how words and phrases are used in various contexts. Figure 1 shows the *Check My Words* toolbar with the resources displayed.

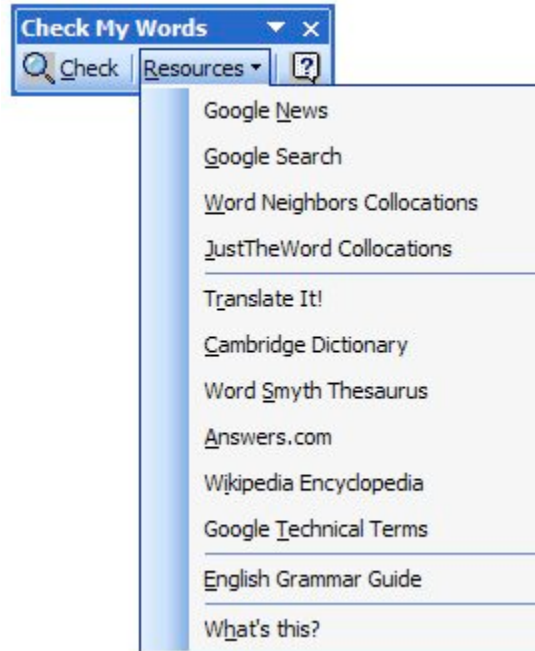


Figure 1: Resources

The main function of *Check My Words* is to point the user towards an appropriate page in the *English Grammar Guide* when he or she is unsure of the correctness of a sentence. The *English Grammar Guide* is a 1,500 page online database of common sentence-level errors made by native Chinese speakers writing English. It helps students improve their English grammar by providing examples and detailed explanations of these errors and their solutions. It also helps students learn when to use certain words with other words.

Some of the other resources included in *Check My Words* include Google News and Google Search, which allow a student to search for commonly used phrasal forms. This helps students check their writing against what other people have written on the Internet. *Word Neighbors* searches through a database of selected texts and shows students words that frequently precede or follow the chosen word. *JustTheWord* is a website that allows students to search a database

for collocations of the selected English word. A collocation is a word or phrase used frequently with another word or phrase. Native speakers will naturally use collocations, while non-native speakers may use words that literally have the same meaning but are not collocations. For example, “strong” referring to flavor is a collocation of “tea”, but “powerful” is not.

The full potential of the resources offered by *Check My Words* can be recognized when the learner makes an extensive attempt to explore these resources. We will discuss this discovery based aspect of *Check My Words* in the next section.

2.2 Discovery Based Learning

Discovery based learning is an educational approach based on cognitive psychology. The learner explores, manipulates, and interacts with the environment to discover knowledge. The idea behind discovery based learning is that learners are more likely to remember concepts discovered on their own (Conway, 1997).

Bruner (1960) discusses the use of discovery approaches to convey the most basic knowledge of subjects in such a way as to encourage students to continue learning on their own. This approach also allows students to learn increasingly complex and abstract material by building on the general knowledge they originally possessed. This method of learning requires a suitable environment. Bruner described this as a “spiral curriculum” (p. 13), where the ideas gained in earlier experiences are used to describe a new situation or fact. Meriel (1986) conjectured that

an appropriate method of encouraging discovery learning is for the teacher to work in “hypotheticals”, encouraging students to use their knowledge to predict or explain occurrences. This style of learning also requires that the instructor be willing to work in the realm of the general over specific instances. Bruner points out, “the best way to create interest in a subject is to render it worth knowing” (p. 31).

Kenn Martin (2000) lists a series of advantages of discovery based learning. According to Martin, discovery based learning is advantageous because it requires the learner to be actively engaged in the learning process. He also mentions that it encourages curiosity in the learner and personalizes the learning experience.

Martin (2000) also provides one disadvantage of discovery based learning, stating that the learner may be confused if he/she has no initial framework to build upon. In fact, Tuovinen and Sweller (Tuovinen, 1994) observed in their experiment that students taking the explorative approach performed significantly worse than students who read through worked examples when the students had no prior knowledge of the material. The interactive nature of discovery based learning is very different from the current system used in Hong Kong.

2.3 Educational System in Hong Kong

The current system of education in Hong Kong is divided into primary, secondary and tertiary levels, lasting for six, seven, and three years, respectively (Hong Kong SAR Information Service Department, 2001). The secondary level lasts five years, or “forms,” which lead to the Hong

Kong Certificate of Education Examination (HKCEE). This is followed by two more forms which culminate in the Hong Kong Advanced Level Examination (HKALE). The two examinations heavily influence the advancement of students and require a functional understanding of the English language. This need for competence in English is the reason why English language classes are required for students in primary, secondary, and tertiary levels. Although a new educational system is to be introduced in the near future, the need for English is unlikely to decrease.

According to Evans (1996), the strong emphasis on testing within the school structure is a limitation of the educational system. This limitation led to a revised English language syllabus, which advocated a much more interactive and conceptual approach. However, textbook learning is still the core of most English classes, and even teachers specifically trained in this new syllabus “are often unable or unwilling to apply the ideas” (p. 45). The new concepts outlined for teaching interactively also clashed with the traditional nature of educational institutions in Hong Kong. Schools believe that the student-teacher interaction encouraged by the new syllabus may be disruptive to normal school functions. Because of this perception, schools avoid the new syllabus (Evans, 1996). Milton (2005) argues that the lack of sufficient language use, coupled with the focus on examination results, produces students who learn just enough to pass an exam while failing to gain “broad lexico-grammatical and communicative competence” (p.1). This situation results in students who are able to pass the HKCEE and HKALE while still having a limited grasp of the English language.

Recently, the Education Commission recommended the adoption of a 3-year junior secondary, 3-year senior secondary and 4-year university academic structure to replace the old 5-2-3 academic structure. The Government approved the recommendation and decided to implement the new academic system in 2009. The new academic structure is expected to prepare students for better critical thinking and help students develop better independent learning skills (Education and Manpower Bureau, 2004). Both critical thinking and independent learning skills are important for discovery-based learning. Therefore, the new academic structure may prepare students better for a discovery-based learning environment.

2.4 The Medium of Instruction (MoI) in HK

The medium of instruction (MoI) in Hong Kong schools has been a source of controversy since the mid-19th century. In general, students learn more easily in their native language. Most primary schools, as well as some secondary schools, use Cantonese as the medium of instruction (Hong Kong SAR Information Service Department, 2001). Despite Government support for the use of Cantonese as the MoI, English-medium secondary education has been expanding very rapidly. Parents who believe that future education or careers in business and government would benefit from proficiency in English drove this phenomenon. Furthermore, with the exception of select artistic and cultural courses, English is the official language of instruction at the university level. In reality, however, a wide gap has always existed between policy and practice in the universities and colleges with English as their medium of instruction. Although English continues to be the medium of books, assignments, and examinations, most native teachers in Hong Kong generally use a mix of Cantonese and English in the classroom (Evans, 1996). This

situation reduces the need for English proficiency, allowing students to leave these schools with relatively weak English skills.

2.5 Summary

Despite the introduction of CALL technology and the more modern learning approach of discovery based learning, Hong Kong continues to instruct its students through traditional methods. The current methods of English language instruction have certain limitations, and results in students who have limited English writing skills. Milton (2005) suggests that the approach taken by his software will allow these students to overcome the weaknesses inherent in the current system, allowing the students to become better writers through the discovery based approach that *Check My Words* utilizes. In order to test this theory, we conducted a study of *Check My Words* to determine whether his software improved the writing abilities of students in Hong Kong. The methodology used for this study can be found in the following chapter.

3. Methodology

The goal of our project was to evaluate the effectiveness of Professor Milton's *Check My Words* software tools. We pursued the following objectives to achieve our goal:

- To determine the improvement in English writing skills after using *Check My Words* software.
- To identify the strengths and weaknesses of the *Check My Words* software.
- To determine student and teacher satisfaction with the *Check My Words* software.

The objectives were designed to gather information about potential improvements in writing after using the software. Measuring improvement in writing skills allowed us to gather quantitative data on the efficacy of the software as an instructional tool. The second and third objectives enabled us to gather perceptions about the software to suggest potential improvements. This approach allowed us to analyze the “user friendliness” of the software while using the software as an educational tool.

3.1 To Determine the Improvement in English Writing Skills after Using Check My Words Software

One method we used to determine the effectiveness of *Check My Words* was to determine the improvement in English writing skills after conducting several workshops in which students used the software. We conducted a three-week study involving students from various schools. The

study consisted of three phases: the preparation phase, the experimental phase, and the post-experimental phase.

In the preparation phase, we visited classrooms participating in the study and demonstrated the *Check My Words* software and its features to capture student and teacher interest. We also distributed a pre-test in this period and used the results as indicators of the students' English writing skills before using *Check My Words*. We visited a total of four schools in our study and conducted workshops in five separate classes. To distinguish among the classes, we numbered them in the order in which we visited them.

We held workshops for two separate classes at the first school: a class of primarily Social Science majors (referred to as Class 1) and a class of translation majors (referred to as Class 2). The students in Class 1 were in their second year of post-secondary education, and the students in Class 2 were in their third. The post-secondary school functions as a gateway between secondary and tertiary education. The students in Class 3 were in their first year of university and came from Mainland China. The second and third schools were both secondary schools. The students in Class 4 at the second school were in Form 6, and the students from Class 5 were in Form 4.

The second phase of the study, the experimental phase, consisted of hour-long workshops conducted in the individual classrooms. We conducted four workshops with Class 1. We held two workshops with Class 2, one of which was extended to two hours. We could not schedule another workshop with this class due to the students' exam schedule. However, we completed

our planned workshop material in the extended session. We also conducted four workshops at one of the secondary schools. The students who attended the workshops there had better spoken English skills than the students from Class 1 and Class 2. We conducted three workshops with Class 4. These students had a much higher level of oral English skill than the other students we met. Our experiences with Class 5 were limited. We conducted one workshop with the school but cancelled the remaining two after we discovered that *Check My Words* was not compatible with MSWord 97, the only version of Word available at this school. *Check My Words* requires a minimum of Microsoft Word 2000 to run properly.

In these workshops, we explained the features of *Check My Words* and used a booklet created by Professor Milton to guide the students through activities (see Appendix O). Using the information we gathered from the pre-tests, we customized each workshop to focus on common sentence-level errors made by the majority of the students in each class. The major purpose of the workshop was to evaluate the effectiveness of a discovery-based learning method that students could use to improve their English writing proficiency.

We also assigned online activities to the students to increase their familiarity with the features of the software. There were three units in the online assignments and two to three activities in each unit. In order to prevent the students from sharing their answers, we did not allow students to see the correct answers until after the submission deadline. We gave students from each school at least one week to complete the activities in each unit.

In the post-experimental phase of the study, we distributed a post-test to the students in each class. We compared the average score of pre-tests to the average score of post-tests to determine the overall improvement in English writing skills after using the software.

3.2 To Identify Strengths and Weaknesses of Check My Words

As our second objective, we identified the strengths and weaknesses of *Check My Words*. Although *Check My Words* includes many online resources, we restricted our evaluation to the *English Grammar Guide* and *Word Neighbors*. To prepare for our workshops, we thoroughly explored the major features of the software. This gave us first-hand experience with the software, from which we were able to make observations on its educational value. It also allowed us to prepare for the workshops by choosing functions and features of the software that would be most beneficial to the students, especially through the observations of our non-native English speaking group members. Our initial observations also allowed us to better understand comments made by our students during the workshops.

Along with our own evaluation, we reviewed questions and comments from students who used the software in our workshops. We collected the comments through participatory observation workshops we instructed. Upon the completion of the workshops, we also collected user feedback from a survey (see Appendix I). We used the feedback from the observations and the survey to determine positive and negative aspects of each resource in the software from the perspectives of both the team and students in Hong Kong.

3.3 To Determine Student and Teacher Satisfaction after Using Check My Words

At the end of each workshop, we distributed a questionnaire to the students who used the software. We divided the questions on the survey into three sections: demographics, questions about the workshops, and questions about *Check My Words*. The demographics section contained questions regarding the students' gender, age, school year, and major field of study. The second section of the questionnaire contained questions about the workshops, such as the number of workshops they attended and their opinions on the usefulness of the workshops. The questions about the software asked students about their preferences towards specific features of the *Check button*, *English Grammar Guide*, *Word Neighbors*, and *JustTheWord* in the *Check My Words* software.

In addition to the questionnaire, we conducted interviews with two teachers from the schools involved in our workshops. One teacher attended our workshops and was directly involved in the learning process. Another teacher had used the software in the past and was helping Professor Milton spread its use. We asked the teachers to relay any feedback received from their students regarding the usefulness of the software or our workshops. We interviewed both teachers about their opinions on *Check My Words* and its capabilities.

After completing the workshops, we analyzed the students' and teachers' comments to recommend suggestions for improving the software. We also analyzed the results from the pre-test and post-test. All results are described in detail in the following section.

4 Results

This section contains results related to our goals and objectives that we collected during our study. This includes data from our pre-test, post-test, direct participatory observation, survey and interviews.

4.1 To Determine the Improvement in English Writing Skills after Using the “Check My Words” Software

Our initial analysis covered the pre-test scores from all five classes and post-test scores from three classes involved in our workshops (see Table 1). Our results show that Class 3 scored the highest overall. This finding is consistent with the fact that Class 3 consisted of university level students. These students had passed through a rigorous application and admissions process to get into one of the most competitive universities in Hong Kong. They were also generally more mature than the secondary school students. Therefore, their higher proficiency in English than the students from the other classes was not surprising. Despite the fact that Class 5 students were the youngest to participate in the study, their average pre-test and post-test scores exceeded that of all other classes except Class 3. This may have been due to the fact that Class 5 was a “band 1” school, the most competitive and exclusive of the secondary school levels in Hong Kong.

Table 1: Class Type

Class Number	Class Type
Class 1	Year 2, Post-secondary
Class 2	Year 2, Post-secondary
Class 3	Year 1, University
Class 4	Form 6, Secondary School
Class 5	Form 4, Secondary School

We noticed a general trend of improvement in the score averages after comparing the scores from the pre-test to post-test (see Figure 2). Class 1 and Class 3 demonstrated an increase of over 10% in their average scores from pre-test to post-test. Class 2 showed an increase of over 15%. We continued our analysis of Class 1, Class 2 and Class 3 in order to find trends between the number of workshops attended and the students' overall improvement between the pre-test and post-test scores. The following sections perform this analysis on a class by class basis.

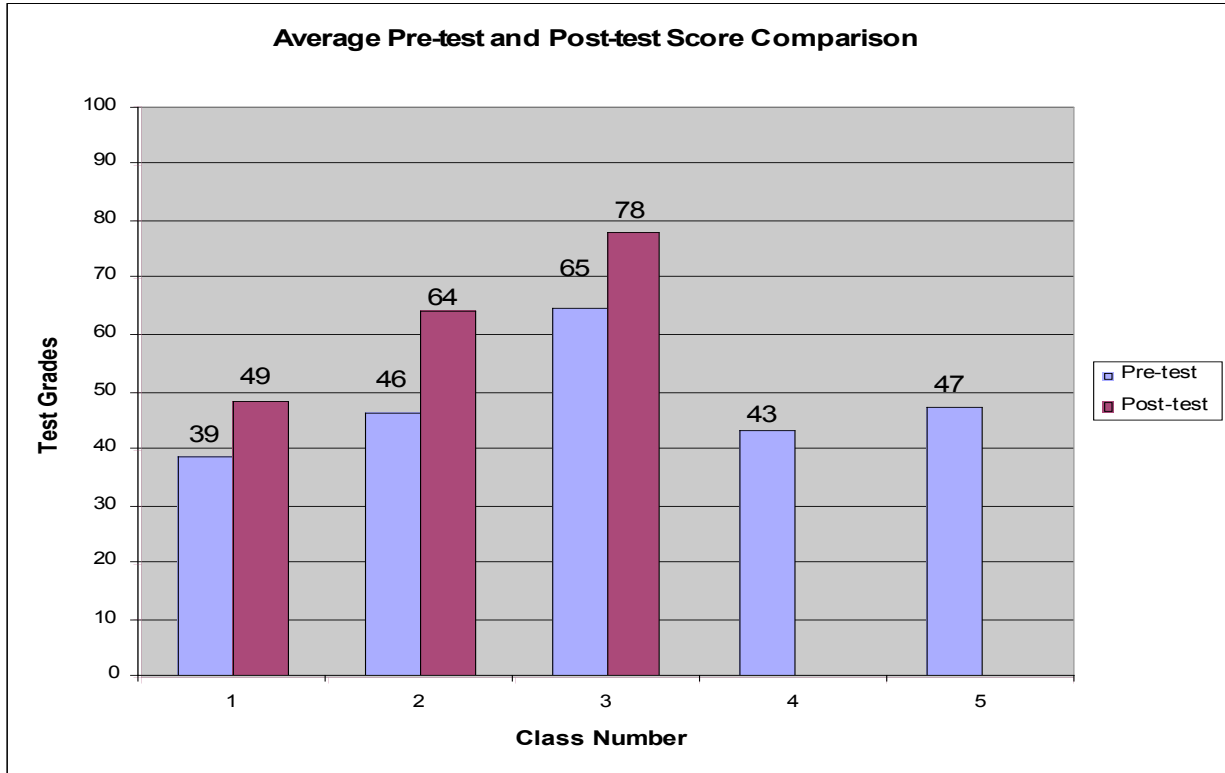


Figure 2: Average Pre-test and Post-test Score Comparison (n=75)

4.1.1 Class 1

The average score of the pre-tests in Class 1 was 38.5%, the lowest average score among all the classes that took part in the workshop. More than 80% of the students answered the five questions that were related to the use of the phrases “search for”, “have extensive knowledge”, “benefit”, “initiative” and “post” incorrectly in the pre-test (see Appendix E). The average score on the post-test for Class 1 was 48.7%, which showed substantial improvement in correcting common errors after using the software. Despite the fact that we reused several questions from the pre-test, more than 80% of the students still answered the question about “initiative” incorrectly.

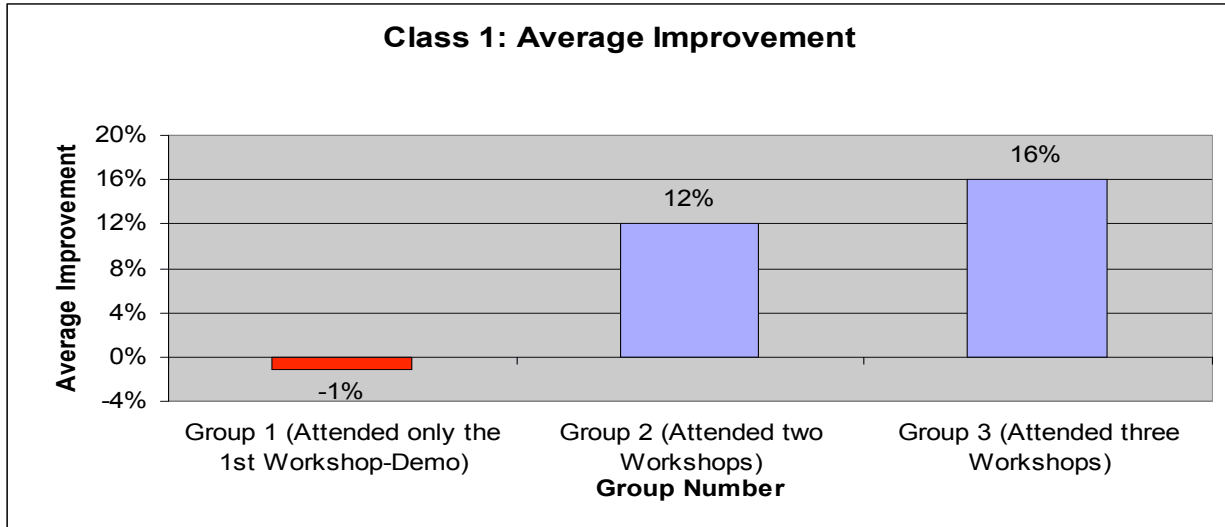


Figure 3: Class 1 - Average Improvement (n=34)

Forty-one students took the pre-test in Class 1, while only 35 students took the post-test. One student from the post-test group had not taken the pre-test, leaving a final comparison to be made from a total of 34 matched pairs of pre-tests and post-tests. We calculated the average improvement in each group by subtracting the post-test score from the pre-test score, adding all of these scores, and dividing by the total number of members in that group. As shown in Figure 3, the students from Group 1 who did not take part in any workshops other than the first demonstration actually saw a slight drop in average score from pre-test to post-test. Students from Group 3 who attended all of the workshops following the demonstration showed marked improvements in their scores.

4.1.2 Class 2

The average pre-test score and post-test scores in Class 2 was about 46.4% and 64.3%, respectively. These scores were higher than the scores from Class 1. We expected this result because teachers had informed us that students in Class 2 had a higher proficiency in English

than the students in Class 1 despite the fact that both classes were from the same post-secondary college. Nevertheless, more than 80% of the students in this class answered incorrectly questions that contained common errors related to collocations, connective words (“on the other hand”) and the use of the word “appreciate”.

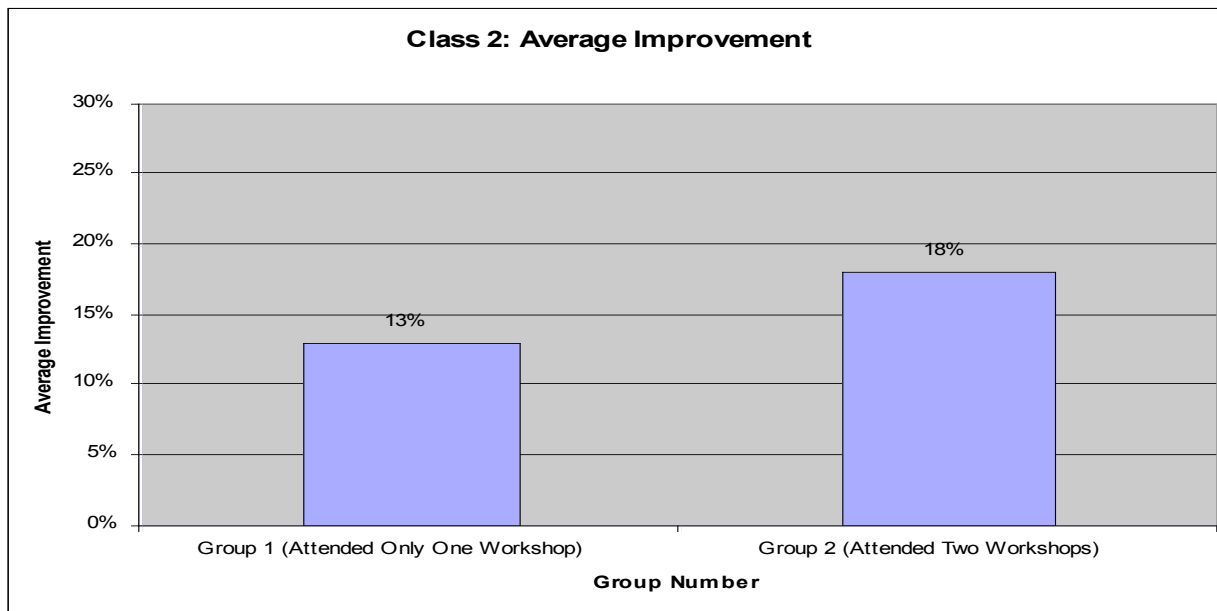


Figure 4: Class 2 Average Improvement (n=14)

Eighteen students took the pre-test in Class 2, while fifteen students took the post-test. One student from the post-test group had not taken the pre-test; therefore, we have only fourteen matched pairs of pre-test and post-test results. Group 2 students who attended two workshops showed a higher average improvement than the Group 1 students who attended only one workshop (see Figure 4).

4.1.3 Class 3

Eight students took the pre-test in Class 3, while only four students took the post-test. Therefore, we only have 4 matched pairs of pre-test and post-test results. Four students who took the post-test actually attended at least two workshops and they all showed marked improvement in the test score. However Group 3 students who attended three workshops showed the same average improvement as the Group 2 students who attended only two workshops (see Figure 5). Due to the very small sample size, we are unable to make any assumptions about the trend between workshop attendance and average improvement for Class 3.

