ESP Instruction: Traditional vs. Eclectic Method in Relation to Reading Comprehension of Iranian Agriculture Students

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This study aimed at finding out the effect of two different methods of ESP instruction, namely, the traditional grammar translation method and an eclectic method on improving university students' reading comprehension ability. The main assumption was that compared to the Grammar-Translation which is probably not an efficient method, an eclectic method that focuses on improving reading comprehension ability of the university students through the use of some necessary strategies and skills, as proposed by Brown (2003), seems to be more effective. The participants, within the age range of 18-24, included 72 male and female Agriculture students who were semi-randomly assigned to two experimental groups (i.e. eclectic vs. traditional) each consisting of 36 learners. Following a pre-test, treatment (15 weeks, 2 sessions per week), and a post-test, the obtained data was analyzed using two-way ANOVA to examine the effects of the independent variables, while taking gender as a moderator variable. The results of the analysis showed that the eclectic method was significantly more effective compared to the traditional one in improving reading comprehension ability of the students, while gender did not turn out to have any significant effect on the students' reading comprehension. The findings are discussed in relation to effective reading comprehension instruction.

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through the use of cognitive and metacognitive strategies in ESP teaching contexts.

Keywords: ESP Instruction, Traditional Method, Eclectic Method, Reading Comprehension

Certainly, a great deal about the origins of English for Specific Purposes (ESP) could be written. Notably, there are three reasons common to the emergence of all ESP: the demands of a Brave New World, a revolution in linguistics, and focus on the learner (Hutchinson & Waters, 1987).

Whereas traditional linguists set out to describe the features of language, revolutionary pioneers in linguistics focus on the ways in which language is used in real communication (Gatehouse, 2001). A significant innovation was that there is a difference between spoken and written language. According to Hutchinson and Waters (1987), given the particular context in which English is used, the variant of English will change. And, if language in different contexts changes, then, modifying language instruction to meet learners' needs in specific contexts is also possible.

The final reason of ESP's emergence emphasizes the learners’ role. Instead of focusing only on the method of language delivery, more attention is given to the learners' different ways of language acquisition and learning strategies. Therefore, specific courses are designed to cater for a learner-centered instruction.

Dudley-Evans and St. John (1998) have identified some absolute and variable characteristics of ESP as follows:

I. Absolute characteristics:
   - ESP is defined to meet specific needs of the learner;
   - ESP makes use of the underlying methodology and activities of the discipline it serves;
   - ESP is centered on the language (grammar, lexis, register), skills (e.g. reading), and discourse and genres appropriate to these activities.

II. Variable characteristics:
• ESP may be related to or designed for specific disciplines;
• ESP may use, in specific teaching situations, a different methodology from that of general English;
• ESP is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could, however, be for learners at secondary school level;
• ESP is generally designed for intermediate or advanced students;
• Most ESP courses assume some basic knowledge of the language system, but it can be used with beginners.

According to the characteristics of ESP above, it could be said that an ESP course which concentrates on three main factors of meeting specific needs of learners, making use of the underlying methodologies of the discipline it serves, as well as focusing on the appropriate skills necessary for this purpose will help learners to succeed in their goals. In other words, a successful ESP course will be a course that takes into consideration three main factors of learners' needs, a suitable methodology, and the essential language skills needed by learners to accomplish their objectives.

Traditional vs. Eclectic Method

According to Fiorito (2005), ESP should concentrate more on language in context than on teaching grammar and language structures. This view is basically in accordance with what the recent and more successful communicative approaches of language teaching propose. Therefore, rather than focusing on the structural elements of language, an ESP course should be based on the analysis of students' needs and the purposes for which language will be used. Although in an ESL or EFL class all language skills are emphasized equally, an ESP course focuses on (a) particular skill(s) necessary for a purpose by the students. For example, an ESP course might emphasize the development of reading skills of students studying English to understand the technical texts of their fields of study.
In the context of formal educational system of Iran, students' needs are usually defined as the ability to read technical texts of their fields of study and getting familiar with specific English in their majors. According to this definition proposed by the curriculum developers and policy makers of the Ministry of Science, Research, and Technology, the main goal of ESP course should be developing students' reading comprehension skills in English to understand the technical materials they have in their fields.

What is noteworthy is that, to the authors' knowledge, ESP in the Iranian context is commonly taught through the unfashionable Grammar-Translation Method (GTM). Contrary to Fiorito's definition of ESP program, what exists in the literature indicates that in GTM students have to learn language grammar and vocabulary so that they can be able to translate the readings and do the exercises (Chastain, 1988). Among the shortcomings of GTM, its lack of concern with cognitive principles (Chastain, 1988) leads to the inability of students to develop some necessary skills and strategies required in reading comprehension. This might be the worst pitfall that decreases its efficiency for ESP programs, which, according to Fuertes-Olivera and Gomez-Martinez (2004) leads to some passive learners who do not participate in class activities. Therefore, in this context, an eclectic method of ESP instruction making use of a number of appropriate features of a variety of teaching methods to develop learners' reading comprehension ability seems to contribute positively to learning outcomes.