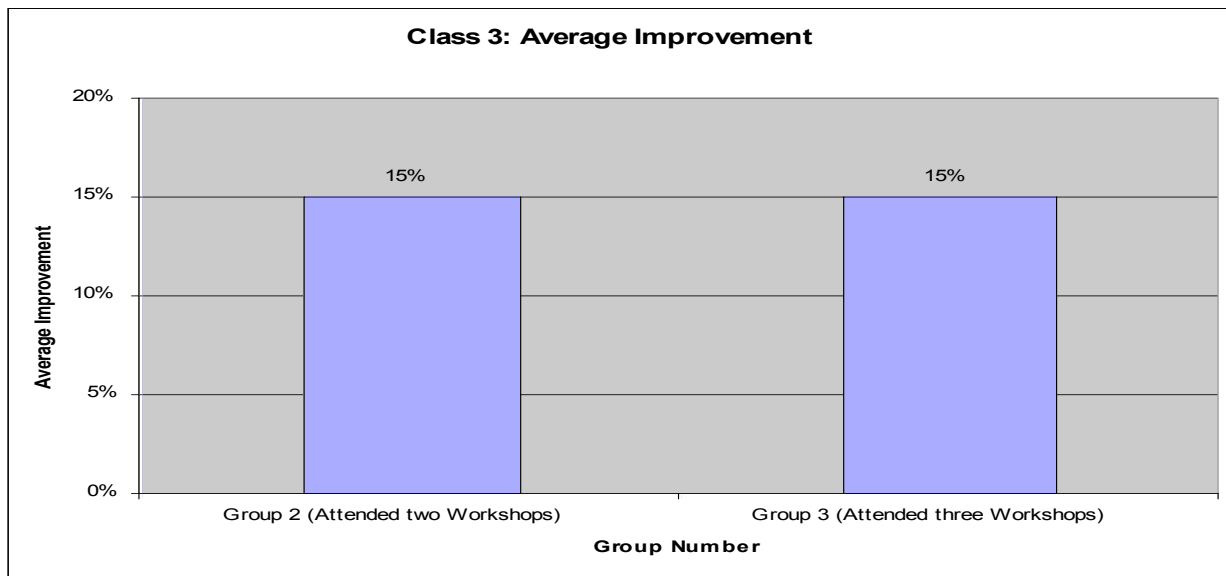


Figure 5: Class 3 Average Improvement (n=4)

4.2 To Identify the Strengths and Weaknesses of Check My Words

We received both positive and negative comments on the software during the workshop. This section details the direct feedback received from talking with the students as well as their written responses to the survey questions.

4.2.1 Student Feedback on the 'Check' Button

The 'Check' button is the most readily visible resource in *Check My Words*. Shown below is an example of the window which opens upon pressing the 'Check' button (see Figure 6). In this example, the word that the student is investigating is "born". After highlighting or clicking on the word, the window shown in the figure pops up. This window displays a list of errors in order of frequency of occurrence, as well as a list of the words in the same word family as the highlighted word.

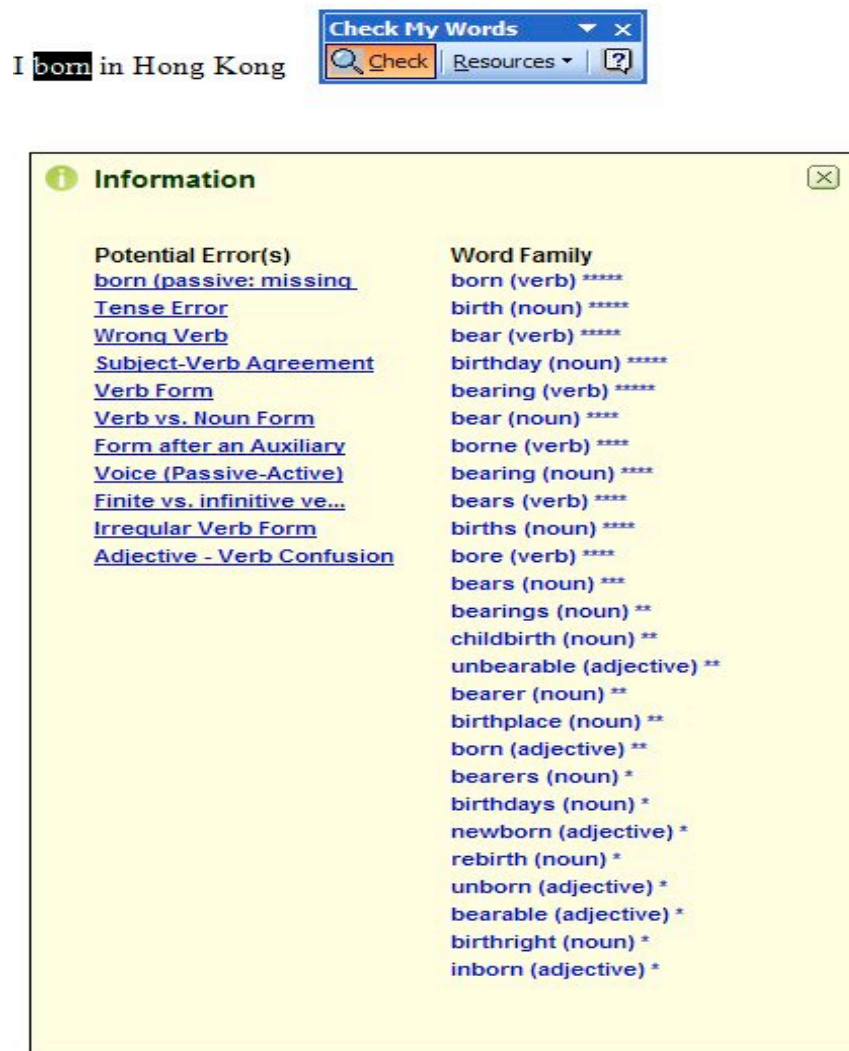


Figure 6: The 'Check' Button

Clicking on any of the ‘Potential Error(s)’ will open a new window containing references to that error in the *English Grammar Guide*, while selecting a different word form will automatically replace the highlighted word. Our data show that the ‘Check’ button was the easiest tool for students to learn to use. Students appreciated the ability of the ‘Check’ button to describe common errors. The link between the ‘Check’ button and the *English Grammar Guide* is one of the strengths of this tool. However, while the tool is simple to use, many users pointed out that the amount of text to select when using the ‘Check’ button was difficult to determine. These students would usually select a portion of writing at least three to four words long, while the tool was designed to be used to check individual words and very short phrases. Another point of confusion for some users was that links from the ‘Check’ button did not match the title of the corresponding *English Grammar Guide* page. The example in Figure 7 where the student has entered the word “experience” is directing the user to the appropriate entry for the problem, but a quick glance at the title of the article led some students to assume that the link was incorrect since the link name did not match the title.

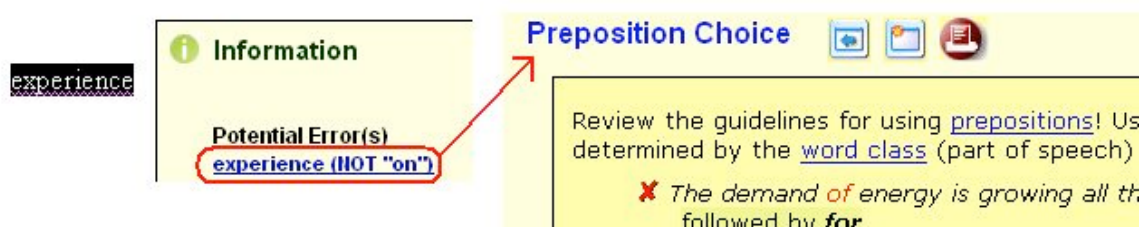


Figure 7: Title Disparity

There were several cases where students would become frustrated with the slow initial reaction speed of the program. This was especially common among students in Class 1 and Class 4. The ‘Check’ button’s primary strength is its ease of use, while its primary weaknesses are its limited search size and long initial load time.

4.2.2 Student Feedback on the *English Grammar Guide*

Another of the major resources in *Check My Words* is the *English Grammar Guide (EGG)*. There are two ways to reach the *EGG*: using a link in the ‘Check’ button (as shown in Figure 6) or directly selecting it through the dropdown list of ‘Resources’. The integration with the ‘Check’ feature directly links the users to an entry focused on the error s/he has made. The direct selection option brings users to an index page (shown in Figure 8), which allows them to browse through a table of contents or search via the index feature.



Figure 8: The *English Grammar Guide*

Most students found the *English Grammar Guide* to be very detailed and generally used it as a reference more than as an active tool. The integration of the *English Grammar Guide* with the ‘Check’ button means that they also share the benefit of a simple interface. However, the ease of use was countered by the amount of information buried in the guide. In all workshops except those held with Class 3, students encountered issues with the *EGG* where they were unable to

find sufficient explanations of their error. In some cases, the tool required the user to go through multiple levels of pop-up windows, making it difficult to find the information the user searched for. There were several instances where a user complained about a lack of information when they failed to notice a link that would have contained the answer to their question if they had expanded it. The most common example of this was when the students searched for the word “benefit”. The description of “benefit” in the *EGG* was not very helpful to the students, while example sentences using the word “benefit” correctly were very helpful. However, the example sentences were nested under links and needed to be clicked to be seen. These sentences showing the use of the word “benefit” were more helpful to the students than the description on the use of the word. Although some students wanted to read the complete description, most were more interested in simply correcting their error. The overall strengths of the *English Grammar Guide* are its detailed information and comprehensive database. Its weakness is the amount of information that is not easy to find on first glance.

4.2.3 Student Feedback on *Google Search* and *Google News*

The *Google Search* and *Google News* resources allow the user to check phrases on the Internet using Google. Their features are very similar in function, with the only difference being the sources used by the tool. Both tools are available under the ‘Resources’ menu of *Check My Words*. In order to use either tool, the user must highlight a portion of text to be checked. In Figure 9, the user has selected the phrase “can benefit to the company”. From this point there are two common ways to use the tool. The first is to simply click ‘Search’ and a web browser window will pop-up with a Google search of that phrase. The second option is to follow the instructions given on the window in Figure 9, and select a word within the phrase that the user

wishes to correct. While the tool was designed with the latter search method in mind, many users used the former as a method to check their corrections.

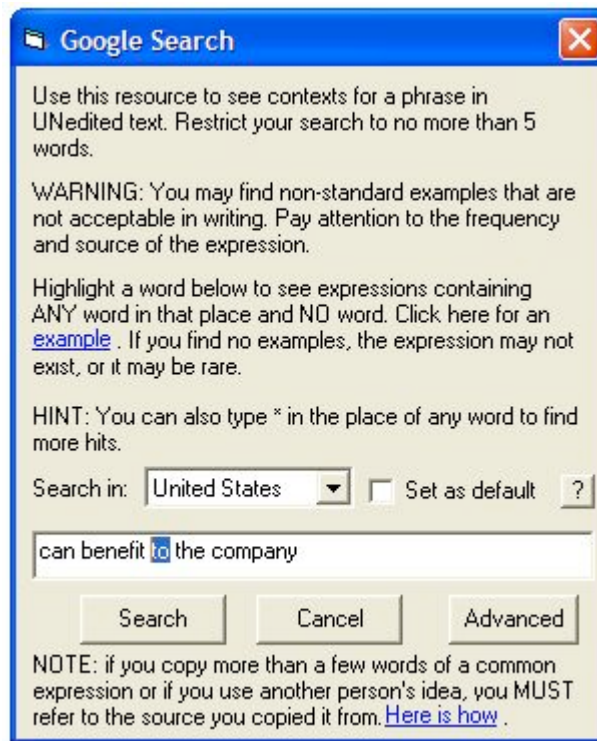


Figure 9: The Google Search Tool

The *Google Search* tool was also the fastest of the tools in *Check My Words*, which the students appreciated. The *Google Search* tool generally received positive feedback, but there were some exceptions. Some users found *Google News* to be less useful because of its limited resources to check against. From our observations during the workshops, many searches using *Google News* did not return results. This was due to the fact that many searches the students tried were often very long phrases which would not commonly be found in a news article. There were also situations in which a student found the text they had selected in *Google News*, despite the fact that the text was incorrect. The most common cause of this situation was when the author of the website was a non-native speaker of English. This also occurred several times with the normal *Google Search*, causing some users to comment that the tool was not always right. An important

observation about these tools was that many students failed to read the instructions included with the tool (see Figure 9). Google's strengths come from its speed and the ability to verify the correctness of a phrase by finding the frequency of it in other people's writing. The ability of the *Google Search* tool in making corrections is limited, however, and its reliance on general web searches left the accuracy of the corrections in question.

4.2.4 Student Feedback on *Word Neighbors*

Word Neighbors is another tool available under the 'Resources' menu of *Check My Words*. This tool was also developed by Professor Milton, and serves to help students with phrasing and collocations. In order to use this tool, the user first selects a word or phrase that they wish to correct. The most common approach taken by the students was to use the tool to show words that come before or after the selected piece of text. Another method of searching is to use the software to search for missing words within a phrase using the 'Span' feature. By selecting the 'Check all word forms' box, users can also see all forms of the word or phrase they selected, rather than being restricted to the exact form they entered (see Figure 10). The tool can also be used to check against specific corpora, large collections of writing that are categorized by the type of writing involved.

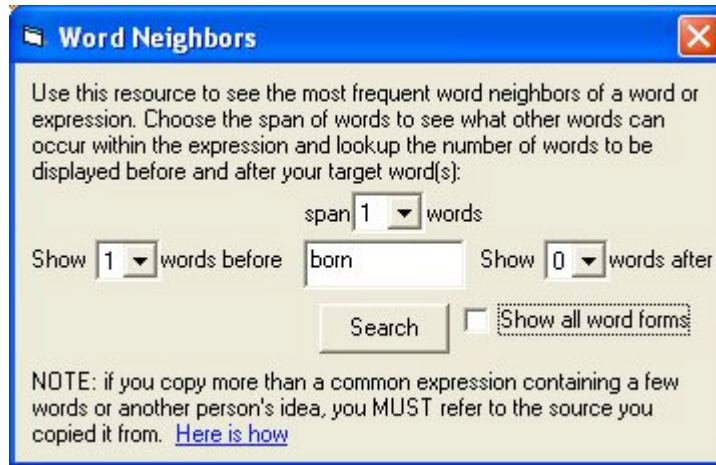


Figure 10: *Word Neighbors* Tool

Upon clicking ‘Search’, a browser window opens similar to the one shown in Figure 11. This window displays information about frequency of use, the forms of the word or phrase being searched, and contains several features to further explain the results shown. Users can use this tool to define a phrase, translate a phrase into Chinese, or hear the phrase being spoken in recorded audio clips available on the internet. The tool also displays context for the phrase, so users can verify that their correction is appropriate.

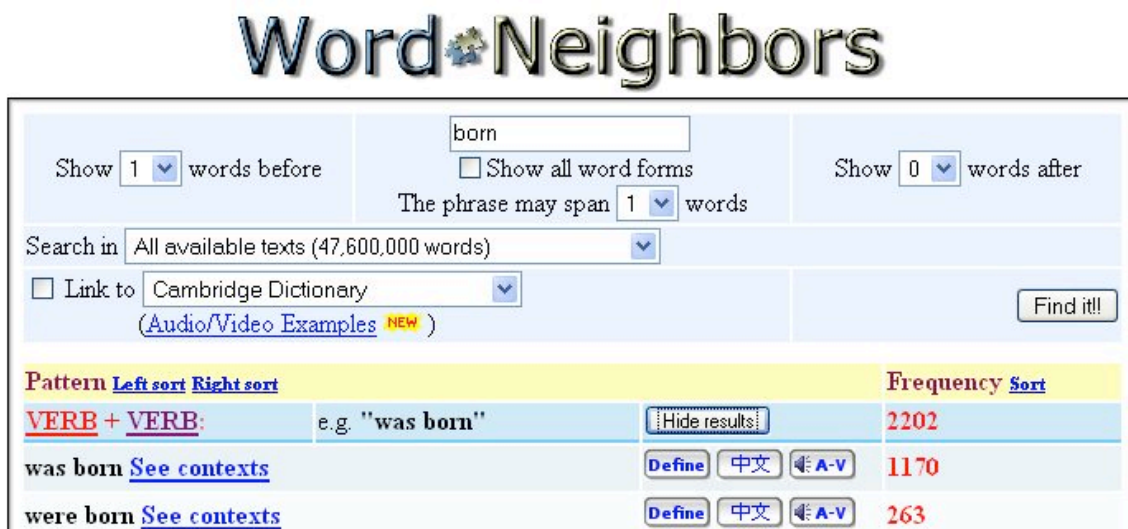


Figure 11: *Word Neighbors*

Word Neighbors was the most commonly used tool by most of the participants, and therefore received the most comments. Most students enjoyed the use of *Word Neighbors* because of the simple interface. Aside from having an easy to use interface, many students found the collocation contexts to be helpful. The ‘Define’ button found next to the search results was also popular. This allowed students to receive an English definition of the word using the Cambridge Dictionary. They also liked *Word Neighbors* because it was generally easier to find the phrase they wished to use than it was in any of the other tools. Students also liked the frequency count and context examples available in *Word Neighbors*.

User complaints about *Word Neighbors* were minimal. Some users found that the ‘Translate’ button (see Figure 12) did not provide a very reliable translation of the phrase they had searched for. The translation function uses the 3rd-party Babelfish translation program, a web-based utility which does word for word translations. However, these translations are generally incorrect when a colloquialism is being translated.

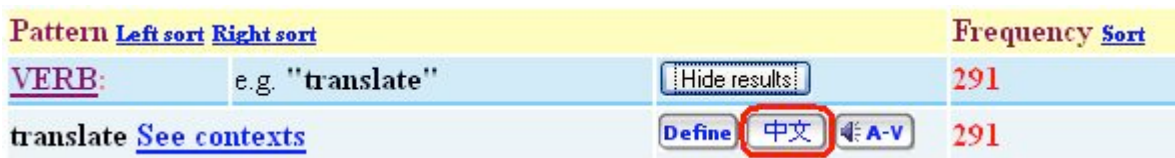


Figure 12: The 'Translate' Button

A few students also suggested that a function to find a word in the middle of a collocation would be beneficial. An example of this is when a student is trying to fill in a word in a short phrase, such as “a very ____ car”. This comment reinforced the finding that many students did not actually read the directions for using the tools, as that functionality is already included under the ‘Span’ feature. Ease of use, ease of navigation, and utility are important strengths of the *Word*

Neighbors tool. The primary weakness of the tool is the long load time relative to the other tools, which causes students to become impatient.

4.2.5 Student Feedback on *JustTheWord*

The final resource we analyzed was *JustTheWord*. This tool is available under the ‘Resources’ menu in *Check My Words*. *JustTheWord* is a collocation tool designed to help students by helping them with word choice. To use *JustTheWord*, the user selects a single word and chooses ‘*JustTheWord* Collocations’ under the ‘Resources’ menu. The tool is programmed to automatically determine the part of speech of the word selected in the sentence, but the user is able to alter the program’s selection (see Figure 13). After the user presses ‘OK’, the tool opens a browser window separated into two main areas. The first area displays a list of collocations with the selected word. The second area gives the user a method to select the parts of speech that appear in the collocations (see Figure 13).

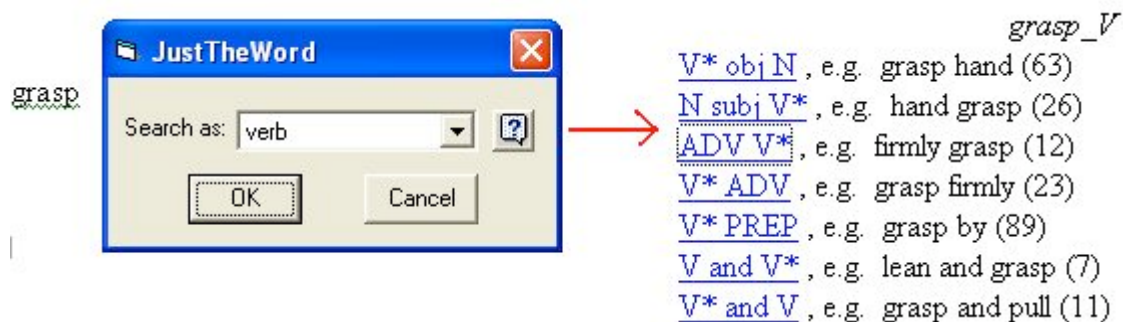


Figure 13: *JustTheWord* Collocation Forms

After the user selects the parts of speech, the browser jumps to the section in the page with the selected parts of speech. These are broken into clusters, or groups of collocations similar in meaning. Figure 14 shows collocations in the form “V* ADV”, meaning the selected word(*grasp*) as a verb followed by an adverb. Each collocation shows its frequency of

occurrence in the corpus of *JustTheWord*, and also acts as a link to contextual use of the collocation.

<i>cluster 1</i>	
grasp firmly (23)	██████████
grasp tightly (11)	████████
<i>cluster 2</i>	
grasp just (6)	██████
grasp only (5)	██████
<i>unclustered</i>	
grasp clearly (4)	██████
grasp immediately (4)	██████

Figure 14: *JustTheWord* Collocation Listing

Users liked *JustTheWord*, citing the context examples as being very helpful. The ability to see the frequency of use for collocations was also appreciated in *JustTheWord* as it was in *Word Neighbors*. During a classroom observation, a group of students pointed out that *JustTheWord* could also be used as a form of vocabulary enhancement. Despite this point, several users disliked *JustTheWord* because it lacked definitions for its collocations. The students from Class 3 commented on the need for definitions, as their questions were based on collocations which did not translate literally such as “heavy handed”. Students generally preferred to use *Word Neighbors* over *JustTheWord*, primarily because they found *JustTheWord* results to be harder to locate. Most students did not notice that the cluster groups (see Figure 14) show collocations with similar meanings. This tool shares some strengths with *Word Neighbors*, such as context examples and ease of use. Weaknesses for *JustTheWord* are a lack of the utility features found in *Word Neighbors* and while having a logical cluster system to native speakers, many users failed to notice the significance of the cluster divisions.

4.2.6 General Comments

In general, the students quickly became comfortable using the software. Most students commented that the software was easy to navigate. However, there was at least one student per workshop who had difficulty accessing the tool they wished to use. These comments were usually raised when students attempted to highlight more text than the chosen tool could search for accurately. The students also encountered some instances where the toolbar would recognize a word if the cursor was inserted in the word without highlighting the word (see Figure 15). This caused some confusion since some resources included in the toolbar did not detect a non-highlighted word. Specifically, the 'Check' button recognizes words without the need to highlight them, while *Google Search* (see Figure 9) does not. Many users complained about the lack of an automatic detection ability in the program to recognize their errors. They had certain expectations about error detection in the software because they were used to *Microsoft Word's* spelling and grammar checkers. There were not many technical complaints, but some students were slow to learn which resource to use for certain applications.

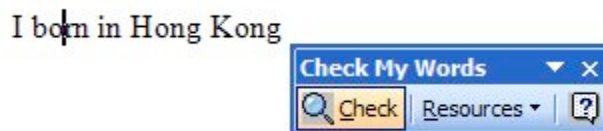


Figure 15: Non-highlighted word

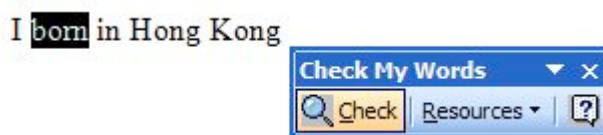


Figure 16: Highlighted word

Overall, most students said that the software seemed useful to them, and that they would continue to use it. The diminishing number of students from workshop to workshop may suggest that while some students find this discovery based learning method interesting, many prefer to focus their learning on what will be on their tests. Other possibilities are that the proximity to the Lunar New Year holidays affected their willingness to come to our sessions, as well as proximity to exams for three of the five classes. Many students found *Check My Words* to be useful, but most also had issues with one or more resources within the toolbar. Students tended to choose one or two of the resources they liked to use and ignore the others. The problem with this tendency is that each resource in *Check My Words* is effective in different situations, and therefore ignoring certain tools limits the effectiveness of the toolbar. Overall, students liked the reference power of the software tools, while the main drawbacks were cases where information was difficult to find.

4.3 To Determine Student and Teacher Satisfaction after Using Check My Words

To determine student and teacher satisfaction after using *Check My Words*, we used the results from the student survey and comments made during the workshops. Upon the completion of the workshop, we conducted interviews with teachers to determine what feedback they had received from their students after using *Check My Words*, as well as their opinions and comments about the software. We also analyzed students' workshop attendance to partially determine their level of motivation.

4.3.1 Student Survey

We conducted a survey of the students who participated in the workshops using questionnaires. One of the questions asked the students to rank the resources we introduced in the workshops. The purpose of this question was to gather information on which aspects of *Check My Words* were more useful from the students' perspective. Unfortunately, many of the students misunderstood the directions to rank the resources in order of preference from "1" being the most preferred to "5" being the least preferred. Instead, they rated the resources using numbers more than one time. This skewed our results by bringing the averages closer to each other, since many students wrote the number 3 when they could not make up their minds. While *Word Neighbors* and the *English Grammar Guide* tied for popularity in our survey results (see Figure 17), the observations in the workshops and the written comments suggest that *Word Neighbors* was more popular. The written responses about what students liked about the workshop and software also show a preference for the ease of use in *Word Neighbors* and the completeness of explanation in the *English Grammar Guide*.

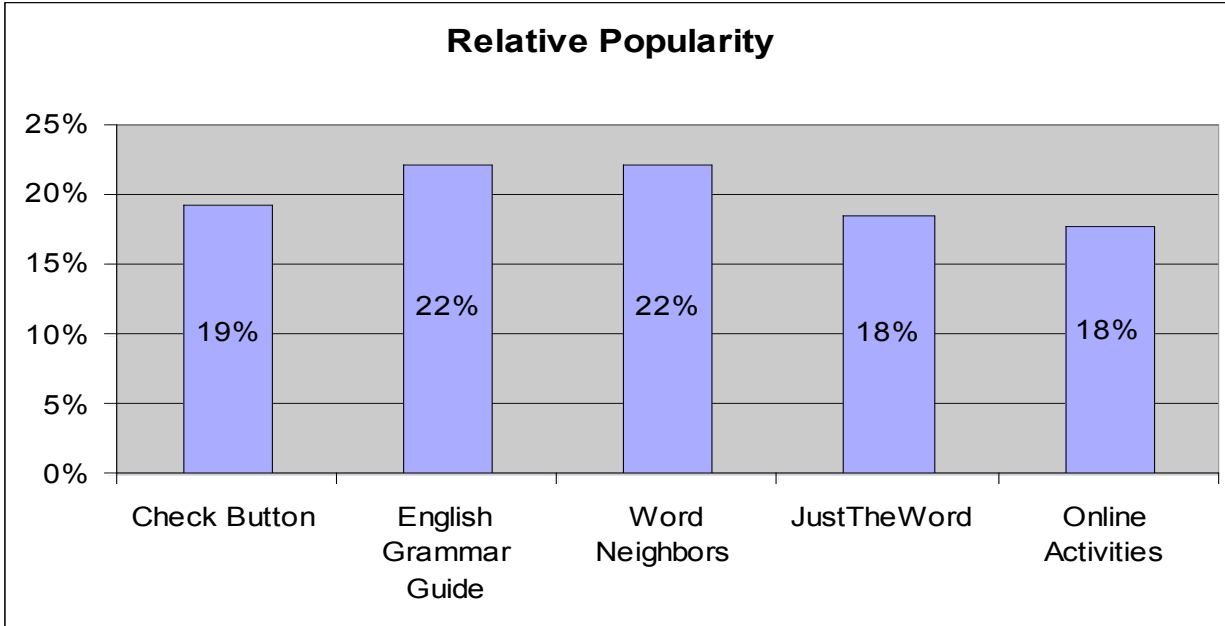


Figure 17: Weighted Percentage Preference of Software Tools (n=75)

All classes who attended the workshops showed improvement in their test scores, and the students who attended more workshops tended to show more improvement. User comments on the software were generally positive, with some general feedback showing that the instructions may need to be clarified or made more visible. As for overall satisfaction with the software, the majority of the students involved stated that they would continue to use the software (see Figure 18).

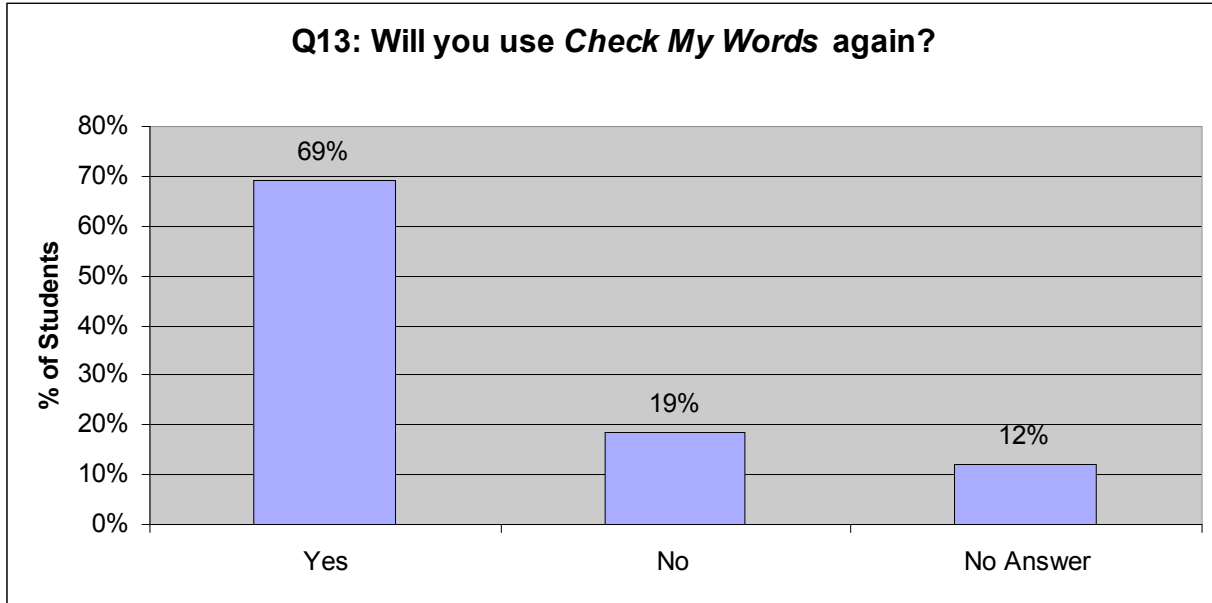


Figure 18: Will you use *Check My Words* again? (n=75)

Teachers were also pleased with the software in general, and the teacher from Class 1 actually stated that she may wish to implement the software for one of her classes in the future. An important point to make about these results is that the students from the non-university level classes generally preferred teacher based instruction or blended instruction over computer instruction, which suggests that the spread of the software as a viable student aid may require additional effort from the instructors in non-university settings (see Figure 19).

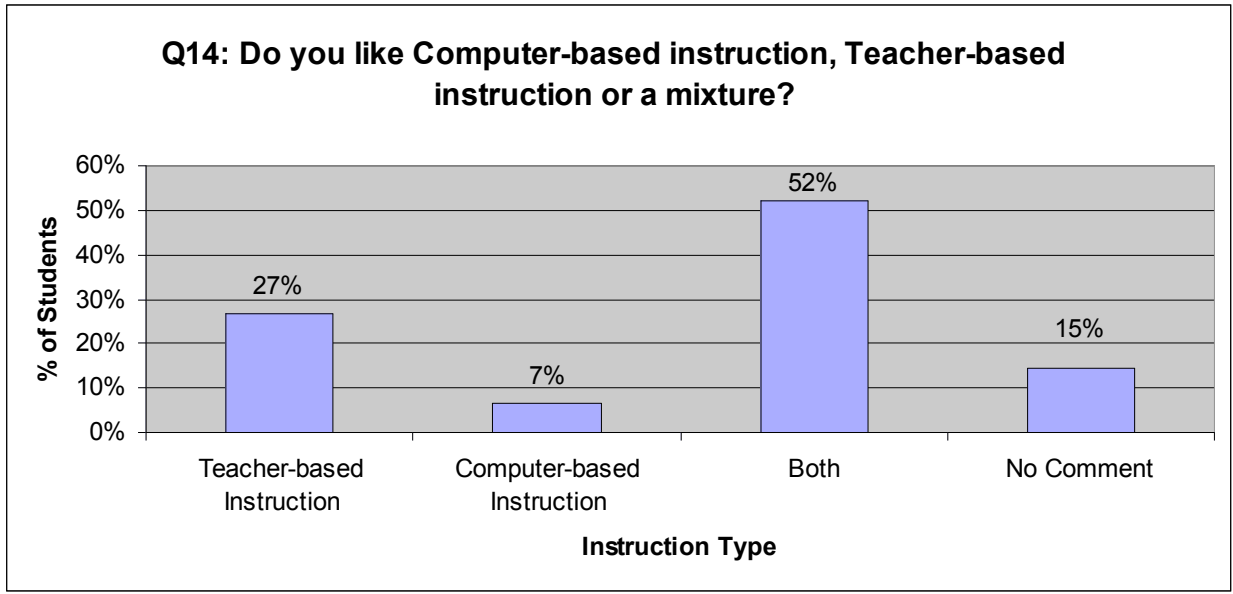


Figure 19: Question 14 Analysis (n=75)

4.3.2 Workshop Attendance

The number of students attending our workshops decreased over time at all schools (see Figure 18). We observed a student retention rate of approximately 50% after each workshop. Although the attendance diminished, the students who came to the later workshops were more motivated to learn how to use *Check My Words* and to improve their English than the students attending the earlier workshops.

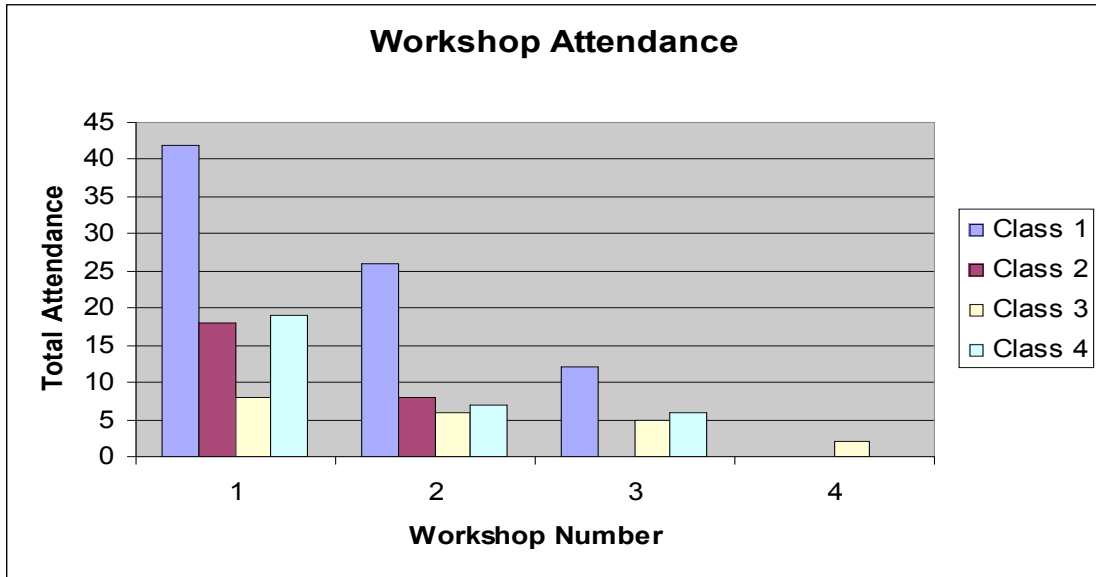


Figure 20: Workshop Attendance

During the first workshop with the Class 1, 44 students were present but not all seemed interested in *Check My Words* software. This may have been due to their low level of English skills or their lack of motivation to improve. However, the 12 students who attended the final workshop seemed much more eager to learn and discover the various features of the software for themselves. They completed the in-class activities we assigned to them and continued to complete optional work.

We did not have enough data to analyze the attendance patterns for Class 2. We were only able to complete one demonstration and one workshop with the class, but we noticed a 10-student attendance reduction from the demonstration to the workshop. As mentioned previously, the students who took part in the workshop attempted to figure out activities on their own instead of asking for our help. This showed that they were willing to use the discovery-based approach to learning or were at least willing to explore a new piece of software. In our student survey, the majority of the students in this class responded that they would continue to use *Check My Words*

in the future. As with Class 1, this group preferred to be in a teacher based or mixed environment for learning rather than a computer based classroom.

The workshops held with Class 3 began with a much smaller number of students than the other classes, but the decrease in students from the initial demonstration to the final workshop was not as great when compared to the other classes. This may have been due to the higher motivation levels of the students we observed during the workshops. The students in Class 3 explored the software more fully than any of the other students, which suggests that they were more independent than the other classes.

There was a large reduction in student attendance from the first to second workshops with Class 4. However, most of the students from the second workshop returned for the third. The students' answers to the questionnaire described 2 other factors about the drop in attendance. Students stated that they did not like the time frame of the workshop, possibly because it was scheduled as an after school activity. Their other concern was that the workshops did not directly improve their writing. This concern probably stemmed from a miscommunication with the teachers, as students stated that they had only been told that the workshops were meant to help their writing and not how this was going to be done. Most of the negative comments about the workshop were about our lack of teaching skill rather than software issues. The students also preferred a teacher based class over a computer based one, according to the survey results. These factors explain the drop in attendance as being more a function of timing and learning style.

5 Conclusions

We will now discuss conclusions drawn from the results of our workshops. We were able to make conclusions in the areas of the appropriate target audience for *Check My Words*, the role of the teacher in the introduction of *Check My Words* to the classroom, and suggestions specific to the software.

5.1 Target Audience

From our in-workshop observations and attendance records (see appendix G), we found that many students lack the motivation to explore *Check My Words* on their own. However, the group of students from Class 3 explored the software more thoroughly than the students at other schools. Our results also showed that the students from Class 3 scored higher on the pre- and post-test on average than the other students. The students in Class 3 all came from Mainland China, and therefore went through a rigorous application process which included oral interviews and examinations to be admitted into the university. Taking these facts into consideration, we concluded that using educational software and a discovery-based approach to teaching English is more effective for students with a higher motivation to learn English and a stronger educational background in English.

5.2 Blended Learning

The teacher plays a vital role in the introduction of *Check My Words* to the classroom. We created a blended learning environment in our workshops with the students. Blended learning refers to an online, distance-learning approach combined with traditional face-to-face classes. We took a traditional approach in guiding the students through exercises while the students explored electronic resources. We can see from the results in section 4.1 the effectiveness of this method. The students with higher workshop attendance showed a greater improvement in their test scores. This leads us to conclude that *Check My Words* is an effective English teaching tool in a blended learning environment. We also discovered from our student survey that students preferred a blended learning environment over traditional teacher-based instruction (see Figure 19).

Although the blended learning methods we used were effective to a certain degree, we had difficulty influencing the students' incentives when on their own. However, the teacher has a stronger influence over students through assignments. Therefore, the integration of *Check My Words* into the curriculum by the teacher should cause students to put more effort into exploring the software. If the teacher is willing to do this, s/he should begin the class with an introduction of the software and have the students use it throughout the term. We saw one example of this when we visited a class at the Hong Kong University of Science and Technology in which the teacher incorporated *Check My Words* into the curriculum. Groups of students were asked to explore one of the resources in *Check My Words* and to present what they learned about it. Since these students explored the software on their own time outside the class instead of in an in-class blended learning environment, they knew less about features of the software than the students

who attended our workshops. The teacher created a blending learning environment by providing useful feedback in class about the use of software that the student had missed.

5.3 Software Specific Suggestions

From our observations, interviews, and surveys, we came up with specific suggestions for changes to *Check My Words*. The following is a list of specific software issues we encountered, followed by specific suggestions about the software. Note that the last five points are issues that are technical in nature or bugs, and suggestions will not be made about these points.

List of Software Issues

- *The English Grammar Guide* would be more useful to students if it were translated into Chinese
- The number of words a user can select for each tool is not explained for all tools
- When using the ‘Check’ button, several links under Potential Errors do not match the titles of the sections in the *EGG* that they are linked to
- The *EGG* contains useful information that is difficult to find
- The instructions for *Google Search* and *Google News* contain instructions that should be made more noticeable to the user
- *Google Search* and *Google News* require the user to highlight text while the other tools do not
- Translations in *Word Neighbors* are not always accurate

- The ‘Span’ feature in *Word Neighbors* is not described well
- *Word Neighbors* does not include enough specific corpora
- The collocations grouped by clusters in *JustTheWord* are not explained
- Most tools suffered from long initial loading times
- The ‘Check’ button’s pop-up appeared black with blue links when viewed with certain color settings, making it very difficult to read
- Incorrect link between the ‘Check’ button and the *EGG* (second link about worth)
- Some part of Microsoft Update interferes with the toolbar, causing it to sometimes crash after an update
- If the user does not have an active internet connection, the software does not function and the error message given does not explain the cause of the problem

General Suggestions

The translation of the *English Grammar Guide* into Chinese would be beneficial to students. The students also wanted more explanations for certain pages in the *English Grammar Guide*. We observed that once the students got to the page they were looking for, they did not click on any of the links on that page.



The word **benefit** is frequently **overused** and **misused** by learners.

Do not confuse the verb and noun forms of words. **Benefit** can be a noun or a verb (as a verb, it is careful in choosing a preposition, and which preposition you choose, to follow this word. **Benefit** is such as these (note the use of the modal verbs **could** and **would**):

- *I would appreciate your suggesting any associates you feel **would benefit from** our products.*
- *Would you please let me know if your company **could benefit from** our contracting service?*

Can you tell whether **benefit** is a verb or noun in each of these sentences?

Which of the following sentences is more natural and fluent?

A common error in the use of **benefit** as a verb is the incorrect use of passive voice.



 Click on the correct sentences!

Figure 21: English Grammar Guide Screenshot 1

This was unfortunate, because many of the links when clicked displayed information or examples relevant to the current page.

A common error in the use of **benefit** as a verb is the incorrect use of passive

 Click on the correct sentences!

- *Our customers will benefit from these services.*
- *Our customers will be benefited from these services.*
- *Our customers are benefited from these services.*
- *Our customers benefit from these services.*
- *These services will benefit our customers.*
- *These services benefit our customers.*

Figure 22: English Grammar Guide Screenshot 2

 Click on the correct sentences!

- *Our customers will benefit from these services.* CORRECT ✓
- *Our customers will be benefited from these services.* ✗ INCORRECT! The passive form of
- *Our customers are benefited from these services.* ✗ INCORRECT! The passive form of **be**
- *Our customers benefit from these services.*
- *These services will benefit our customers.*
- *These services benefit our customers.*

Figure 23: English Grammar Guide Screenshot 3

We believe that the students thought the links would take them to a different page and were reluctant to leave the page they thought the answer was on. If the links to show additional information were displayed as buttons rather than links, this misunderstanding could be avoided. Another issue related to links would be the disparity between some of the links in the ‘Check’ button to their *EGG* counterparts. Some clarifications should be made to the links to avoid the issue shown in the example in Figure 7.

An issue with the ‘Check’ button and Google Search was that students tended to highlight whole phrases or sentences. If the selected phrase is too large, the ‘Check’ button loses relevancy, and Google does not come up with any hits. It may be a good idea to have a warning pop-up when the phrase selected is larger than a certain size. Google generally works for up to four or five words, and the ‘Check Button’ usually works for one or two. This is explained in the Google tool, but since many students did not read these instructions, they did not follow them. We would therefore suggest that the major instructions for each tool be emphasized in some way.

One of the teachers who had used *Check My Words* commented that the *Word Neighbors* interface that is available from the *Check My Words* toolbar in *Microsoft Word* is visually less attractive and limited in features when compared to the *Word Neighbors* website. We suggest including the option to have the *Word Neighbors* website open with the selected word or phrase entered into the input box. This would allow the instructions to be displayed if it is the user’s first time using the software, but would also enable direct access to the full features of the *Word Neighbors* if the user prefers it.

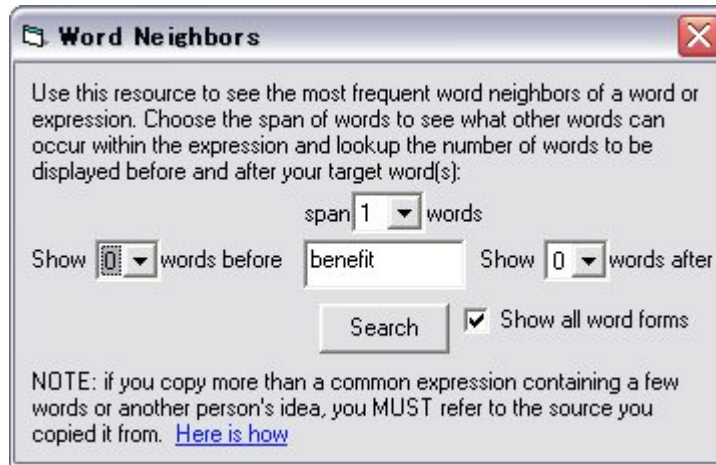


Figure 24: *Word Neighbors* Dialogue Box

Word Neighbors

Show 0 words before benefit Show 0 words after

Show all word forms

The phrase may span 1 words

Search in All available texts (47,600,000 words)

Link to Cambridge Dictionary (Audio/Video Examples NEW)

Find it!!

Pattern	Left sort	Right sort	Frequency	Sort
NOUN:	e. g. "benefits"	Show results	6916	
VERB:	e. g. "benefit"	Show results	1383	
ADJ:	e. g. "beneficial"	Show results	628	
ADV:	e. g. "beneficially"	Show results	11	

Total Expressions: 8938
 Select and right-click to hear or look up any words.

Figure 25: *Word Neighbors* Website

There was also a comment about the available corpora in *Word Neighbors*. *Word Neighbors* currently uses 16 different corpora as a database.

WordNeighbors

The screenshot shows the WordNeighbors website interface. At the top, there is a search bar and several options: "Show 0 words before", "Show all word forms" (checked), and "Show 0 words after". Below these is a dropdown menu for "The phrase may span 1 words". The main search area has a "Search in" dropdown menu currently open, showing a list of corpora with their word counts. To the right of the search area is a "Find it!!" button. On the left side, there is a "Link to" checkbox and a "HELP" section with a note. On the right side, there is a "LANGUAGE LEARNING EXERCISES" section with a disclaimer.

Search in: All available texts (47,600,000 words)

- 'How to' texts (890,000 words)
- Academic Abstracts (Summaries) (445,000 words)
- Academic Articles (13,000,000 words)
- Biographies (300,000 words)
- Business letters (38,000 words)
- Business Texts (960,000 words)
- Easy Reading (113,000 words)
- Fiction (9,500,000 words)
- Law texts (440,000 words)
- Miscellaneous (2,800,000 words)
- Newspaper Articles (2,350,000 words)
- Reports (7,200,000 words)
- Reviews (books and software) (65,000 words)
- Song Lyrics (1100+, 225,000 words)
- Speeches (political and gov'n't) (3,560,000 words)
- TV Dramas (5,700,000 words)
- All available texts (47,600,000 words)

NOTE: The d... when you clic... approximation... class of the w...

LANGUAGE LEARNING EXERCISES

rogram is NEVER 100% accurate. For example, ... The classification given here is a close ... just use your human judgment in deciding the

Figure 26: *Word Neighbors* Corpora

It is not clear from the name of a corpus what it actually includes. For example, “Newspaper Articles” contains mostly articles local to Hong Kong, but this is not clear. Our suggestion to solve this problem is to create subdivisions of corpora that are clearer. Addition of more specialized corpora would also be useful. The problem of students not reading the directions was also present in *Word Neighbors*, where the span feature was ignored and misunderstood. Further clarification on this feature might be appropriate to add to the main *Word Neighbors* site, as well as the tool in *Check My Words* if that suggestion is not taken.

5.4 Future Work

Professor Milton has developed another piece of software called *Mark My Words*. The purpose of this software is to allow the teacher to mark students' writing electronically. It facilitates commenting on errors and lets the teacher point the student towards specific resources in *Check My Words*. When used together with *Check My Words*, students have the necessary resources to correct their errors. This allows the teacher to hold the students accountable for the correction of their errors. This is a good way for students to learn how to use the software, as it complements one of the limitations of *Check My Words* - that the student needs to spot his or her own errors. Once a student uses the suggested resource to correct his or her error, he or she is likely to remember the process and less likely to make the same error in the future. The use of *Mark My Words* by the teacher would be highly beneficial to students learning to use *Check My Words*. However, a future study must be conducted to evaluate the feasibility of incorporating both *Mark My Words* and *Check My Words* as a set into a classroom.

The new education system being adopted by Hong Kong may produce students who are more willing to adopt discovery-based learning. In turn, this may make it easier for students to learn to use *Check My Words*. Schools may also incorporate the software into their curriculum to promote discovery-based learning. The incorporation of *Check My Words* into a class would also address the influence of the instructor, which affected our study. This suggests that a re-evaluation of the software after the introduction of this new system may be appropriate.

In conclusion, *Check My Words* is effective in improving students' English writing skills. However, adding more features to the software and making it more user-friendly will make it

more attractive for students to use. We also discovered that the teacher plays a vital role in the blended learning environment, which is necessary to provide direct feedback when the student has questions about using the software. Also, the new education system being adopted in Hong Kong may make it easier to spread the use of *Check My Words*.

Bibliography

Bardin, D. (2000). Discovery Learning. In Hoffman, B. (Ed), *Encyclopedia of Educational Technology*. Retrieved January 21th, 2007 from <http://coe.sdsu.edu/eet/Articles/discoverylearn/index.htm>

--This web document in Encyclopedia of Education Technology defines the discovery learning. It also describes how to apply the discovery learning to different situations. We can use the information in this web document to be one of the sections in our background chapter.

Bates, L., Lane, J., Lange, E. (1993). *Writing Clearly: Responding to ESL Compositions*. Boston: Heinle & Heinle Publishers

--This book discusses ways to respond to students' sentence level and content mistakes in ESL writing. It also introduces ways to help students' correct common errors effectively.

Bruner, J. (1960). *The Process of Education*. Cambridge: Harvard University Press

---Bruner is one of the founders of the discovery based learning approach. This book focuses on the restructuring of education and cognitive benefits of this style of learning.