In a model concerning curriculum development, design, and evaluation, Brown (1995a, 1995b, and 2003) illustrates the inextricable link between regularly formative evaluation and the five principles of his curriculum development framework. These principles can be outlined as: needs analysis; the specification of goals; test development and improvement; materials adoption, adaptation, and development; and teaching and teacher support. Such topics are designed to help students improve their reading strategies for processing academic texts. Some skills and strategies like inferencing, critical analysis, increasing reading speed, acquiring vocabulary, etc. that are proposed through this model are
applied in the eclectic method of this study. Certainly, such a method which focuses on teaching different learning strategies such as the use of meta-cognitive strategies, skimming and scanning techniques, guessing meaning from the context, etc. would be possibly more efficient than the traditional method of ESP instruction which is mainly a kind of Grammar-Translation.

Therefore, conducting investigation on the possible effects of such an eclectic method that focuses on various strategies to improve reading comprehension ability of the learners seems to be a fruitful attempt.

According to Huang (2006), in many EFL contexts of Asian countries, English is a required subject of students in all levels of their educational life. The main goal of learning and teaching English in these contexts is to help students "pass the joint entrance examinations into senior high schools and colleges" (Huang, 2006, p. 2). Although reading comprehension is an essential part of these exams, students usually do not receive any instruction on reading skills and strategies necessary to read some complicated texts in their educational life. Then, they enter university and study specific English related to their own fields of study, and, except English majors, they do not have to take English courses after the first year of their studies (Huang, 2006). This applies to the ESP instruction in the Iranian context, as well. The problem starts when the students have to struggle with some technical lengthy texts during their university life. This may be partly due to the fact that ESP instructors do not provide their students with different skills and strategies required to succeed in their reading comprehension goals. During such ESP classes, as Huang (2006) mentions, some more proficient students will acquire some necessary reading skills by themselves, while other less proficient ones will lose their confidence and interest in the course and as a result they will refer to the translation versions of their texts in order to pass the exams. It seems that these so-called ESP classes will not train the students with satisfactory reading abilities. Therefore, as Edwards (2000, p. 296) proposes, practical studies of ESP course designs including alternative methods of ESP instruction that are derived from teachers' practical
experiential knowledge and from the students' needs and objectives seem warranted.

In this vein, Flowerdew and Peacock (2001) pointed out some necessary macro- and micro-skills of reading that are needed by English for Academic Purposes (EAP) students. Making use of learners' existing knowledge to understand new material and matching new knowledge with their schema are macro-skills; and recognizing logical relationships, definitions, generalizations, examples, explanations and predictions, and distinguishing fact from opinion are some crucial micro-skills. Similarly, Hauptman (2000) also noticed that learners with well-provided background knowledge but low language proficiency could get the main ideas of texts.

Some other studies have revealed that different reading strategies are used for different types of texts focusing on differential nature of reading strategies used by poor and good readers. For example, according to Golinkoff (1975), one of the major characteristics of poor readers is that they have the same way of reading for all kinds of texts. In a definition by Pearson and Fielding (1991: 847), they have explained strategies as "conscious and flexible plans that readers apply to particular texts and tasks." According to such a definition and also the concept that language learning and reading are skills and therefore "teachable" through training, many studies have focused on teaching strategies explicitly to improve students' reading comprehension. Meta-cognitive strategies have also been emphasized as useful strategies for effective reading. As mentioned by Carrell (1996, 1998), successful use of a reading strategy depends on meta-cognitive application of such strategy. In other words, successful readers are both aware of and flexible in the use of different reading strategies needed to accomplish a task.

Several studies have been conducted with regard to ESP instruction in relation to the development of learners' different skills. In a recent study, Huang (2006) examined the ways that may motivate the students to engage in EAP reading texts in an EFL context. He constructed a questionnaire including 18 statements describing various situations in which the students were motivated
to read. Descriptive statistics showed that learners were most willing to read under three circumstances: when (1) teachers were available to answer the questions, (2) key points were highlighted clearly in textbooks, and (3) reading skills were taught (Huang, 2006). One can, therefore, infer from Huang's suggestion that teaching reading skills is one of the crucial factors that may motivate students to read efficiently. This, in turn, highlights the importance of teaching reading skills in an ESP and EAP program.

Fuertes-Olivera and Gomez-Martinez (2004) conducted a relevant study in Spanish context of ESP instruction. They tried to analyze some learning factors affecting Spanish students of business English. By performing different correlation and regression