Conway, J. (1997). Educational Technology's Effect on Models of Instruction. Retrieved January 21st, 2007 from <http://copland.udel.edu/~jconway/EDST666.htm#dislrn>

--This web document describes the shift of the learning styles that is largely memorized to one that is largely process oriented. One of the examples the author describes is "discovery learning".

Davis, T. M., Murrell, P. H., Hollister B., & Rockey, A. (Eds). (1993). *Turning Teaching into Learning: the Role of Student Responsibility in the Collegiate Experience*. Washington, D.C.: The George Washington University.

--This book discusses student responsibility, which the authors define as the quality of effort that a student puts in to his or her college life. This is relevant to our project because students are responsible to make the best use that they can out of the software we are testing.

Doff, A. (1988). *Teach English: A Training Course for Teachers*. Cambridge: Cambridge University Press

---This book is a guide for ESL teachers to improve their own teaching skills. Tests are included, and some examples are provided.

Downey, M., & Kelly, A. V. (1986). *Theory and Practice of Education: An Introduction*. London: Paul Chapman Publishing Ltd.

---This book covers a range of teaching issues, from learning styles to classroom behavior. Helpful in describing the cognitive process in the use of discovery based learning.

Education and Manpower Bureau. (2004). The New Academic Structure for Senior Secondary Education and Higher Education. Retrieved February 25th, 2007 from <http://www.emb.gov.hk/index.aspx?langno=1&nodeID=4702>.

Evans, S. (1996). The Context of English Language Education the Case of Hong Kong.

[Electronic version]. *RELC Journal*, 27(2), 30-55. Retrieved November 10th, 2006 from Eric database.

--Journal article describing the instruction of English within the Hong Kong school systems. Details include classroom environment, teaching styles, and the English language syllabus developed by the Hong Kong government. This article is relevant to the project in that it discusses the current methods used in Hong Kong schools for teaching English.

Flood, J., Lapp, D., Squire, J., & Jensen, J. (Eds.) (2005). *Methods of Research on Teaching the English Language Arts*. Erlbaum Associates. Retrieved November 5, from <http://site.ebrary.com/lib/wpi/Doc?id=10106608>

--The chapter on “Critical Pedagogy and Social Change” describes methods that countries can use to educate their citizens in one language under the pressures of another language. This applies to Hong Kong because they need to know English to become successful, but their entire culture is based around Chinese.

Gaskell, D., & Cobb, T. (2004). Can Learners Use Concordance Feedback for Writing Errors. *System*, 32(4), 304-319.

--This report attempts to make concordance information accessible to lower-intermediate L2 writers. It describes a URL-link technology that allows teachers to create and embed concordances in learners’ texts. This report is useful for writing the “user feedback” section in our background chapter.

Gilbreath, D., Kilgore, B., O'Neil, R., & Simone, M. (2005). *Educating Hong Kong's Youth*. (Unpublished IQP Project Report No.CXP-0503). Worcester, MA: Worcester Polytechnic Institute.

--This past IQP report describes the research and analysis conducted for the improvement of a high school (CCVC) in Hong Kong. In the result session, they compare another high school where students have high motivation and good behavior with the poor behavior and low motivation in CCVC. I think we can apply the similar comparison and contrast methods to our project as well.

Heaton, B. J. (1991). *A Guidebook to Theory and Practice*. London: Pearson P T R.

--This book discusses how to create various types of tests for an English classroom. It also provides various examples.

HKSAR Government, Information Service Department. (2001). Education. In *Hong Kong 2001* (English Version Ed). Hong Kong: The Information Service Department of the HKSAR Government.

--The "Education" chapter in this book provided very useful information about the history of education system in Hong Kong, especially the establishment of using English as a medium of instruction in college. It also gives the reader an insight about the history of the higher education institutions including HKUST.

HKUST College of Lifelong Learning. (2004). Mission and Objectives. Retrieved December 1st, 2006 from <http://www.cl3.ust.hk/about/background.html>

Hong Kong University of Science and Technology. (2006). Mission and Vision. Retrieved December 1st, 2006 from <http://www.ust.hk/en/ab/eab0002.html>

Lee, K. C. (2001). Selecting and Integrating CALL software programs into the EFL Classroom. Hong Kong: The Information Technology & Multimedia in English Language Teaching Conference (Eric Document Reproduction Service No. ED454736).

--This report talked about the use of computer assisted language learning (CALL) software programs by teachers in their classroom. The software programs were designed to help teachers to facilitate the EFL teaching. However, we can apply some of the useful techniques and methods in the report and make some recommendations to improve the use of web-base English learning software tools, promoting students to become independent writers.

Littlewood, W. (2004). Students' Perspectives on Interactive Learning. In Kwo, O., Moore, T., & Jones, J. (Eds.), *Developing Learning Environments*. Hong Kong: Hong Kong University Press.

--This article discusses students' feelings and comments on interactive learning styles.

Littlewood, W., & Liu, N., F. (1996). *Hong Kong Students and Their English*. Hong Kong: The English Center, The University of Hong Kong.

--This article reports and discusses some of the information gathered by the LEAP Project at the University of Hong Kong about the English learning experiences, proficiency and perceptions of students entering college education in Hong Kong.

Martin, K. (2000). Discovery Learning. In *Alternative Modes of Teaching and Learning*.

Retrieved January 28th, 2007 from

http://www.csd.uwa.edu.au/altmodes/to_delivery/discovery_learning.html

Milton, J. (2005). Resource-Rich Web-Based Feedback: Helping Learners Become Independent

Writers. In Hyland, F., and Hyland, K. (Eds.), *Feedback in Second Language Writing*.

Cambridge: Cambridge University Press.

--In this chapter, Professor Milton briefly reviews some of the problems in manual and automatic feedback to student writing. He also describes the web-based discovery based that encourages learner to look up information in online resources as they write and revise.

This chapter gives us a general idea for the previous studies Professor Milton has conducted regarding the My Words software.

Milton, J. (2006). A Short Course on Check My Words (Unpublished Document). Hong Kong:

Hong Kong University of Science and Technology.

--This booklet describes the use of online resources to correct common errors and to write more accurately and fluently.

Oliver, M. (2000). An Introduction to the Evaluation of Learning Technology. Retrieved Nov,

5th, 2006, from http://ifets.massey.ac.nz/periodical/vol_4_2000/intro.html

--This page discusses the evaluation of learning technology. This directly relates to our project as the evaluation of learning technology(which encompasses educational multimedia, web-based learning, computer assisted learning, etc) is what we are being asked to do.

Oxford, R. L., Hollaway, M. E., & Murillo, D. (1992). Language Learning Styles: Research and Practical considerations for Teaching in the Multicultural Tertiary ESL/EFL Classroom. *System*, 20 (4), 439-445.

--The language learning styles which deviated from the traditional EFL learning styles are described in this article and the information provides can be considered as the resources for the background of the IQP proposal.

Reid, J. (1987). The Learning Style Preferences of ESL Students. *TESOL Quarterly*, 21 (2), 87-111.

--The author's comparative study of college students learning English as a second language (ESL) reported significant cultural differences in visual, auditory, kinesthetic, tactile, group, and individual learning styles among Korean, Chinese, Japanese, Malay, Arab, and Spanish students. We can use what she found from the study to be part of background chapter information.

Rao, H. Z. (2006). Matching Teaching Styles with Learning Styles in East Asian Contexts.

Retrieved November, 6th, 2006, from <http://www.zlgy.cn/wen/yingyu/200606/20815.html>

--In this article, the author discussed the significance of matching teaching and learning styles in East Asian countries and provided some empirical evidence to indicate that East Asian students exhibit distinctive EFL learning styles.

Riley, F. (2006). CALL@Hull. Retrieved Nov. 12, 2006, from

<http://www.fredriley.org.uk/call/index.htm>

Salant, P., & Dillman, D. A. (1994). *How to Conduct Your Own Survey*. New York: John Wiley & Sons.

--This book shows the group members with little or no basic knowledge how to conduct a meaningful survey. It also provides different approaches regarding how to write out a survey as well as analyzing the data after the survey. This book is very helpful to give us a general idea to design our own survey related to the project.

Tedick, D. J. (2004). *Second Language Teacher Education: International Perspectives*. Lawrence Erlbaum Associates, Incorporated. Retrieved Nov. 5, 2006 from <http://site.ebrary.com/lib/wpi/Doc?id=10084631>

Tollefson, J. W. (2002). *Language Policies in Education: Critical issues*. Mahwah, N.J.: Lawrence Erlbaum Associates, Inc. Retrieved Nov. 5, 2006 from <http://www.netlibrary.com/Details.aspx>

--This book describes different methods of researching how the English language is taught. This skill will be very important in Hong Kong, as we have to research how the English language is taught so we can determine whether or not it is effective.

Tuovinen, E. J. (1994). *Cognitive Load and Discovery Learning*. Retrieved January 28th, 2007 from <http://www.aare.edu.au/97pap/tuovj113.htm>

Ware, P., and Warschauer, M. (1996). *Electronic Feedback and Second Language Writing*. In Hyland, F., and Hyland, K. (Eds.), *Feedback in Second Language Writing*. Cambridge: Cambridge University Press.

Warschauer, M. (1996). Computer Assisted Language Learning: An Introduction. Retrieved November, 18, 2006, from <http://www.ict4lt.org/en/warschauer.htm>

--In this article, Mark Warshauer provides an overview of Computer Assisted Language Learning(CALL). He focuses on the pedagogical questions considered in using computers in the classroom.

Warschauer, M., & Healey, D. (1998). Computers and Language Learning: An Overview.

Retrieved November 19, 2006, from <http://www.gse.uci.edu/faculty/markw/overview.html>

--In this article, Mark Warshauer and Deborah Healey discuss Computer Assisted Language Learning(CALL) and provide information on the history of CALL and current practices and research areas of CALL.

Appendix A: Sponsor Description

The Hong Kong University of Science and Technology (HKUST) opened in October 1991 as a technological university dedicated to the advancement of learning and scholarship, with special emphasis on research, postgraduate education, and close collaboration with business and industry. The mission of HKUST is to advance learning and knowledge through teaching and research in science, technology, engineering, and management and business studies and to further assist in the economic and social development of Hong Kong (Hong Kong University of Science and Technology, 2005).

All courses at HKUST are taught in English except selected courses in Humanities, Social Science and the Chinese language. Therefore, the importance of English language learning is significant for HKUST (Hong Kong University of Science and Technology, 2005).

The Hong Kong University of Science and Technology is a public university, funded primarily through research as well as government assistance. Student fees, other sources of research support and donations from Hong Kong community and HKUST alumni are also significant contributors to the education in the university (Hong Kong University of Science and Technology, 2005).

Table 2: Student Populations (Hong Kong University of Science and Technology, 2005)

Students	Undergraduate	Postgraduate ¹	Total
Science	1,406	373	1,779
Engineering	2,094	1,424	3,518
Business & Management	2,067	904	2,971
Humanities & Social Science	N/A	421	421
Joint School Programs	N/A	65	65
UG Dual Degree Programs	69	N/A	69
Total (as at Jan 2006)	5,636	3,187	8,823

Table 3: Faculty Populations (Hong Kong University of Science and Technology, 2005)

Faculty	Regular	Visiting	Total
Science	107	10	117
Engineering	141	9	150
Business & Management	103	13	116
Humanities & Social Science	45	5	50
Total (as at Jan 2006)	396	37	433

Our IQP will be working with one of the college divisions in HKUST called College of Lifelong Learning Ltd (CL3). The initiator of our project, Dr. John Milton, is the Director of English Language Courses for the CL3. CL3 is a non-profit organization owned by HKUST. The mission of CL3 is to provide secondary school dropouts an alternative way to gain undergraduate degrees and to assist the economic and social development of Hong Kong by educating youth for the future (HKUST College of Lifelong Learning, 2004).

CL3 is currently incorporating two international education programs for students and teachers in Hong Kong: International Schools CyberFair and ThinkQuest. The purpose of International

¹ Graduate

Schools CyberFair is to encourage students to use the Internet to share resources, and establish a partnership with their local communities (HKUST College of Lifelong Learning, 2004). The latter refers to “an international competition where students and teachers engaged in collaborative, project-based learning through creating educational websites with an aim to teach others.”

Appendix B: McCarthy, Barbara Interview Summary

Armen: What is your position here at WPI?

Barbara: I am a part time instructor of communications in the Humanities and Arts department.

Armen: And you teach classes, too?

Barbara: I've been teaching here for 15 years, since 1991, and it started as a full-time position. I'm gradually working into retirement, and one of my main goals is working with international students. The only course I teach now is the speech for international students. I used to teach the writing, and I'm phasing that out.

Armen: Is there any sort of certification required to teach ESL classes?

Barbara: Well, at WPI, I don't think there is, technically. It's wise to have some sort of background in it, and I do. In addition to my graduate study in English literature and writing composition, I went to Clark University to get certified. It's more a certificate of achievement than state certification. It wouldn't certify me to teach at a public school. Someone like the director of ESL, Billy McGowen, has taken courses in that. He has had experience with the Peace Corp. Some people get into this field without having specific training in how to do it. If you're doing it in public schools, you would have to have specific training.

Armen: Do other instructors in the ESL program teach just ESL, or other classes also?

Barbara: Well, I know that professor Nikitina teaches writing, and a number of literature courses too. She teaches American history for international students, and also teaches normal history courses.

Armen: What are the usual class sizes for international students?

Barbara: For writing and speech, 15 maximum. A lot of individual attention and conferences.

Zach: What other methods of teaching do you use besides conferences with students?

Barbara: In the classroom, I have students work with peer tutors. They have to write a critique for their other classmates. Outside of the classroom,

Armen: Do you use any computers or computer software for teaching?

Barbara: Well, I don't teach the writing class anymore, but I know professor Nikitina uses Refworks to create a bibliography. When I taught the writing, I would have the students take a workshop at the library to teach them about the research searching tools that are available online. Right now, I am not using software for the speech class, but I am using software. I will use the media devices in the classrooms and tape the student speeches to show them how they present. I try not to rely too much on media devices, because I do not want them to be distracted by the technology. I do not want technology to replace the speech skills.

Armen: Before we run out of time, I know you have to go. How do you think the ESL program could be improved at all?

Barbara: I really think we've got it to the best stage that it can be. The teachers at WPI are lucky, in that we have an initial screening. Students do not get in here unless they have a 550 in the TOEFL (Test of English as a Foreign Language). It tests your reading, vocabulary, listening, and speaking skills. The students must pass this score to get in to WPI, or go to a summer program with Bill McGowen. It is not being done over the computer, I don't know how they are doing it.

Zach: Thanks very much, you've been very helpful.

Min: Yes, you have.

Appendix C: Nikitina, Svetlana Interview Summary

M: What is your current position at WPI?

N: I am an Adjunct Assistant Professor of English.

M: Is there any sort of certification required to teach EFL classes?

N: Well, I do have a doctoral degree in teaching English in general and English literature. Actually I have had training in teaching EFL, but I don't have EFL certification.

M: What are the usual class sizes for the writing class?

N: The class size is limited to 15. Class sizes of 8 to 10 seem to be the best, but officially the limit is 15

M: What methods do you use in teaching the writing class?

N: There is a variety of methods. I certainly like to involve students as much as I can: having them do presentations, having them do exercises, and basically the method I used is workshop. It is not a lecture class, it is not taking note class, it is a "do things" class. People come and they are expected to react, to produce things and to critique. I see writing as a skill.

M: What tools do you used in the classroom to help teach English?

N: Well, as you know the classroom has very little technological tools and I thought this is fine for a while. Now I feel....Actually next year I am going to request more equipped classroom, because with PowerPoint and the all the electronic means, there are so many software tools students can use to write that demonstrating them in the class, or using them in the class could be advantage, especially for international students.

M: Do you encourage students to use the web-based software tools in English learning?

N: Definitely. There are a lot of interactive exercises on the web that students can use and should use without fear that their grades will be low. They can definitely use those tools and for me to be able to show them in class will encourage them to use the software tools. But I don't have the capabilities; I would not turn class into a technology demonstration class. I listed all the links to grammar exercises or the potentially useful websites. But I don't know if students use the websites. But if I show the links in the class, if the students see how helpful they could be, they may be more inclined. But again this is only part of class, I would not turn the class into the PowerPoint presentation class.

M: Do you feel you have enough time to teach the subject matter?

N: Very tight course and very little time. I think that, for the writing class, it should be a two term class. To give students the time to complete more writing, I want to give the students more time. I would also like to increase the total length of the class to an hour and 50 minutes.

M: What are the assignments for students daily or weekly?

N: There is a writing assignment which consists of several parts: grammar, vocabulary, analysis and there is a final writing project which students work on from the beginning of the course to the end. There is one major assignment, but there are also 5 small ones.

M: How are students encouraged to interact in class?

N: I like to do that. When students do grammar presentations, for example, I try to be the listener, run the exercises, and call on other students. I like to do more in class critique so people can read each other's writing and give feedback to each other. Students appreciate that. The problem is that with some international students said they did not know enough themselves, how they could tell another person. But even if you may feel you are not good at grammar, you may be very good at analytical organization. Or you may be good at vocabulary, but may not be good

at composition. So each person contributes something valuable. I would like to do more, but with time so short, I don't feel I can.

M: Do you feel students' writing skills improved over the course time?

N: Yes, I try to make the measure of progress more tangible. For example, students have to learn 10 new words, not just write them down but they have to use them in their sentences. The students appreciate it and they feel that their vocabulary skills are increasing.

I hope some of the things get clarified through grammar presentations, and I give a lot of grammar feedback when I correct students' work. Now I do electronic submissions, so all of my comments are online. The students can read about it and think about them.

M: Do you have time to give students direct feedback?

N: Yes.

M: How are your comments made?

N: When I make my comments, I try to be explicit. I rarely get questions like "What do you mean?", "What do I need to improve?" I think I make it clear in my comments. But do people improve in their composition? I hope they do, I hope this process of slowly improving one piece over several revisions gets them to review that process. The text book that we have is not great. I wish we had a better text book, but it is a source.

M: Have there been any noticeable problems with your current system?

N: Yes, there are some.

M: How did you discover them?

N: Every time I teach, I teach differently. I introduce electronic submissions for students to submit their assignments. However, I didn't receive the electronic files in the first week of the

class. Therefore, there are some technological problems that need to be improved. The room needs to be better equipped and the proposal to increase the length of class time is in the process.

M: If you changed the class time to an hour and 50 minutes, how often does the class meet weekly?

N: Twice a week instead of 3.

You need time to write. If the class met twice a week, the students would have 2 days in between to think about the topics, to organize, and to research. I think it would be beneficial to give them this extra time to reflect on their work.

Appendix D: Software Testing

Experimentation Methods

An experiment can be divided into the following four stages: objective definition, design, execution, and result analysis. During the objective definition stage, a hypothesis is formed in terms of the variables that will be involved in the experiment. The design stage involves specifying the experiment plan. The execution stage is simply the conducting of our proposed experiment, and the data collected during this period is analyzed in the analysis stage. In the analysis stage, the results of the experiment are tested for statistical significance, meaning that analyses are performed to determine whether the results of the experiment were due to chance or due to the experimental variable.

The Goal Question Metric Approach

The Goal Question Metric (GQM) approach is a top-down approach to making measurements. According to Basili *et al.* (The Goal Question Metric Approach), measurement can not be defined in a bottom-up approach because there are too many different characteristics to observe in software.

There are three steps in the GQM approach, as suggested by its name. These steps are:

1. Define specific goals.

2. Determine a set of questions that need to be answered for the goals to be achieved.
3. Associate Data with each question to answer the question quantitatively.

Appendix E: Pre-test

Quiz - Common Errors in Employment Application Letters 1/15/2007

Name: _____ ID# _____

Please circle correct answer.

1. I can be a good teacher because
 - a. I am able to cope with the problems arisen by the students.
 - b. I am able to cope with the problems raised by the students.

2. Which of the following is correct?
 - a. I would be appreciated it if you can contact me as soon as possible.
 - b. I would appreciate it if you can contact me as soon as possible.
 - c. I would be appreciated if you can contact me as soon as possible.

3. I am sure that
 - a. I can be benefit to your company.
 - b. I can be of benefit to your company.

4. Which of the following is correct?
 - a. As far as I know the requirements for the job match my skills exactly.
 - b. As I know the requirements for this job match my skills exactly.

5. I am able to perform editorial work
 - a. efficiently
 - b. with high efficiency

6. Which of the following is correct?
 - a. I am an initiative and hard working person.
 - b. I have initiative and am a hard working person.

7. He is an exceptionally hard working person.
 - a. On the other hand, he can work independently.
 - b. On the other hand, he has trouble working independently.

8. I am an ideal candidate for this position because
 - a. I can speak fluent Mandarin.
 - b. I could speak fluent Mandarin.

9. I worked in a part-time job last summer.
 - a. During I worked in this company, I learned graphic design.
 - b. During the time I worked in this company, I learned graphic design.

10. Which of the following is correct?
- I searched for an answer, but was not successful.
 - I searched an answer, but was not successful.
 - I found an answer, but was not successful.
11. I learned
- the way of fixing emergencies.
 - how to handle emergencies.
 - the way to fix emergencies.
12. I have a
- rigid grasp of logical thinking.
 - firm grasp of logical thinking.
13. I have experience
- on responding to customers.
 - in responding to customers.
14. Which of the following is correct?
- I have many experiences in this type of work.
 - I have a great deal of experience in this type of work.
 - I have much experience in this type of work.
15. Which of the following is correct?
- I am concerned about these issues.
 - I concerned about these issues.
 - I concern these issues.
16. Which of the following is correct?
- I got rich knowledge in this field.
 - I have rich knowledge in this field.
 - I have extensive knowledge in this field.
 - I got extensive knowledge in this field.
17. Which of the following is correct?
- I am enthusiastic about the job.
 - I am enthusiastic to the job.
 - I am enthusiastic for the job.
18. Which of the following is correct?
- I have the patience of this job.
 - I have the patience for this job.
 - I have the patience in this job.
19. Which of the following is correct?

- a. I know how to provide a comfort environment for passengers.
 - b. I know how to provide a comfortable environment for passengers.
 - c. I know how to provide a comforting environment for passengers.
20. I am writing to apply for the position
- a. posted on the website.
 - b. which posted on the website.
 - c. was posted on the website.

Appendix F: Post-Test

Name: _____ ID# _____

Please circle the correct answer.

1. Which of the following is correct?
 - a. It worths the trouble.
 - b. It is worth the trouble.

2. Which of the following is correct?
 - a. I am too tired to go out today. Besides, it is raining.
 - b. I am too tired to go out today. Besides, it is sunny.

3. Although we had seen similar questions before,
 - a. but we still found this one difficult.
 - b. we still found this one difficult.

4. Which of the following is correct?
 - a. Most people in Hong Kong believe this.
 - b. Most of people in Hong Kong believe this.

5. I can be a good teacher because
 - a. I am able to cope with the problems arisen by the students.
 - b. I am able to cope with the problems raised by the students.

6. The fast growing _____ of China is becoming a major international force.
 - a. economy
 - b. economic

7. Which of the following is correct?
 - a. I've searched that letter everywhere, but was unsuccessful.
 - b. I've searched for that letter everywhere, but was unsuccessful.
 - c. I've found that letter everywhere, but was unsuccessful.

8. Which of the following is correct?
 - a. I have initiative and am a hard working person.
 - b. I am an initiative and hard working person.

9. Which of the following is correct?
 - a. Try to see it from my perspective,
 - b. Try to see it of my perspective,
 - c. Try to see it for my perspective,

10. I am able to perform editorial work
- efficiently
 - with high efficiency
11. I have a
- bad grasp of logical thinking.
 - good grasp of logical thinking.
12. Which of the following is correct?
- It is a must to study hard for a good grade.
 - It is necessary to study hard for a good grade.
13. Which of the following is correct?
- Please remind me on the meeting.
 - Please remind me of the meeting.
 - Please remind me to the meeting.
14. Which of the following is correct?
- My boss concerns about my poor performance.
 - My boss is concerned about my poor performance.
 - My boss concern my poor performance.
15. Which of the following is correct?
- I would be appreciated it if you can contact me as soon as possible.
 - I would appreciate it if you can contact me as soon as possible.
 - I would be appreciated if you can contact me as soon as possible.
16. Which of the following is correct?
- I have only a few friends.
 - I have only few friends.
 - I have only several friends.
17. Which of the following is correct?
- He demanded a higher salary.
 - He demanded for a higher salary.
 - He demanded about a higher salary.
18. Which of the following is correct?
- My mother doesn't have the patience for cook.
 - My mother doesn't have the patience to cook.
 - My mother doesn't have the patience in cook.
19. Which of the following is correct?
- The success of a man can not always be measured by his wealth.
 - The successful of a man can not always be measured by his wealth.

20. You may be interested in the results of the English test.
- a. They are extremely surprised.
 - b. They are extremely surprising.

Appendix G: Workshop Attendance and Test Results

Class 1

Table 4: Class 1 Workshop Attendance and Test Results

ID No	Demo (1st Workshop), Monday, 1/15/07	2nd Workshop, Tuesday, 1/23/07	3rd Workshop, Thursday, 2/1/07	Pre-test (n=42)	Post-test (n=35)
s0610106	Present			40%	35%
s0610102	Present			45%	50%
s0650006	Present			30%	
s0650017	Present			45%	
s0650019	Present			35%	55%
s0650020	Present			35%	25%
s0650021	Present			5%	
s0650024	Present			45%	
s0650025	Present			55%	30%
s0650026	Present			45%	
s0650028	Present			25%	
s0650031	Present			50%	50%
s0650035	Present			45%	
s0650037	Present			75%	45%
s0650038	Present			20%	45%
s0690002	Present			35%	45%
s0690004					45%
s0650002	Present	Present		50%	75%
s0650004	Present	Present		45%	60%
s0650005	Present	Present		55%	45%
s0650009	Present	Present		30%	55%
s0650010	Present		Present	35%	35%
s0650011	Present	Present		30%	50%
s0650014	Present	Present		55%	55%
s0650015	Present	Present		35%	35%
s0650016	Present	Present		35%	75%
s0650027	Present	Present		45%	40%
s0650030	Present	Present		40%	55%
s0650033	Present	Present		40%	45%
s0650034	Present	Present		50%	60%
s0650036	Present	Present		40%	55%
s0690001	Present	Present		20%	40%
s0690003	Present	Present		35%	

Table 5: Class 1 Workshop Attendance and Test Results (2)

ID No	Demo (1st Workshop), Monday, 1/15/07	2nd Workshop, Tuesday, 1/23/07	3rd Workshop, Thursday, 2/1/07	Pre-test	Post-test
s0210051	Present	Present	Present	20%	45%
s0550022	Present	Present	Present	25%	35%
s0650001	Present	Present	Present	25%	60%
s0650003	Present	Present	Present	55%	45%
s0650007	Present	Present	Present	35%	65%
s0650013	Present	Present	Present	30%	55%
s0650018	Present	Present	Present	30%	45%
s0650022	Present	Present	Present	45%	60%
s0650029	Present	Present	Present	35%	45%
s0650032	Present	Present	Present	45%	45%
Average Score				38.5%	48.9%

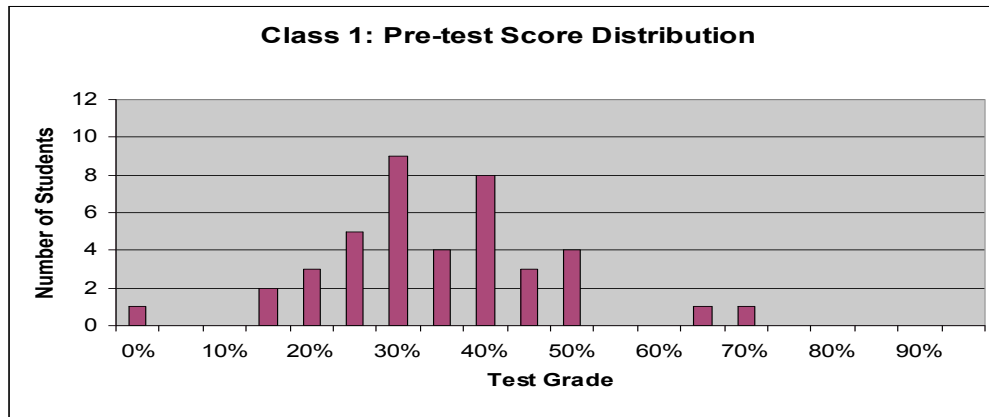


Figure 27: Class 1 Pre-test Result (n=42)

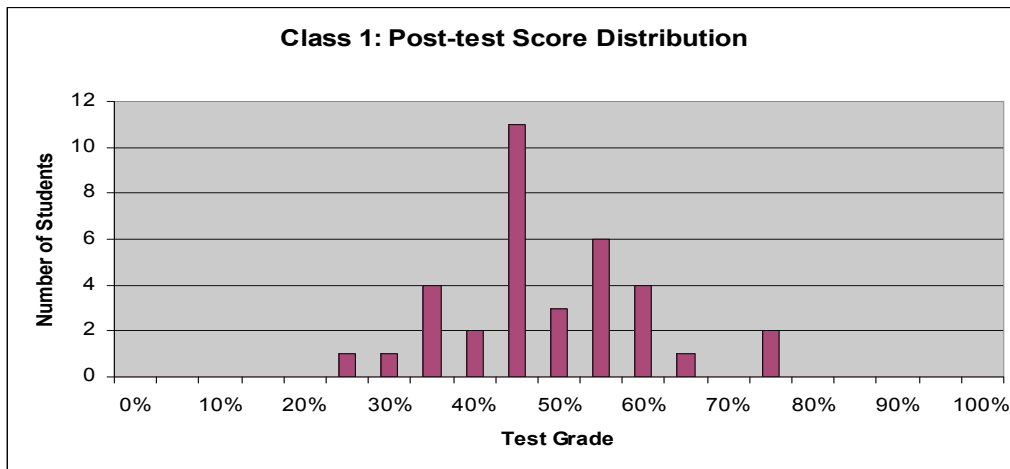


Figure 28: Class 1 Post-test Result (n=35)

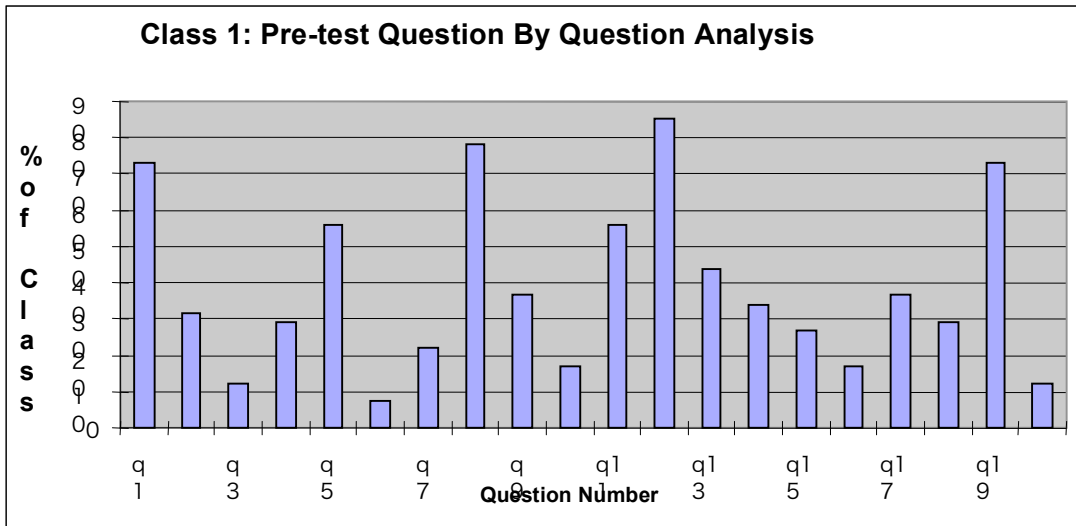


Figure 29: Class 1 Pre-test Questions Analysis

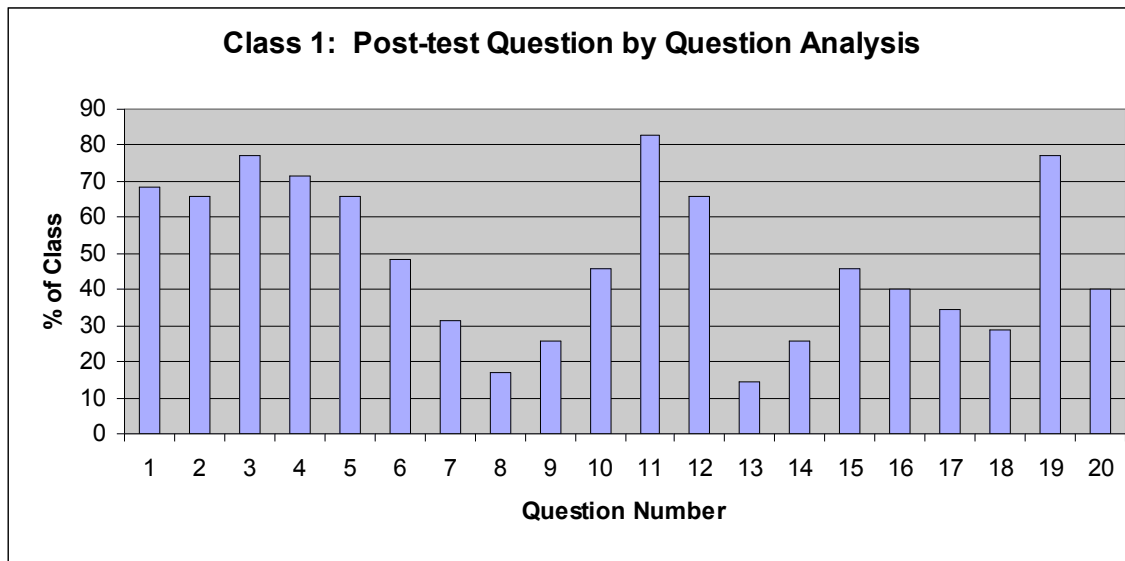


Figure 30: Class 1 Pos-test Questions Analysis

Class 2

Table 6: Class 2 Workshop Attendance and Test Results

Login ID	Demo (1st Workshop), Thursday, 1/18/07	2nd workshop, Friday, 1/26/06	Pre-test (n=18)	Post-test (n=15)
s0220068	present		25%	
s0310027	present	present	45%	50%
s0310075	present	present	50%	80%
s0310085	present		60%	80%
s0310086	present		35%	65%
s0310089	present		35%	
s0310093	present		85%	85%
s0310097	present		35%	35%
s0310098	present	present	85%	85%
s0310099	present		25%	
s0310100	present			50%
s0310108	present	present	35%	80%
s0310125	present	present	50%	75%
s0310132	present	present	45%	50%
s0310134	present		50%	65%
s0320018	present		30%	40%
s0420008	present	present	45%	65%
s0420009	present		45%	
s0420017	present	present	55%	70%
Average Score			46.4%	65.0%

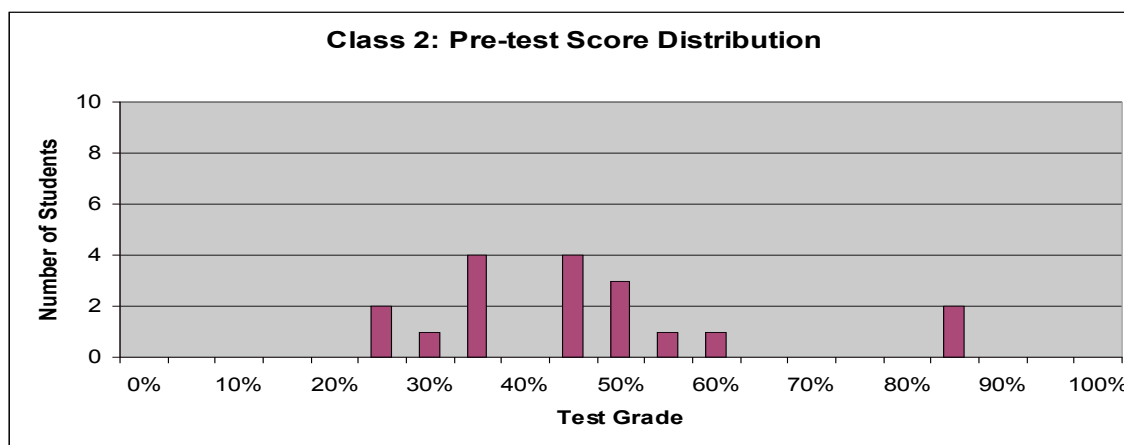


Figure 31: Class 2 Pre-test Score Distribution (n=18)

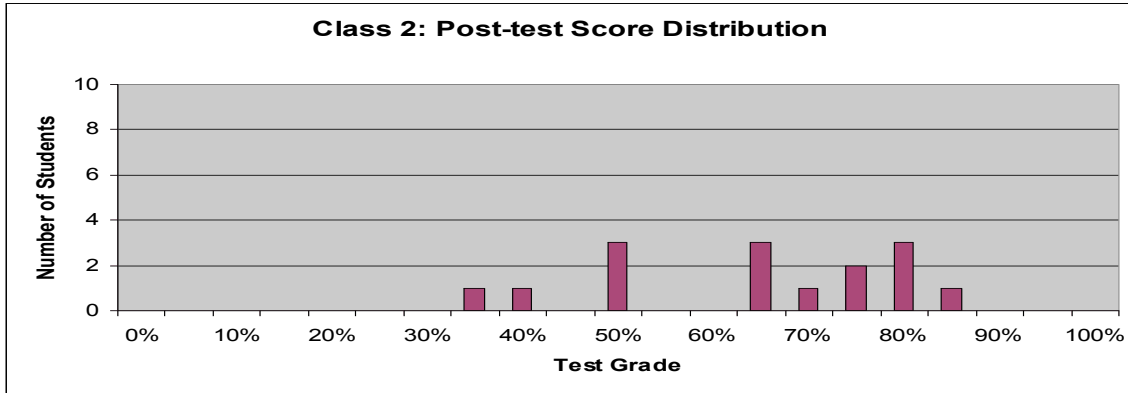


Figure 32: Class 2 Post-test Score Distribution (n=15)

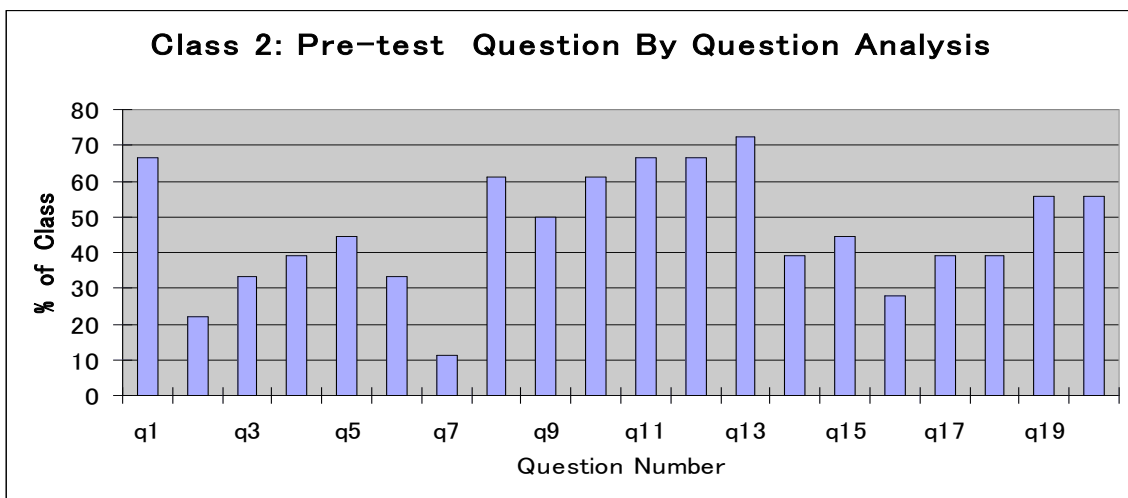


Figure 33: Class 2 Pre-test Questions Analysis (n=18)

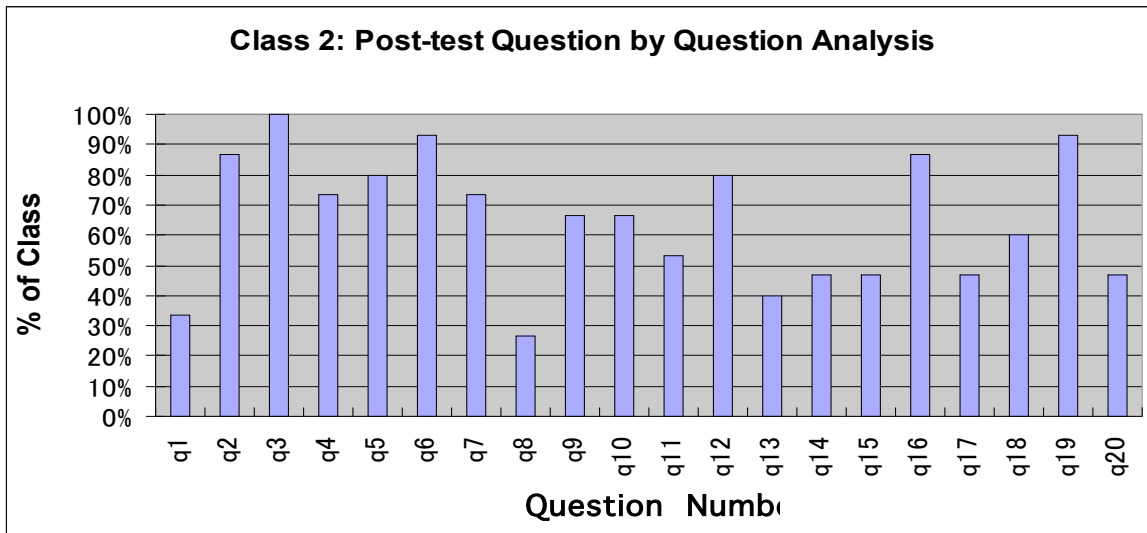


Figure 34: Class 3 Post-test Questions Analysis (n=15)

Class 3

Table 7: Class 3 Workshop Attendance and Test Results

ID #	Tuesday, 1/30/07, Demo (1st Workshop)	Friday, 2/2/07, 2nd Workshop	Tuesday, 2/2/07, 3rd Workshop	Pre-test (n=8)	Post-test (n=4)
0-6707856	Present	Present	Present	55%	85%
0-6660307	Present	Present		70%	75%
0-6660292	Present	Present		65%	90%
0-6680010	Present	Present	Present	60%	
0-6702612	Present		Present	60%	
0-6660369	Present			65%	
0-6708147	Present	Present	Present	60%	60%
0-6667977	Present	Present	Present	85%	
Average Score				65.0%	78%

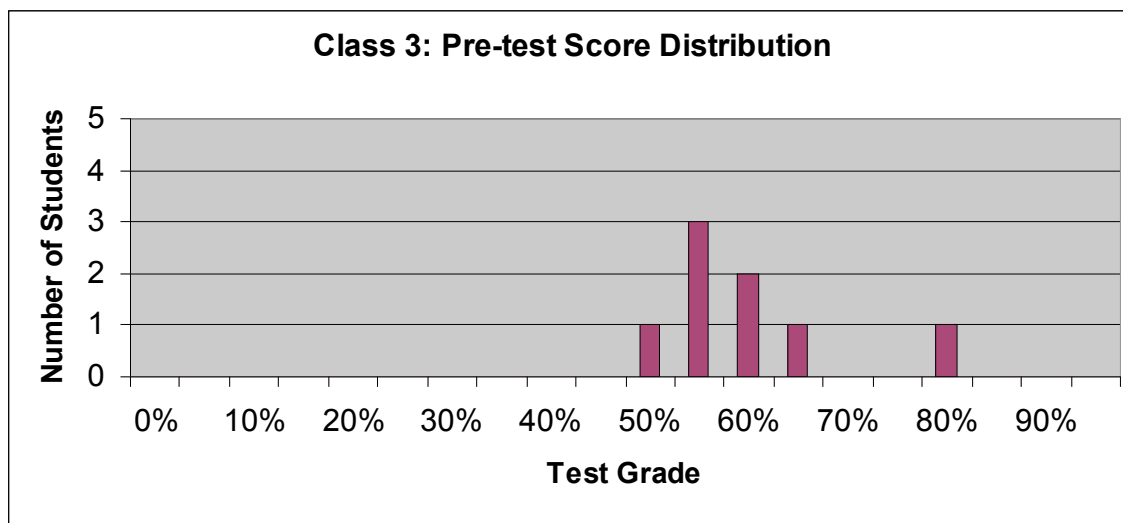


Figure 35: Class 3 Pre-test Score Distribution (n=8)

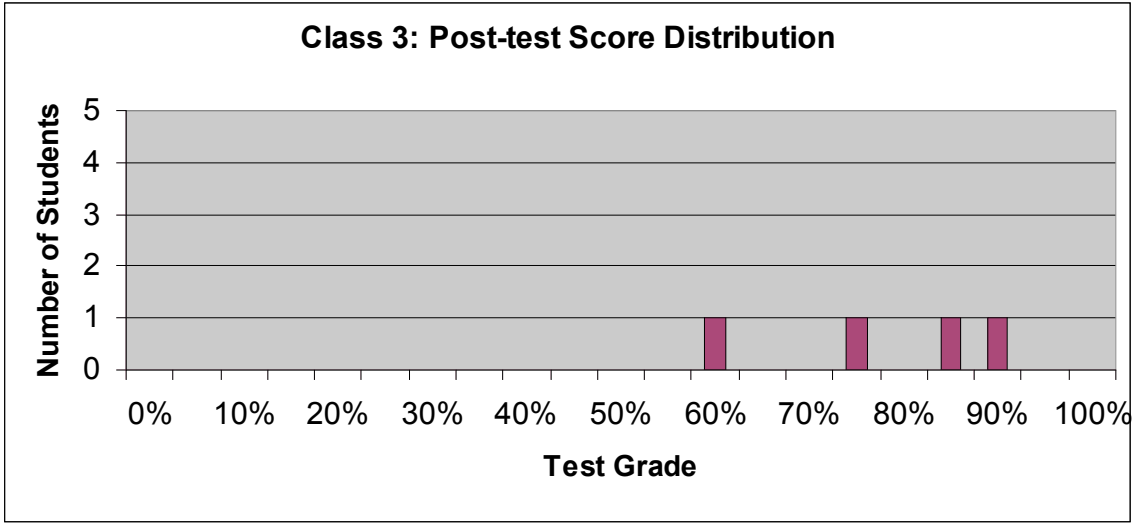


Figure 36: Class 3 Post-test Score Distribution (n=4)

Class 4

Table 8: Class 4 Workshop Attendance and Test Results

Class 6A, ID Number	Thursday 1/25/07, Demo (1st Workshop)	Friday 1/26/07, 2nd workshop	Friday, 2/2/07, 3rd workshop	Pre-test	Post-test
s6A12345	Present		present	40%	N/A
s6A12346	present			40%	N/A
s6A12347	present	present	present	40%	N/A
s6A12348	present		present	40%	N/A
s6A12349	present	present		45%	N/A
s6A12350		present	present	55%	N/A
s6A12351	present			45%	N/A
s6A12352	present	present	present	40%	N/A
s6A12353	present		present	20%	N/A
s6A12354	present			40%	N/A
Class 6C, ID Number					
s6C12345	present	present		60%	N/A
s6C12346	present			30%	N/A
s6C12347	present	present		45%	N/A
s6C12348	present			40%	N/A
s6C12349	present	present		40%	N/A
s6C12350	present			50%	N/A
s6C12351	present			50%	N/A
s6C12352	present			60%	N/A
s6C12353	present			45%	N/A
Average Score				43.4%	N/A

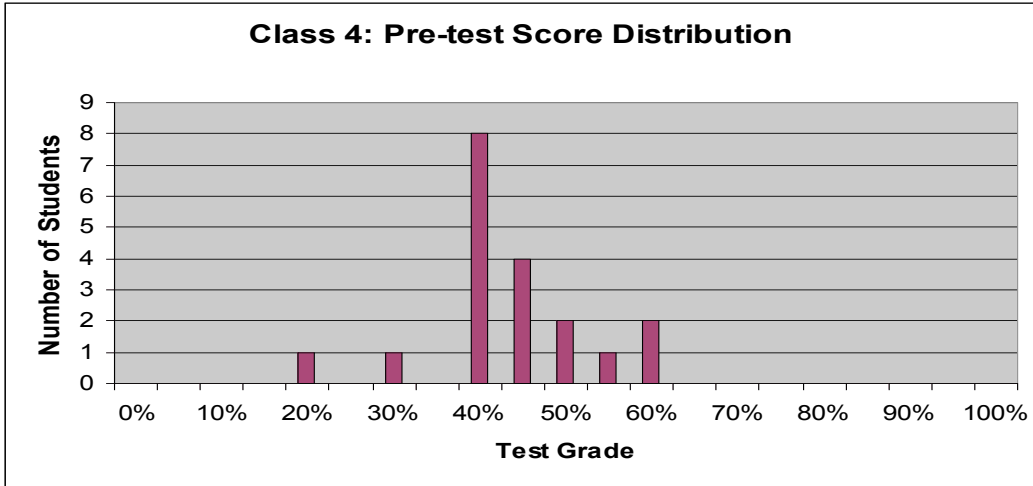


Figure 37: Class 4 Pre-test Score Distribution (n=19)

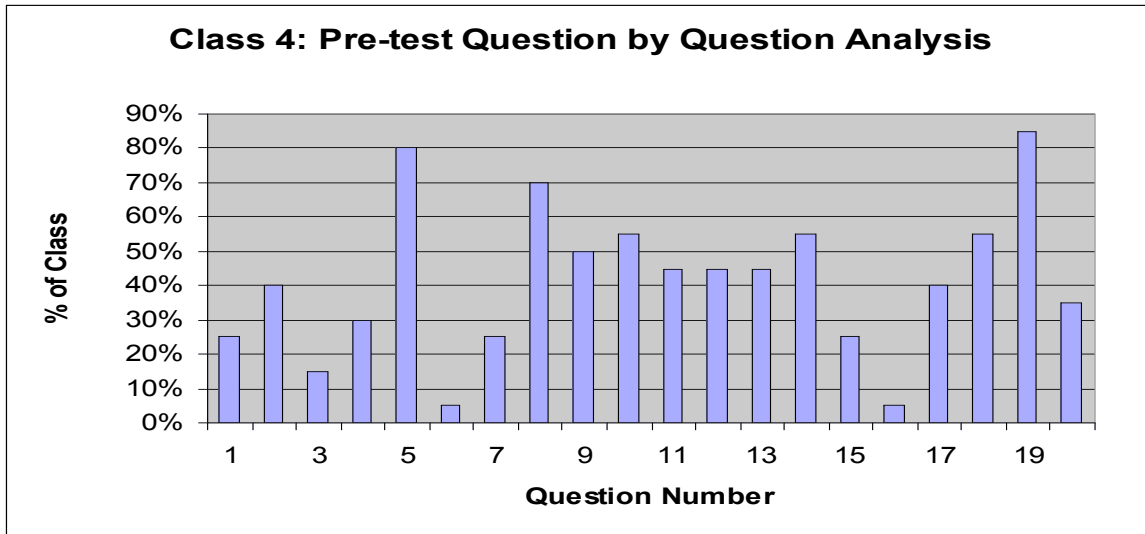


Figure 38: Class 4 Questions Analysis (n=19)

Class 5

Table 9: Class 5 Students Pre-test Results

ID #	Pre-test (n=28)
1	45%
2	45%
3	55%
4	65%
5	50%
6	35%
7	60%
8	75%
9	45%
10	55%
11	55%
12	45%
13	15%
14	25%
15	40%
16	50%
17	25%
18	40%
19	40%
20	45%
21	55%
22	35%
23	50%
24	50%
25	55%
26	70%
27	40%
28	60%
Average	47.32%

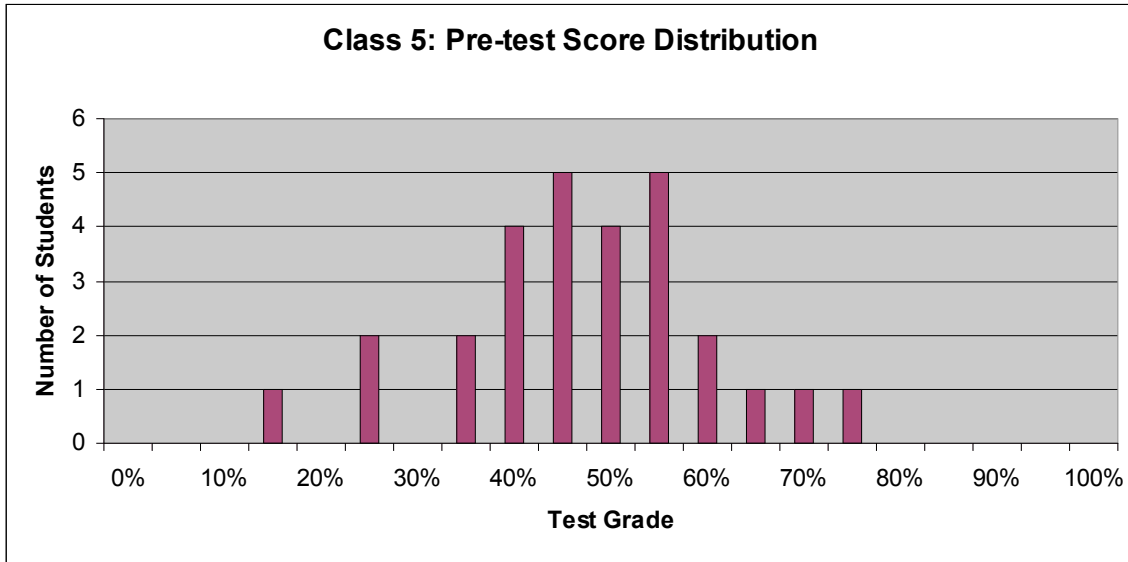


Figure 39: Class 5 Pre-test Score Distribution (n=28)

Appendix H: Workshop Observation

Class 1

During our first one-hour workshop with Class 1 in one of the post-secondary colleges in Hong Kong, we observed that many of the students had trouble concentrating on one task for very long. Many students also ignored our commands or asked their professor for a Cantonese translation. This observation led us to believe that the students had weak oral-aural English skills and did not understand many of our instructions. We remedied this by speaking more slowly and using the computer to display written versions of the instructions. We also observed that some students had difficulty using the computers. Although we provided visual examples on how to use the software using a digital projector, some students required one-on-one demonstrations.

In our second workshop with Class 1, the students appeared to have much more motivation than in the first workshop. The technological barrier did not seem to affect their use of the software. Although they did not attempt to discover new features of the software on their own, they were willing to explore a feature once we described it to them. Many of the students asked questions when they had difficulty in the activities we assigned to them. Once the 1-hour session was complete, most students remained in the classroom to complete the workshop activities they had begun earlier. This shows a much higher level of motivation than was displayed in the first workshop session.

Class 2

We held one extended (two-hour) workshop in Class 2, which was in the same post-secondary college as Class 1. We could not schedule another workshop with this class due to the students' exam schedule. In the two-hour workshop session, we covered most of the material in the workshop packet (see Appendix O). The students seemed to have better verbal English skills than Class 1 students but were much quieter. Their better English speaking skills could be attributed to the fact that they are studying to become translators and need to master the language. Instead of asking many questions, they attempted to figure out the activities on their own. However, they gladly accepted our help when they could not figure out how to complete an activity.

Class 4

We also conducted four workshops at Class 4. The students attending the workshops had better spoken English skills than the students from both Class 1 and Class 2. They also seemed more computer literate and were quick to figure out the software features. This may have been a result of the school having a relatively advanced computer lab. This led us to believe that students with more exposure to computers have a much easier time figuring out how to use the *Check My Words* software and its supplementary online materials.

Class 3

We conducted three workshops with students from Class 3. These students had on average a much higher level of oral English skills than the other students we met. They were much more motivated to figure out the features of the software. Some students came to the first workshop having explored the various *Check My Words* resources on their own time, speeding up their learning process. Much of this could be attributed to the fact that the students in this group were

at university level and older than the other groups. The students in this workshop were all originally from Mainland China, which may also have played a roll in their higher motivation and English skills. Their language training background may have differed greatly from the students educated in Hong Kong.

Class 4

We also conducted four workshops in Class 4. The students attending the workshop had better spoken English skills than the students from Class 1 and Class 2. They also seemed more computer literate and were quick to figure out the software features. This may have been a result of the school having a relatively advanced computer lab. This led us to believe that students with more exposure to computers have a much easier time figuring out how to use the *Check My Words* software and its supplementary online materials.

Appendix I: Student Questionnaire

English

1. General Questions

1. Are you male or female?

Male

Female

2. How old are you? _____

3. What form are you in?

4

5

6

7

University

4. What is your stream of study? (e.g. science, math, etc.)

2. Workshop Questions

5. How many workshops did you attend?

6. Do you think the workshops were useful?

Yes / No

7. Do you think the instructors did a good job?

Yes / No

8. What did you like about the workshop?

9. What did you dislike about the workshop?

3. Software Questions

10. What did you like most about the software?

11. What should be changed in or added to *Check My Words* to make it better?

12. Rank the parts of the software in order of usefulness.
(Use each number once; 1=most useful, 5=least useful)

- Check button _____
- English Grammar Guide _____
- Word Neighbors _____
- JustTheWord _____
- Online activities _____

13. Will you keep using *Check My Words*? Yes / No

14. Do you like using a computer to learn, listening to a teacher, or a mix of both? Why?

4. Personal Questions

15. Have you attended a tutoring school?

Yes No

16. How often do you use a computer?

Once a month or less Once or twice a week Almost every day Every day

17. How often do you use Google to search the internet?

Once a month or less Once or twice a week Almost every day Every day

18. How many years of English classes have you taken in school? _____

19. Do you speak a language other than English and Cantonese?

Yes No

20. Do your parents speak a language other than English and Cantonese?

Yes No

21. Rank how well you can do the following (use each number once, 1=best and 3=worst)

- Understand English _____
- Speak English _____
- Write English _____

22. How important do you think it is to learn English? (1=Not important, 4=Very important)

1 2 3 4

Chinese

學生問卷調查

背景問題

1. 您的性別 男 女
2. 您的年齡 _____
3. 您現在就讀的班級?
F.4 F.5 F.6 F.7 大專
4. 您是主修什麼學科 (列如: 理科, 數學, 文科)

工作坊問題

5. 您參加了多少個工作坊 _____
6. 您覺得這些工作坊對您有沒有幫助 有 / 沒有
7. 您覺得那些導師做好了他們的工作嗎? 有 / 沒有
8. 您最喜歡這個工作坊的哪些地方

9. 您最不喜歡工作坊的哪些地方

軟件問題

10. 您最喜歡那些軟件的什麼地方

11. 您覺得 “*Check My Word*” 環節應該要加或改些什麼?

12. 請為以下軟件評分 (1 分最有用, 5 分最沒用)

Check button _____
English Grammar Guide _____
Word Neighbors _____
JustTheWord _____
Online activities _____

13. 您會繼續使用 “*Check My Word*” 嗎? 會 / 不會

14. 您比較喜歡用電腦學習, 或是由老師授課, 或是兩者混合? 為什麼?

個人問題

15. 您有去補習社補習嗎 有 / 沒有

16. 您多久使用一次電腦

一月一次或更少 一星期一兩次 差不多天天 天天

17. 您多久使用一次 Google 去搜索東西

一月一次或更少 一星期一兩次 差不多天天 天天

18. 您在學校裏學了多久英文 _____

19. 除了廣東話和英語之外, 您會 其他語言嗎? 會 / 不會

20. 除了廣東話和英語之外, 您的父母會 其他語言嗎? 會 / 不會

21. 請為您自己以下幾方面的英語能力排次序 (請用 1, 2, 3, 1 為最好, 3 為最差)

明白英語 Understand English _____
英語會話 Speak English _____
英語寫作 Write English _____

22. 您覺得學英語有多重要 (1 分最不重要, 4 分最重要)

1 2 3 4

Appendix J: Student Questionnaire Results

Class 1

Total Questionnaires received: 38

Q1: Gender	Female	Male					
	14	24					
Q2: Age	17-18 years old	19-20 years old	20-21 years old	22-23 years old	No Answer		
	7,9	8,6	6,1	4, 1	2		
Q3: School Year	2nd year in post-secondary college						
	37						
Q4: Major Field of Study	Humanity	Social Science	Translation	Science	No Answer		
	9	23	2	1	2		
Q5: How many workshops did you attend?	None	Only One Workshop	Two Workshops	Three Workshops	No Answer		
	2	5	18	12	0		
	Yes	No	No Answer				
Q 6 :Were the workshops helpful?	27	6	5				
Q7: Did the instructors do a good job?	32	2	4				
Q13: Will you use Check My Words again?	28	6	4				
Q15:Have you ever gone to a tutoring school?	6	27	5				
Q12: Score each of the following resources	1 (most useful)	2	3	4	5 (least useful)	No Answer	
Check Button	8	6	12	4	5	3	
English Grammar Guide	11	7	12	5	0	3	
Word Neighbors	9	10	14	2	0	3	
JustTheWord	6	7	16	5	1	3	
Online activities	5	9	12	6	3	3	
Q14: Do you like a computer based class, teacher based class, or a mixture?	Teacher Instruction	Computer-based Learning	Both	No Answer			
	6	1	27	4			

	Once a month	One or Twice a week	Almost Everyday	Everyday	No Answer
Q16: How often do you use a computer on your own?	0	5	12	18	3
Q17:How often do you use Google to search on your own?	19	12	3	0	4
Q18: How many years of English education have you received	More than 13 years	10-13 years	9-6 years	3-5years	No Answer
	24	3	4	0	8
	Yes	No	No Answer		
Q19: Do you speak a language other than Cantonese or English?	25	9	4		
Q20: Do your parents speak a language other than Cantonese or English?	18	17	3		
21: Rate how well you can understand, speak, or write English.	1 (best)	2	3 (worst)	No Answer	
Understand English	16	15	5	2	
Speak English	5	18	13	2	
Write Tenglish	6	8	22	1	
21. On a scale of 1(least) to 4(most), how important is it to learn English?	1	2	3	4	No Answer
	0	1	4	31	2

Q8: What did you like about the workshops?

- The Instructors were nice -12 students
- Had a chance to speak with foreigners in English-4 students
- Made new friends with foreigners-2 students
- Workshops were creative – 3 students
- Pre-test, Post-test and exercises in class – 4 students
- English Grammar Guide, Check Button -2 students
- No Comment – 10 students

Q9: What did you dislike about the workshop?

- It was difficult to understand the main idea of the questions -1 students
- Time was too short in learning the software – 4 students
- Word Neighbors - 1 student
- Slow Progress in generating data – 3 students
- No Comment – 28 students

Q 10: What did you like about the software?

- Software was helpful to improve English – 4 students
- In class exercises – 4 students
- Used the software to look for the mistakes -2 students
- Learned the use of software – 2 student
- No Comment -25 students

Q11: How can the software be improved?

- Add more details and explanation – 4 students
- Software was not user friendliness – 2 students
- No Comment -31 students

Class 2

Total Questionnaires Received: 15

Q1: Gender	Female	Male			
	9	6			
Q2: Age	20 years old	21 years old	22 years old	23 years old	No Answer
	1	7	5	1	1
Q3: School Year	3rd year in post-secondary college				
	15				
Q4: Major Field of Study	Humanity	Translation & Interpretation			
	3	12			
Q5: How many workshops did you attend?	None	Only One Workshop	Two Workshops	No Answer	
	4	5	5	1	
	Yes	No	No Answer		
Q 6: Were the workshops helpful?	7	4	4		
Q7: Did the instructors do a good job?	9	5	1		
Q13: Will you use Check My Words again?	8	4	3		
Q15: Have you ever gone to a tutoring school?	2	13	0		
Q8: What did you like about the workshop?	Instructors were nice	got to know the software	didn't like it	No Comment	
	4	1	1	9	
Q9: What did you dislike about the workshop?	the workshop was not useful	Too much information covered in the workshop	No comment		
	3	1	10		
Q10: What did you like about the software?	EGG	Comprehensive explanation	Learned vocabulary	No Comment	
	2	1	2	10	

Q11: How can the software be improved?	Improve the speed of data loading	Add feature to detect mistakes	Make the software easy to use	No Comment
	1	2	1	11
Q12: Score each of the following resources	1 (most useful)	2	3	4
Check Button	2	2	3	4
English Grammar Guide	5	2	3	1
Word Neighbors	3	4	3	2
JustTheWord	1	1	3	2
Online activities	0	0	8	3
Q14: Do you like a computer based class, teacher based class, or a mixture?	Teacher Instruction	Computer-based Learning	Both	No Answer
	4	1	6	3
	Once a month	One or Twice a week	Almost Everyday	Everyday
Q16: How often do you use a computer on your own?	0	0	6	9
Q17: How often do you use Google to search on your own?	4	5	4	2
Q18: How many years of English education have you received	More than 13 years	10-13 years	9-6 years	3-5years
	8	3	1	3
	Yes	No	No Answer	
Q19: Do you speak a language other than Cantonese or English?	14	1	0	
Q20: Do your parents speak a language other than Cantonese or English?	7	7	1	
21: Rate how well you can understand, speak, or write English.	1 (best)	2	3 (worst)	No Answer
Understand English	10	5	0	0
Speak English	1	7	7	0
Write Tenglish	2	8	5	0
21. On a scale of 1(least) to 4(most), how important is it to learn English?	1	2	3	4
	1	1	1	12

Class 3

Total Questionnaires Received: 4

Q1: Gender	Female	Male				
	0	4				
Q2: Age	19 years old					
	4					
Q3: School Year	Freshman, University					
	4					
Q4: Major Field of Study	Business	Biochemistry	Computer Engineering	Computer Science		
	1	1	1	1		
Q5: How many workshops did you attend?	Only One Workshop	Two Workshops	Three Workshops			
	1	1	2			
	Yes	No	No Answer			
Q 6: Were the workshops helpful?	3	1	0			
Q7: Did the instructors do a good job?	4	0	0			
Q13: Will you use Check My Words again?	2	1	0			
Q15: Have you ever gone to a tutoring school?	0	4	0			
Q12: Score each of the following resources	1 (most useful)	2	3	4	5 (least useful)	
Check Button	0	0	0	1	1	
English Grammar Guide	0	2	2	0	0	
Word Neighbors	2	0	1	0	1	
JustTheWord	2	0	0	1	1	
Online activities	0	0	2	0	0	
Q14: Do you like a computer based class, teacher based class, or a mixture?	Teacher Instruction	Computer-based Learning	Both	No Answer		
	0	1	2	1		
	Once a month	One or Twice a week	Almost Everyday	Everyday	No Answer	
Q16: How often do you use a computer on your own?	0	0	0	4	0	

Q17: How often do you use Google to search on your own?	0	0	1	3	0
Q18: How many years of English education have you received	10 years	7 years	6 years	No Answer	
	2	1	1	0	
	Yes	No	No Answer		
Q19: Do you speak a language other than Cantonese or English?	3	1	0		
Q20: Do your parents speak a language other than Cantonese or English?	3	1	0		
21: Rate how well you can understand, speak, or write English.	1 (best)	2	3 (worst)	No Answer	
Understand English	1	3	0	0	
Speak English	2	0	2	0	
Write Tenglish	1	1	2	0	
21. On a scale of 1(least) to 4(most), how important is it to learn English?	1	2	3	4	No Answer
	0	0	2	2	0

Q8: What did you like about the workshops?

- One on one tutoring – 1 student
- In-class exercise – 1 student
- Instructors were nice – 1 student

Q9: What did you dislike about the workshop?

- The instructors didn't give us enough detailed information on how to use the software at the beginning; therefore we spent a great deal of time exploring the software by ourselves. – 1 students
- It was bored to do the similar exercises related to proofreading – 1 student

Q 10: What did you like about the software?

- Different search engines in the software – 2 students
- Web-based discovery learning – 1 student
- Word Neighbors – 1 student
- The software helps improve English writing skills – 1 student

Q11: How can the software be improved?

- Check Button was not useful – 1 student
- We didn't know which search engine can be used to correct the specific common errors – 1 student
- Improve the accuracy of search results – 1 student
- Add Chinese translation to the collocation words in JustTheWord – 1 student
- Improve the accuracy of search results in Google Search – 1 students

Class 4

Student Questionnaires Received: 18

Q1: Gender	Female	Male					
	11	7					
Q2: Age	17 years old	18 years old	No Answer				
	6	11	1				
Q3: School Year	Form 4	Form 5	Form 6	Form 7			
	0	0	18	0			
Q4: Major Field of Study	Humanity	Science					
	9	9					
Q5: How many workshops did you attend?	None	Only One Workshop	Two Workshops	Three Workshops	Four Workshops	No Answer	
	3	9	1	1	2	2	
	Yes	No	No Answer				
Q 6 :Were the workshops helpful?	9	8	1				
Q13: Will you use Check My Words again?	14	3	1				
Q15:Have you ever gone to a tutoring school?	9	7	2				
Q8: What did you like about the workshop?	Instructors were very patient	time flexibility	got to know the software	very special	English as medium of instruction	No Comment	
	2	2	3	1	2	8	
Q9: What did you dislike about the workshop?	the workshop was not useful	time frame	computer was slow	It was bored	No comment		
	3	2	1	3	9		
Q10: What did you like about the software?	Software was fast to retrieve the database	The software toolbar in MS	Check Grammar	Word Neighbors	JustTheWord	Check Button	No Comment
	3	2	3	2	1	2	5

Q11: How can the software be improved?	add more examples to EGG	Chinese translation	add more explanation, interactive exercise	cant automatically detect the errors	Multimedia features
	2	1	4	2	2
Q12: Score each of the following resources	1 (most useful)	2	3	4	5 (least useful)
Check Button	3	5	3	2	4
English Grammar Guide	2	7	4	1	3
Word Neighbors	2	6	4	3	2
JustTheWord	2	3	4	3	5
Online activities	1	1	7	5	3
Q14: Do you like a computer based class, teacher based class, or a mixture?	Teacher Instruction	Computer-based Learning	Both	No Answer	
	10	2	3	3	
	Once or Less than once a month	One or Twice a week	Almost Everyday	Everyday	No Answer
Q16: How often do you use a computer on your own?	2	3	9	3	1
Q17: How often do you use Google to search on your own?	8	4	3	1	2
Q18: How many years of English education have you received	More than 13 years	10-13 years	more than 6 years	4-6 years	Less than 4 years
	3	6	2	0	2
	Yes	No	No Answer		
Q19: Do you speak a language other than Cantonese or English?	13	3	2		
Q20: Do your parents speak a language other than Cantonese or English?	11	5	2		

21: Rate how well you can understand, speak, or write English.	1 (best)	2	3 (worst)	No Answer
Understand English	8	5	4	1
Speak English	6	4	7	0
Write English	5	6	6	1

21. On a scale of 1(least) to 4(most), how important is it to learn English?	1	2	3	4
	0	1	1	15

Appendix K: Teacher Interview Protocol

1. What subjects do you teach?
2. How many years have you been teaching?
3. What types of work do you usually assign your classes?
4. Did you need any sort of certification to become a teacher?
5. What tools do you use in the classroom (i.e. projector, computer, etc.)?
6. How do you normally interact with your students in class? (language)
7. Outside of class?
8. What (if any) feedback did you receive from your students regarding the *Check My Words* software?
9. What were your feelings about the *Check My Words* software?
10. Will you encourage later students to use *Check My Words*?

Appendix L: HKUST Professor Interview Summary

Throughout the interview, the professor repeated that *Check My Words* was very useful and helpful. She mentioned that she uses *Check My Words* with her students, but that the students need quite a bit of help. She uses discussion-based methods in class, having the students discuss about the software while making her own inputs.

The professor also mentioned several aspects of *Check My Words* that she thought could be improved upon. Here is a list of things she mentioned:

- Resource interfaces accessible from *Microsoft Word* are unattractive and look similar to each other.
- The *Word Neighbors* interface accessible from *Check My Words* is limited. It does not allow the selection of corpora. *Suggestion: Have Check My Words open Word Neighbors on a browser skipping the Word dialogue box.*
- The ability to compare search results from multiple corpora with *Word Neighbors* would be useful.
- The contents of the corpora in *Word Neighbors* are unclear from their names. For example, most of the “Newspaper Articles” articles are from local (to Hong Kong) newspapers. *Suggestion: Create subsections in each corpus.*
- More specialized corpora would be useful. *Suggestion: Add specialized corpora such as lab reports from different majors*

Appendix M: Class 1 Teacher Interview Summary

Armen: What subjects do you teach?

Teacher: I teach English language. It's a tertiary level English course.

Armen: How many years have you been teaching?

Teacher: Two and a half years. This is my third year in teaching industry.

Min: What type of assignments do you usually use for your classes?

Teacher: Actually, for English language students, we give them video lessons. They need to answer multiple choice questions and they also need to write essays, about 300 word essays. Also, they have roleplays in class and presentations. And they have examinations as well.

Min: So they have one writing assignment per week?

Teacher: No no, not per week. Over the semester they have 3 writing assignments.

Armen: What kind of tools do you use in the classroom? Like do you use the projector, a computer or just books?

Teacher: I will use a computer. I will use the visualizer.

Armen: Visualizer?

Teacher: The projector. I will use... sometimes I play music so maybe CD player as well.

Armen: Do you ever go to the computer room and use... have the students use the computers?

Teacher: Uh, very seldom *laughs*

Min: Did you need any sort of certification to become a teacher?

Teacher: Well, in our school we just need to have a Master Degree and we can teach

Min: What about major?

Teacher: Oh, major in English or relevance. But the college actually encourages teachers to have a diploma in education or formal education degree.

Min: So this college requires that as well?

Teacher: No, it just encourages it.

Armen: Do you know if other schools are the same?

Teacher: I think for secondary school they require teachers to have an education diploma, but not in tertiary education.

Armen: How do you normally interact with your students in class?

Teacher: Well, generally I just... most likely I think in Hong Kong we do question... Q&A all the time to interact with students. Yes, that's the way we mostly interact with our students.

Min: How about outside of class?

Teacher: You mean... I'm not sure about the interaction, it means...

Armen: Well, how do you act around your students?

Teacher: Maybe having lunch and talk with them.

Armen: You do things like that with them?

Teacher: I think... I hate for my class to be boring. That's what I use to get along with the students.

Armen: Did you get any feedback from your students about *Check My Words*?

Teacher: Yes, I did. I think they are quite happy to use... to learn... to use computer to learn, but I think the software... is a little bit time consuming. They need to read a lot before they can get the correct answer. So they just aren't very happy that they can't just click it, that they can't just find the answer. They want a faster one, more straightforward to tell them the answer. But maybe another problem that comes up is that they can't learn anything. They just can't get the answer but they can't learn anything.

Armen: They want to the reason why something is wrong?

Teacher: They don't want to know the reason why, they just want to know the answer. *laughs*

Min: So what were your feelings about the *Check My Words* software?

Teacher: Well, I think...

Min: Are you going to use it and maybe ask...

Teacher: Well, actually I did think to introduce it to my students, but I think the installations in the college is quite difficult. I think I would teach some of my students to use the software. I think the software is useful, but because they need to detect the grammatical problems of the students then it really takes time for the students. The students find it quite difficult to find their mistakes.

Armen: We saw from our survey results that 36 of your students said that they would use *Check My Words* again. I don't know if they will or if you'll have to remind them?

Teacher: I think in Hong Kong most students sit in front of their computers for more than three hours a day. I think I will try to find out actually, because I haven't given them an assignment. When I give it to them, I can compare with the second assignment if they have any improvement after introducing the software. I'm afraid your project probably can't cover this part because you'll be gone already.

Armen: Do you do drafts? As in do you have them pass in multiple drafts and correct them?

Teacher: Yeah, but it really takes time because we have a heavy workload.

Armen: I meant do they hand in drafts before the final?

Teacher: No. Because in that class we have about forty-something students, if everybody did that then I'd need to mark eighty-something papers. That's too much work.

Armen: You said they have hard times finding their mistakes, so if a teacher marks their errors for them they might be able to figure out what's wrong.

O: Well, I can actually encourage some of the students to do this. Once you encourage the students, the whole class won't do it together. If you say it's not compulsory, then maybe just a few of them will do this. It's more possible to do it like that.

M: Did the students think the workshop was useful? Did they say it was useful?

Teacher: I think they liked you guys more than the workshops. *laughs*

Appendix N: Glossary

band - The division of schools according to their academic standards. Band 1 is the most competitive and exclusive, and Band 3 is the lowest band.

blended learning - A learning environment in which traditional instructor-based methods are blended with multimedia

cognitive psychology - The school of psychology concerned with internal mental processes including problem solving, memory, and language

collocation - A word or phrase commonly used with another word or phrase

corpora - The plural form of corpus

corpus - A large collection of writings. *Check My Words* uses corpora as databases for certain features

demographics - Population characteristics. The first questions in our questionnaire collect demographics.

form - In the education system of Hong Kong, the educational year of a student. For example, "He is currently in form 6."

interface - In computer science, a feature of a computer program used to gather user input

pop-up - When using a computer, a window that appears on top of or within the active window

user-friendliness - In computer science, a property of software that refers to the ease of use and consistency of the interface

Appendix O: *Check My Words* Workshop Booklet

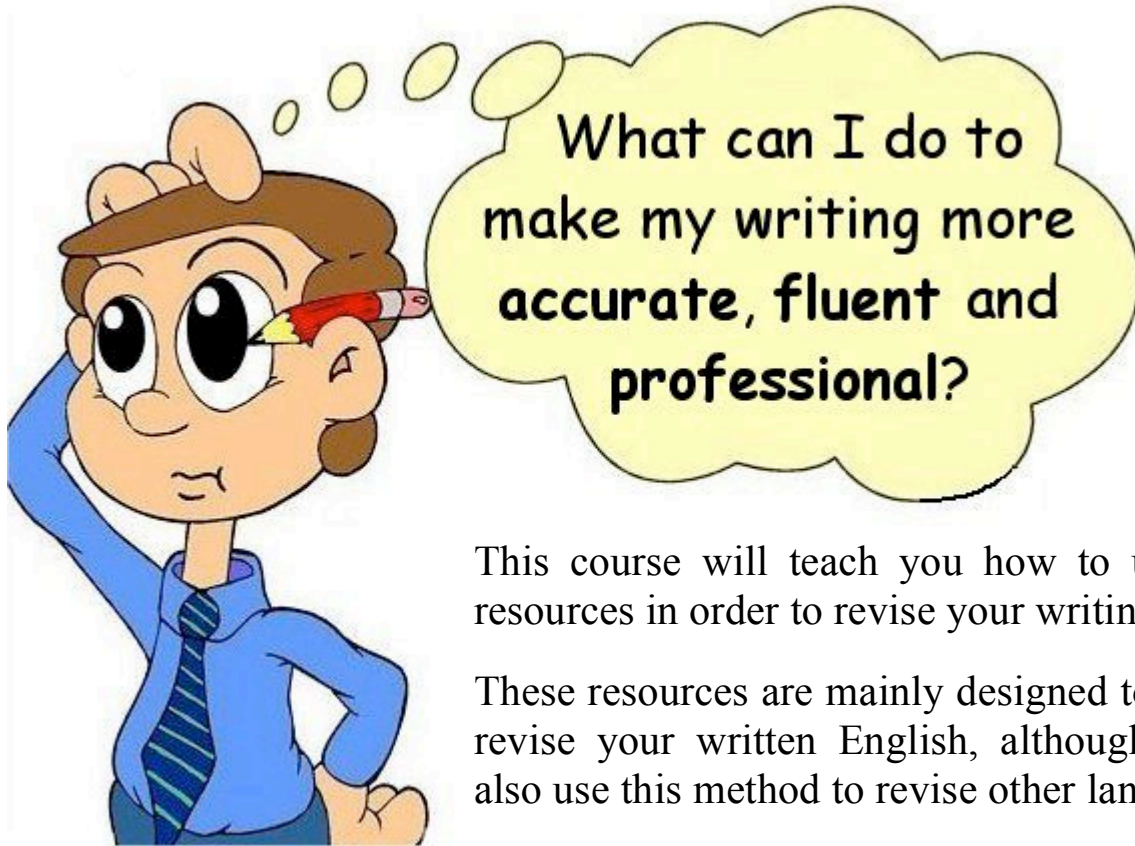


A short course in
using online resources
to correct common errors
and to write more
accurately and fluently

Contents

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Introduction



This course will teach you how to use online resources in order to revise your writing!

These resources are mainly designed to help you revise your written English, although you can also use this method to revise other languages.

This course consists of three parts:
the in-class activities in this booklet
the software program *Check My Words*. This is a toolbar that installs in *MSWord* and
nine online activities divided into three units: these are to be done as homework.

At the end of this short course, you will know how to use various online resources to write more accurately, fluently and professionally. These are skills which you can use throughout your life – in your studies and in your career. If you use these resources thoughtfully, your writing will be more accurate and fluent, no matter what your current level of written English. This program and the resources are available to all UST students and graduates.

Important note: Each online unit **MUST** be completed within **ONE** week. You **CANNOT** submit an activity after the unit deadline. Most of the online activities are automatically graded. You can see the results of each unit when you have completed that unit.

What is *Check My Words* (CMWs)?

CMWs is a software program (installed as a toolbar in *MSWord*) designed to help you improve your English, and especially to enhance your writing effectiveness. It gives you access while you are writing to the following eleven web resources:

A 1,500-page online English Grammar Guide (the EGG) that explains the most common English errors made by speakers of Chinese.

Four search engines so that you can look up how words and phrases are used in context:

Word Neighbors

JustTheWord

Google News and Google Web Search

An automatic translation program (Babel Fish), but be careful: you cannot completely rely on this!

Cambridge Advanced Learners Dictionary

WordSmyth Thesaurus: look up words with similar and opposite meanings – find the word to express your exact meaning and avoid repeating yourself

Two encyclopedias to look up facts, people, places, etc):

Answers.com

Wikipedia

Google Technical Terms: look up the meaning of any technical term.

You can also improve your vocabulary by accessing an online database of useful words and phrases with *CMWs* (click *My Words* – *Get My Words*)

Who will benefit from *CMWs*?

No matter what your current level of English, this tool can help you become a more accurate and fluent writer. Even if you make none of the errors listed in the *EGG*, you can still use the search engines to find persuasive, interesting and professional ways of expressing yourself.

The tasks in this booklet and the online activities are based on some of the most common errors made by speakers of Chinese. You may find that these are easy and that you can do them quickly on your own, but you should use the resources recommended here so that you learn how to check your writing. If you have difficulty completing these activities, *CMWs* will help you.

In the following lessons, you will be introduced to each of these tools and become acquainted with their use. The online activities that accompany these units will further familiarize you with these resources and give you practise in correcting common errors and writing more fluently.

Exercise 1: The following are some of the common problems in the English writing of speakers of Chinese. Put a check beside the types of errors that you have trouble with in your writing:

Choosing which (if any) *preposition* to use

Choosing which (if any) *article* to use

Choosing which (if any) *connective* (e.g. *conjunction*) to use

Choosing which *adjective* goes with a *noun*, which *noun* goes with a *verb*, etc.

Confusing different forms and *parts of speech* of a word

Confusing words that have similar meanings

Using words in the wrong context

Incorrectly omitting words

Using words unnecessarily (redundantly)

Using the wrong *singular* or *plural* form of nouns

You can correct all these types of errors with the resources that this course will introduce!

Exercise 2: The following ten sentences are from job application letters written by students graduating from university. These sentences contain some of the errors listed above. Are you sensitive to such errors in your own writing? Find and circle the errors. In the next unit, we will use *Check My Words* to correct these errors. This exercise is just to determine if you can spot common errors.

I can be a good teacher because I am able to solve the problems arisen by the students.

I would appreciate if you can contact me as soon as possible.

I can be benefit to your company.

As I know, the requirements of this job match my skills exactly.

I am able to perform editorial work with high efficiency.

I am an exceptionally hard working person. On the other hand, I can work independently.

I got good grades in school. Besides, I was active in many clubs and student activities.

I am an ideal candidate for this position because I could speak fluent Mandarin.

I concern current social issues and I want to improve the world.

I am enthusiastic to this job and I will do my best for the company.

Exercise 3: What is your attitude toward the importance of written English? Indicate whether you strongly agree or disagree with the following statements:
Accuracy and fluency in written English are important to my future studies and/or my career.
Strongly disagree 1 2 3 4 Strongly agree

I have difficulty in writing accurate English sentences.
Strongly disagree 1 2 3 4 Strongly agree

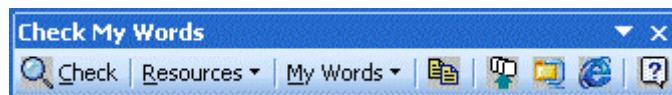
I have difficulty in writing fluent English sentences (e.g. using language persuasively).
Strongly disagree 1 2 3 4 Strongly agree


I am prepared to spend time to check the accuracy and fluency of my written English.
Strongly disagree 1 2 3 4 Strongly agree

I do not have time to revise my writing and improve my written English.
Strongly disagree 1 2 3 4 Strongly agree

Exercise 4: In this exercise, if you have not done so already, install the software *Check My Words* and become familiar with its basic features of. You do NOT need to install the program on any PC on the HKUST campus; it is already installed on all ITSC machines. You can find it by going to the Windows START menu and clicking on *Check My Words*.

If you have a computer, download the installation program for the software from <http://mywords.ust.hk/>. Log on using your ITSC account, click the [Check My Words](#) link and proceed with the download. Remember where you save the file (after you have installed the program, you can delete the installation program). When you install the program on your own computer, you will see the toolbar below the next time you start *MSWord* (2000 and later versions). If you cannot see this toolbar, in *MS Word*, click *View – Toolbars – Check My Words!*

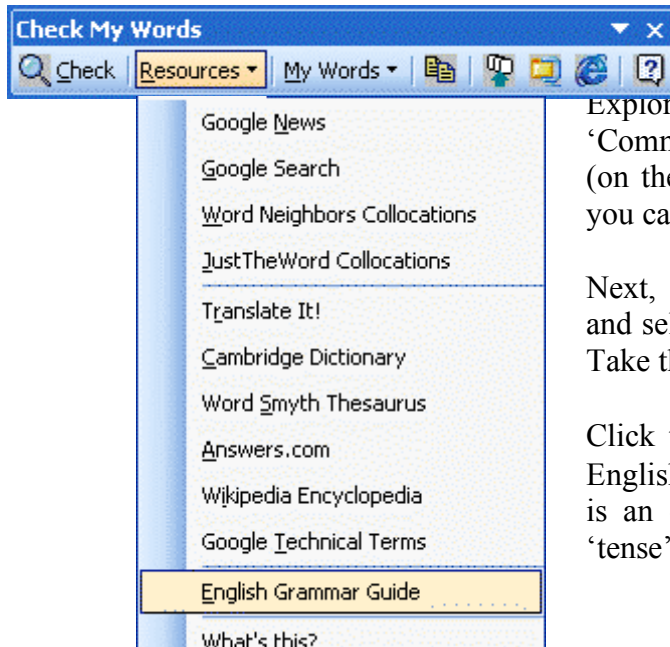


Now you are ready to use *Check My Words* to help you revise your writing. First, follow the tour by opening *MSWord* (remember if you are using a UST computer, click on *Check My Words* under the Windows Start menu). Then, click on this button (on the right of the toolbar):  and follow the tour. You should take time to go through the entire tour, but make sure you at least complete the introduction!

NOTE: If you want to improve your vocabulary, it is a good idea to install the *My Words* toolbar for *IE* or *Firefox*. This toolbar enables you to add words to your personal online database from any web site.

Unit 1: Using the online *English Grammar Guide*

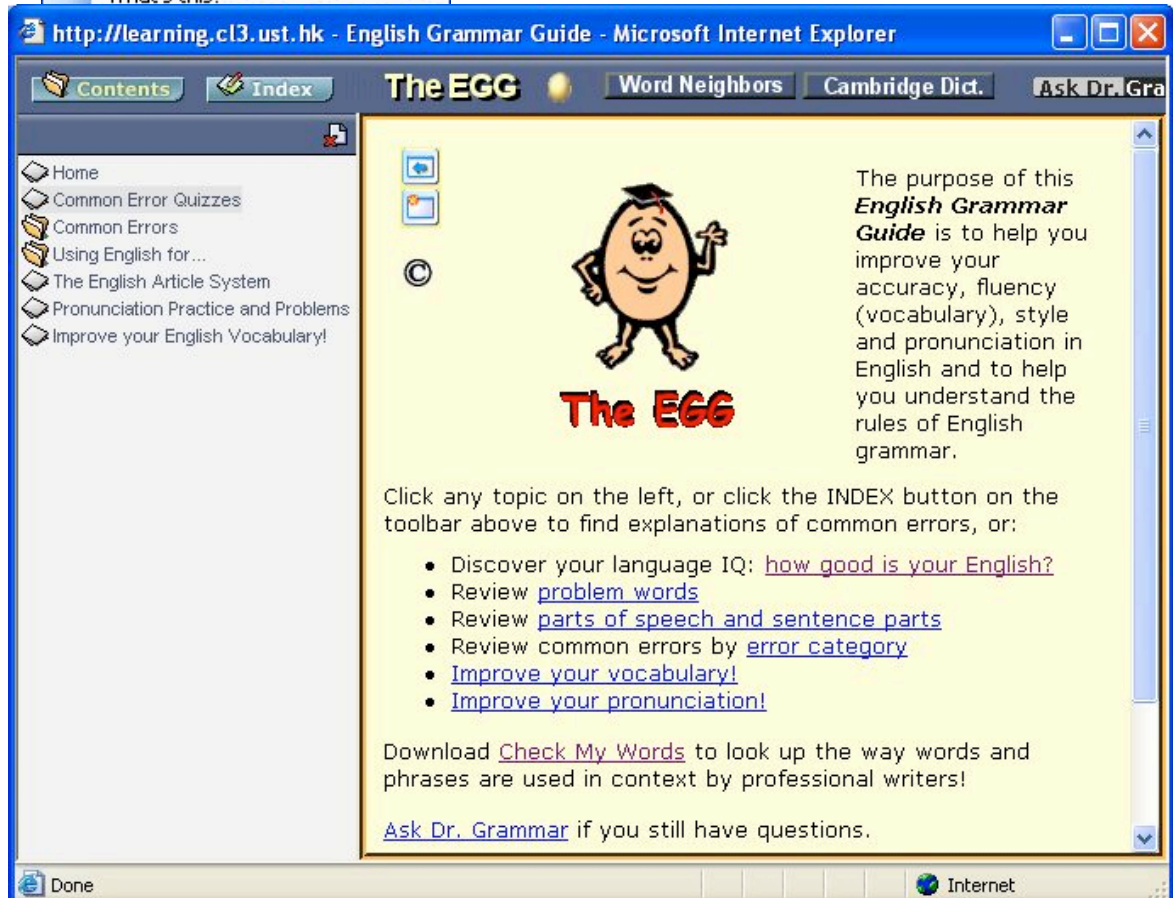
Exercise 1: After you have installed *Check My Words*, you will see the new toolbar in *MSWord*. With this toolbar, you now have access to many resources, including a 1500-page online *English Grammar Guide* (the *EGG*). Open this program by clicking *Resources – English Grammar Guide*. We will look at the other links under the *Resources* button later in this course.



Explore the features of the *EGG*. For example, click on ‘Common Errors’ in the Table of Contents (TOC) pane (on the left) and select ‘Glossary of Problem Words’: you can browse a list of common errors.

Next, click on ‘Common Error Quizzes’ in the TOC and select ‘Errors in Employment Application Letters’. Take the quiz. There are many other quizzes here.

Click the **Index** button on the top menu and type an English word that you have trouble with to see if there is an explanation, or enter a grammatical term (e.g. ‘tense’) to review any aspect of English grammar.

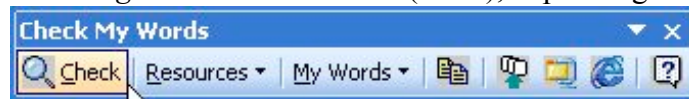


Exercise 2: You can also now check your writing for common errors. NOTE: *Check My Words* does NOT identify errors. No program can do this reliably. However, *Check My Words* CAN help you check the accuracy of any word or phrase and see how it is used in context. You must become your own grammar checker! This is the way you check commonly misused words and phrases:

Put your cursor on a word that you want to check and click the **Check** button. A yellow box will pop up which lists potential errors with the word in order of likelihood. You also see the different forms of the word, its parts of speech and the relative frequency of the word (indicated by the number of stars) in written English.

For example, you might write “*It worth studying hard.*” To check the accuracy of the way you have used the word ‘worth’, put your cursor on the word and click **Check**! Then, click the first potential error. The relevant page from the *English Grammar Guide (EGG)*, explaining the common error, will appear:

It worth studying hard.



Put your cursor on the word you want to check and click on the first potential error in the yellow box. An explanation of the common errors with this word then opens in the *English Grammar Guide*:

Information

<p>Potential Error(s)</p> <p>worth (preposition vs. verb)</p> <p>It worth</p> <p>Wrong Preposition</p> <p>Redundant Preposition</p>	<p>Word Family</p> <p>worth (preposition) *****</p> <p>worth (noun) *****</p> <p>worthwhile (adjective) ****</p> <p>worthy (adjective) ****</p> <p>worthless (adjective) **</p> <p>trustworthy (adjective) ^</p> <p>unworthy (adjective) ^</p> <p>air worthy (adjective) ^</p> <p>worthy (noun) ^</p>
---	--

http://learning.c3.ust.hk/~worth - Microsoft Internet Explorer

This is a page from the *EGG!*

worth

A well-known advertisement appeals to our vanity by asking the question “*Are you worth it?*” The answer the advertiser is hoping for is Yes, I am **worth** it. Here’s my money. The answer CANNOT be Yes, I **worth(s)** it...

Like words such as *afraid*, the word **worth** is often INCORRECTLY used as a verb by learners of English: In the sentence above, **worth** is a **preposition** (some dictionaries consider it an adjective). It can NEVER be a verb! A verb (usually BE) must be used with the word **worth** in this context. Omitting the verb is nonstandard English.

✗ This watch **?** worth(s) a lot of money.

✗ This **?** worth noting.

Worth and the related words **worthy** and **worthwhile** are most often correctly used in these ways:

1. A **noun**: Hong Kong imports billions of dollars **worth** of goods from the mainland each year. In this context, the verb **be** is not used.
2. An **adjective**: The Hong Kong Jockey Club supports **worthy** (or **worthwhile**) causes, and this cause is especially **worthy** of consideration.
3. A **preposition**: Life **is** **worth** living. Good memories, not necessarily piles of money, make it **worth** living.

MORE

Note that “worth” as it used in the last sentence is followed by a noun, pronoun or a gerund (-ing form), not directly by an infinitive:

✓ It’s **worth** starting the project.

✓ It’s **worth** it to start the project.

✗ It’s **worth** to start the project.

Another common error is to substitute **worthy** for **worthwhile** or **worth** it:

✗ It’s **worthy** to start the project.

✓ It’s worthwhile to start the project.

Don’t be misled by sentences such as the following, where BOTH a relative pronoun AND the verb BE can be omitted (we cannot omit just the verb):

✓ This is something (that/which is) worth talking about.

✗ This is something **that** worth talking about.

✓ Thieves may be stealing trees [which/that are] **worth** \$1 billion a year from American national parks. Note that the relative pronoun (**which/that**) and the verb **be** can sometimes be omitted.

[Click here to see expressions that use **worth**, **worthy** and **worthwhile** correctly!](#)

Identify the correct sentences:

- They offer a free service that **worths** over \$500.
- They offer a free service that’s **worth** over \$500.
- She received a scholarship that **worth** 25% of the tuition fee.
- She received a scholarship **worth** 25% of the tuition fee.
- A picture **worths** a thousand words.
- A picture is **worth** a thousand words.
- It is **worth** to note that this offer is limited.
- It is **worthy** to note that this offer is limited.
- It is **worth** noting that this offer is limited.

Be careful **not to confuse adjectives with verbs** and **do not omit verbs when they are needed!**

Online activities (Unit 1):

Now you can begin the online part of this course. The online activities will guide you in discovering other features of *Check My Words* and will give you practice in proofreading and revising your writing. Open your web browser and go to <http://ocs1.ust.hk/>. Log on with your ITSC account. When you have logged in, click on **Activity 1** in Unit 1. Read and follow the instructions. In this activity you will correct the errors in the sentences you saw in the Introduction of this booklet.

Next, do online **Activity 2** in Unit 1 of the course website. This is an automatically graded proofreading activity. You can see your mark under My Progress in the top menu of the web site as soon as you click 'Submit'. However, you must wait till the end of the unit to review your answers (each unit is one week long).

Now do online **Activity 3** in Unit 1 of the course website. This is an automatically graded MC activity to help you become familiar with some of the contents of the *EGG*. You can see your mark under My Progress in the top menu of the course web site as soon as you click 'Submit'.

Remember: complete these activities before the deadline, and do not wait until the last day (the server may crash if many students log on at the same time!)

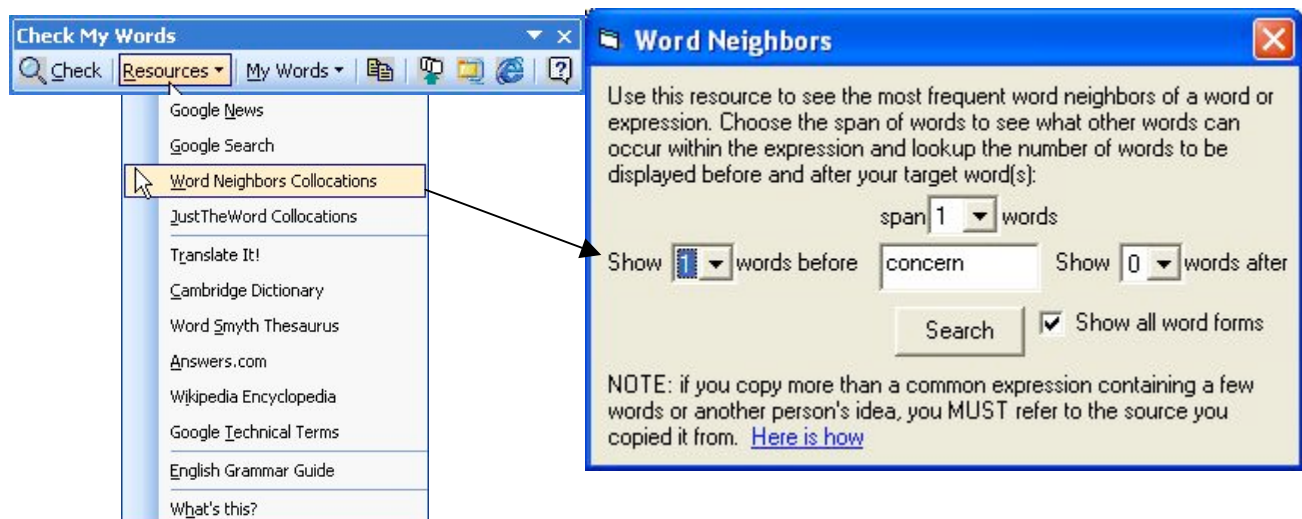
Unit 2: Using *Word Neighbors* and *JustTheWord*

Exercise 1: Not all possible errors can be explained in the online *EGG*. *Check My Words* links you to four online search engines which you can use to look up how words are used in context:

Google News,
Google Web Search,
Word Neighbors Collocations, and
JustTheWord Collocations.

In this unit, you will learn how to use *Word Neighbors*, and *JustTheWord* to check your writing for accuracy and to improve your fluency.

Imagine that you type the following sentence in *MSWord*: “*I very concern about this.*” You realize that you should check the usage of the word ‘concern’. One way to check the way this word is used in professional writing by native English speakers is to put your cursor on the word, then click Resources – *Word Neighbors Collocations*. The following dialogue box pops up. We want to see all forms of the word ‘concern’ and one word before the word:



When you select the options in the dialogue box above and click **Search**, *Word Neighbors* will display the following results. **Which pattern do you think is most relevant to this problem?**

Word Neighbors

Show words before Show all word forms Show words after
 The phrase may span words

Search in

Link to
 ([Audio/Video Examples](#) NEW)

Pattern	Left sort	Right sort	Frequency	Sort
ADJ + NOUN:	e.g. "going concern"	<input type="button" value="Show results"/>	1699	
DET + NOUN:	e.g. "the concerns"	<input type="button" value="Show results"/>	1560	
VERB + NOUN:	e.g. "expressed concern"	<input type="button" value="Show results"/>	568	
NOUN + NOUN:	e.g. "business concern"	<input type="button" value="Show results"/>	550	
PREP + NOUN:	e.g. "of concern"	<input type="button" value="Show results"/>	444	
CONJ + NOUN:	e.g. "and concern"	<input type="button" value="Show results"/>	158	
ADV + NOUN:	e.g. "yet concerns"	<input type="button" value="Show results"/>	14	
PRON + NOUN:	e.g. "everyone's concern"	<input type="button" value="Show results"/>	5	
VERB + ADJ:	e.g. "is concerned"	<input type="button" value="Show results"/>	2140	

more concerned See contexts	<input type="button" value="Define"/>	<input type="button" value="中文"/>	<input type="button" value="A-V"/>	101
very concerned See contexts	<input type="button" value="Define"/>	<input type="button" value="中文"/>	<input type="button" value="A-V"/>	72
not concerned See contexts	<input type="button" value="Define"/>	<input type="button" value="中文"/>	<input type="button" value="A-V"/>	63
so concerned See contexts	<input type="button" value="Define"/>	<input type="button" value="中文"/>	<input type="button" value="A-V"/>	61
also concerned See contexts	<input type="button" value="Define"/>	<input type="button" value="中文"/>	<input type="button" value="A-V"/>	54
primarily concerned See contexts	<input type="button" value="Define"/>	<input type="button" value="中文"/>	<input type="button" value="A-V"/>	36
particularly concerned See contexts	<input type="button" value="Define"/>	<input type="button" value="中文"/>	<input type="button" value="A-V"/>	34
little concerned See contexts	<input type="button" value="Define"/>	<input type="button" value="中文"/>	<input type="button" value="A-V"/>	30
less concerned See contexts	<input type="button" value="Define"/>	<input type="button" value="中文"/>	<input type="button" value="A-V"/>	24
only concerned See contexts	<input type="button" value="Define"/>	<input type="button" value="中文"/>	<input type="button" value="A-V"/>	21

TIP: Click this button for text, sound and video!

Search results for very concerned (ADV ADJ)		Text Type
1	Even if your organization is highly secret and very concerned about security, somewhere in your organization there is going to be a research computer that ends up being connected to a nearby university. ...more	'How to' texts
2	L & #252; Kun, to cite just one of a number of examples was also very concerned to publish didactic works that could be distributed to women and children (Handlin, Action in Late Ming Thought, 11); also see Victor H. Mair's ...more	Academic Articles
3	Labor unions were very concerned that telecommuting was a management ploy to set new productivity standards or to create a "piece work" atmosphere. ...more	Business Texts
4	I had not heard from Jonathan for some time, and was very concerned , but yesterday dear Mr. Hawkins, who is always so kind, sent me a letter from him. ...more	Fiction
5	"I'm very concerned and I just wish the Rugby Union were as concerned as I am," he	Miscellaneous

NOTE: Another way to find the solution to the problem in the sentence: *I very concern about this.* is to highlight the words *very concern*, and click on *Word Neighbors* (there is no need to select words before the expression). *Word Neighbors* will display this information:

Word Neighbors

Use this resource to see the most frequent word neighbors of a word or expression. Choose the span of words to see what other words can occur within the expression and lookup the number of words to be displayed before and after your target word(s):

span words

Show words before Show words after

Show all word forms

NOTE: if you copy more than a common expression containing a few words or another person's idea, you MUST refer to the source you copied it from. [Here is how](#)

Word Neighbors

Show words before Show all word forms Show words after

The phrase may span words

Search in

Link to

([Audio/Video Examples](#) **NEW**)

Words	Left sort	Right sort	<input type="button" value="Hide PoS"/>	PoS?	Frequency	Sorted
very	ADV	concerned	ADJ	See contexts	72	
very	ADJ	concerns	NOUN	See contexts	1	
very	ADV	unconcerned	ADJ	See contexts	1	

Total Expressions: 74
 Select and right-click to hear or look up any words.

Now, correctly complete the sentence with a form of the word ‘concern’:
 “I _____ about this.”

Exercise 2: Certain words strongly attract one another (e.g. we say ‘strong tea’), and other words strongly repel each other (we never ‘powerful tea’). On the other hand, we say ‘powerful car’, and never ‘strong car’. Common examples in business English of ‘strong collocations’ are ‘a short term solution’, ‘a high priority’, etc. Phrasal verbs are another type of collocation: we

say 'hurry up', put up with', etc. There are many thousands of these collocations (or 'word neighbours') in English. It is very difficult to remember them all. However, knowing how to use collocations is vital for accuracy and fluency. Tick all and only the correct collocations below:

groundless accusations	act of kindness	do harm
ridiculous accusations	act on behalf	do business
unsubstantiated accusations	act with impunity	take a chance
crowning achievement	behave differently	make an experiment
no mean achievement	behave badly	take advantage
token acknowledgement	behave properly	take the trouble
formal acknowledgement	drop down notes	play a role
continued acknowledgement	drop by a place	play computer
appropriate action	run the risk	conflicts arise
list out points	make love	difficulties arise
list under a name	make war	disputes arise

You can use *Word Neighbors* and *JustTheWord* to find out the way that English words combine and the way that any English word is used in context.

NOTE: You can also look up word patterns in *Word Neighbors* to see what words to use within a phrase. Just select the number of words to span. For example, if you want to see if it the phrasal verb "call off" can be separated by an object, then highlight "call off", click Resources – Word Neighbors and select a span of 3 words (1+1+1):

Word Neighbors

Use this resource to see the most frequent word neighbors of a word or expression. Choose the span of words to see what other words can occur within the expression and look up the number of words to be displayed before and after your target word(s):

span words

Show words before Show words after

Show all word forms

NOTE: if you copy more than a common expression containing a few words or another person's idea, you MUST refer to the source you copied it from. [Here is how](#)

d Neighbors

Show all word forms Show words after

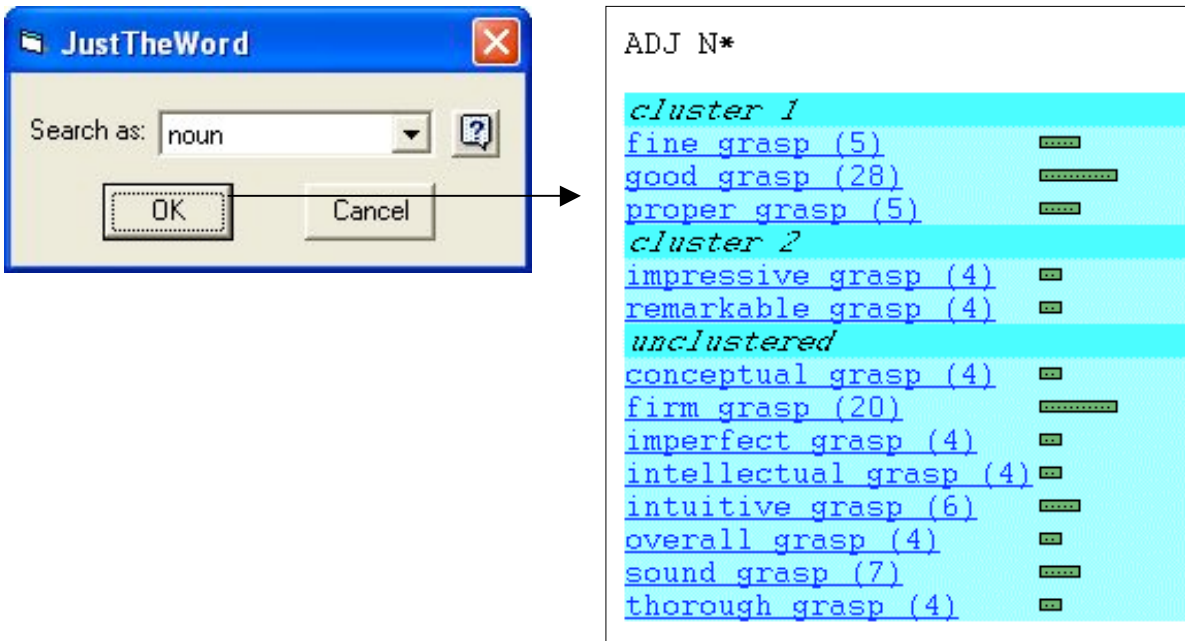
The phrase may span words

(,000 words)

Words	Left sort	Right sort	Show PoS	PoS?	Frequency	Sorted
call off	See contexts				31	
called off	See contexts				26	
called off	See contexts				20	
call off	See contexts				17	
call it off	See contexts					
calling off	See contexts					
call him off	See contexts					
called it off	See contexts					
call off	See contexts					
calls off	See contexts					
call us off	See contexts				2	

In this case, we can see that we can “call somebody/something off”, but it is more common to “call off somebody/something.”

Exercise 3: *JustTheWord* is similar to *Word Neighbors*, except that you cannot see all the forms of a word on the same page. However, one advantage of *JustTheWord* is that it displays common collocations that are separated by other words (e.g. *It is certainly of great practical interest.*). Imagine you write: *I have a rigid grasp of the situation.* You want to check whether the word ‘rigid’ is the correct adjective to describe the noun ‘grasp’. Put your cursor on the word ‘grasp’ and click *JustTheWord* (under Resources). You will see the following dialogue box (‘grasp’ can be a noun or a verb) and results:



Fill in the best adjective for this context:
I have a _____ grasp of the situation.

Online activities (Unit 2):

Now go to the course website and do **Activity 1 of Unit 2**. In this unit, you will practise using *Word Neighbors* and *JustTheWord* to improve your accuracy and fluency. In the first activity, you will use *Word Neighbors* to check the collocations we looked at earlier.

Do **Activity 2 in Unit 2**: in this activity, choose the prepositions that BEST complete each sentence.

Do **Activity 3 in Unit 2**: in this activity, you will correct common errors in ten sentences. You can make the corrections in MSWord using *Word Neighbors* or *JustTheWord*, and then copy these corrections to your browser

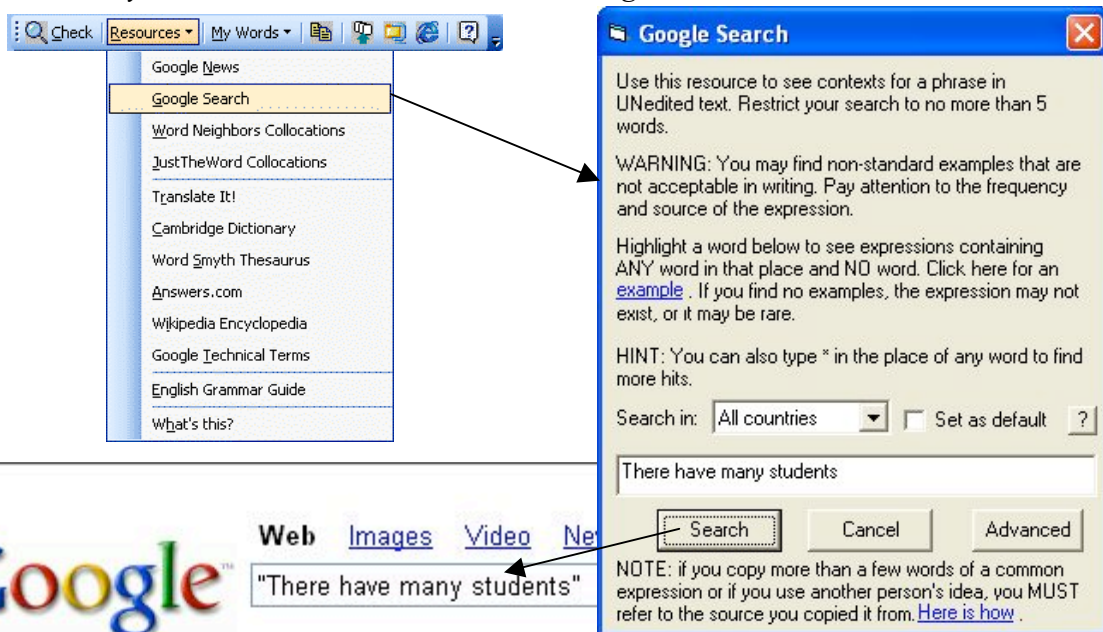
Remember: complete these activities before the deadline, and do not wait until the last day!

Unit 3: Using *Google News* and *Google Web Search*

Exercise 1: In the previous unit, we looked at how to correct common errors and improve written fluency with *Word Neighbors* and *JustTheWord*. However, when you need to check the use of an expression that is not very common, these resources may not be adequate. It is sometimes necessary to search in much more text to find the examples you need. In this unit, you will learn how to use *Google News* and *Google Web Search* to check your writing.

NOTE: These Google engines have the advantage of indexing more text and being faster than *Word Neighbors* and *JustTheWord*; however, they do not summarize word patterns in the way *Word Neighbors* and *JustTheWord* do. You must practise with all these four search engines and decide which is best for particular problems.

For example, imagine that you write this sentence: *There have many students in the library and I can rarely find a place to sit.* You should be sensitive to the types of errors you make, and in this case check whether the use of “have” is correct. One way to check this is to highlight “*There have many students*” and click *Resources – Google Search*:



Notice that you can select what country domains to search in!

Google Web Images Video News

"There have many students"

Search Cancel Advanced

NOTE: if you copy more than a few words of a common expression or if you use another person's idea, you MUST refer to the source you copied it from. [Here is how](#).

Web Results 1 - 6 of about 10 for "There have many students". (0.42 seconds)

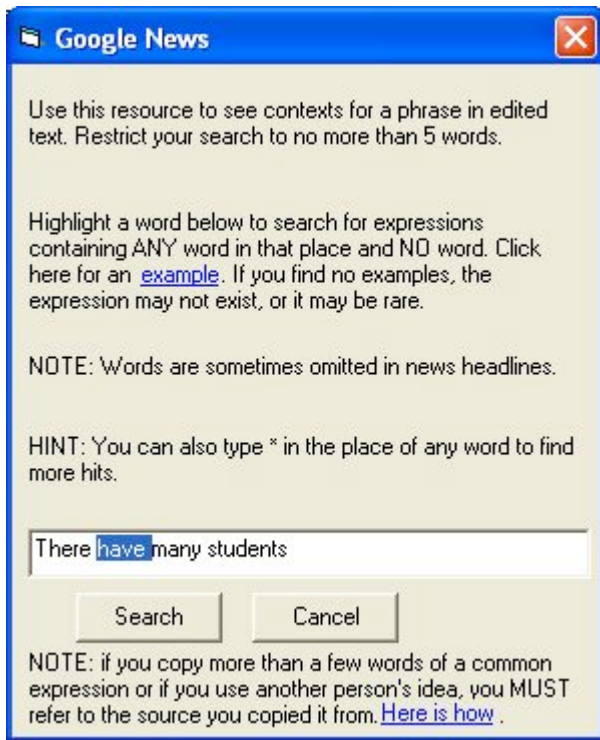
[PDF] [Publ 4759 Issue ch2 Page 445](#)
File Format: PDF/Adobe Acrobat
there have many students (already) read this book. 'Many students have already read this book.' That the lexical subject is VP-external is shown by the ...
www.mitpressjournals.org/doi/abs/10.1162/00243890054406 - [Similar pages](#)

[PDF] [Questions, answers, polarity and head movement in Germanic and Finnish](#)
File Format: PDF/Adobe Acrobat - [View as HTML](#)
AgrS in narrow syntax, but of a postsyntactic linearization rule. (18) a. fia> hafa margir stúdentar lesi> flessa bók. **there have many students** read this ...
www.ub.uit.no/baser/nordlyd/include/getdoc.php?id=80&article=54&mode=pdf - [Similar pages](#)

Google web search has found 10 examples of this expression on the web. Do you think these are enough ‘hits’ to indicate that this expression is correct? You should also look at the contexts of each hit!

What happens when you try the same search with *Google News* (online newspapers indexed by Google)? What can you conclude from this?

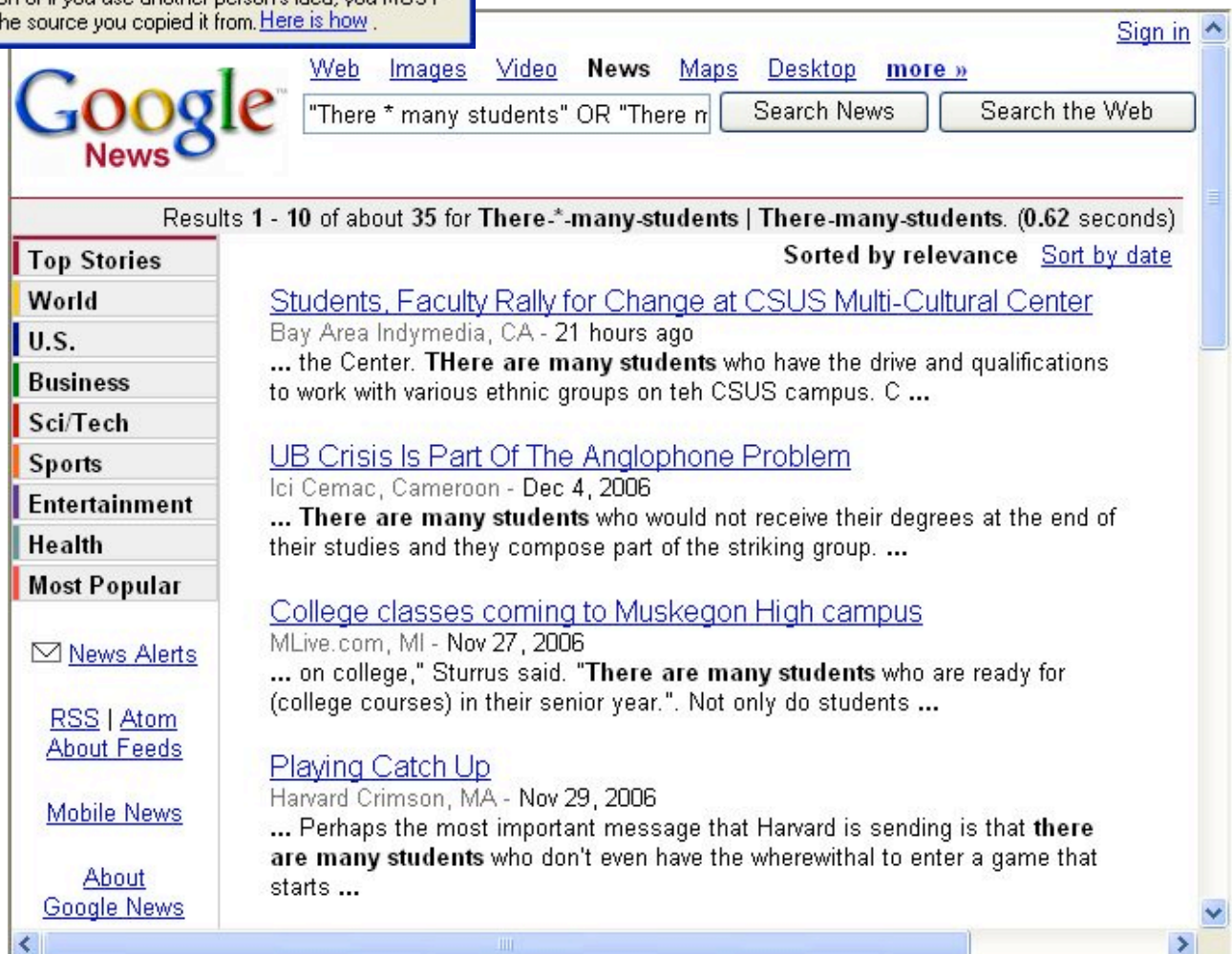
Now, let's repeat the search with Google, but this time use the full power of *Check My Words* to help us. This time, when the dialogue box appears, we will highlight the word(s) we want to investigate (in this case, 'have'):



Can you explain the relative advantages of *Google News* vs. a full *Google web search*?

Notice that when we highlight words in the dialogue box, *Google* (below) will search for any word(s) in that position and NO word(s) in that position, so we can see if another word or no word should be used.

NOTE: Because news stories change frequently in a *Google News* search, the display you see will differ from the display below.



Exercise 2: The following two paragraphs from the introduction to a research article contain a wide range of grammatical errors. Identify the errors and rewrite the sentences using any of the resources in *Check My Words*.

Our understanding of sleep disorders increases a great deal over the last decade. For example, research published in 1988 had shown that most people will spend one third of their lives (220,000 hours) to sleep. Many sleep well and wake themselves up in morning feeling refreshed. However, people suffer from sleep disorders are not get refreshed by their sleeps and instead experience the nightmare. This have a very negative effect on their lives.

A nightmare is a dream it frightens the dreamer in some way. For example, the dreamer maybe frightened that s/he is being chased or is falling at a great height. Many expert are agree that nightmare is a reflection of deep-seated anxious , but other authority disagree, saying that even a person is calm, but s/he may still suffer with nightmares.

Online activities (Unit 3):

Now go to the course website and do **Activity 1 of Unit 3**. In this activity, you will revise the accuracy and fluency of ten sentences using *Google*.

Complete online **Activity 2 of Unit 3**. In this activity, you will use the Cambridge Dictionary, the Word Smyth Thesaurus, and the Wikipedia Encyclopedia to solve some problems.

Appendix: Other features of *Check My Words*

You can also use *Check My Words* to access online word lists when you are writing. You can click 'Get My Words' to log on to the *My Words* web site. If you have added words to your personal word list, you can access these as you write. You also have access to many other word lists (academic words subdivided by frequency, action verbs for job application letters, phrases that are underused or avoided by Chinese speakers, etc. When you have selected a word or phrase, you can use the other resources (e.g. *Word Neighbors* and *Google*) to check the accurate and fluent use of these words and phrases in wider contexts:

The screenshot shows the 'Check My Words' application window. The 'My Words' menu is open, showing 'Get My Words' and 'Add to My Words'. The 'My Words List' panel is visible, showing a list of expressions under the 'Keywords' tab. The list includes 'a cause of', 'a certain amount of', 'a certain degree of', 'a certain group of', 'A change in', and 'a culture of'. A news article snippet is shown below, with the text '... Here, it is a case of the emperor's new clothes: is Clyde versus Hamilton Accies in the Championship not the same as a match between them in the Bell's First ...'. A text box at the bottom left contains the text 'What we have here is a case of...'. Arrows indicate the flow of information from the 'Get My Words' button to the 'My Words List' panel, and from the 'My Words List' panel to the news article snippet, and finally to the text box.

... is a case of ...

Further decline in commodities likely: Credit Suisse
Moneycontrol.com, India - 13 hours ago
... moved? A: Mostly it is a case of a bit of over exuberance. What happens in key commodities, the inventory levels are very low. One ...

Donald stands firm at gate
The Herald, UK - 4 hours ago
... Here, it is a case of the emperor's new clothes: is Clyde versus Hamilton Accies in the Championship not the same as a match between them in the Bell's First ...

Undoing a History of Robbery
Dissident Voice, CA - May 15, 2006
... first place are now calling it theft. What we have here is a case of duplicity and hypocrisy. It's okay for the corporations of ...

Aussie coach wishes Sailor bon voyage
Melbourne Herald Sun, Australia - 4 hours ago
... of what happened. The officials of the ARU are speaking to his management group and it is a case of watch this space.". Asked if ...

Identity of elderly man investigated
TVNZ, New Zealand - 9 hours ago
... himself. Photographer, Alan Knowles, says it is a case of mistaken identity and he insists everyone

What we have here is a case of...

Do you think *Check My Words* is an effective way to check your writing? Will you use the resources in this tool when you write and revise English? Please write a few lines below on your impression of this method of checking your writing:
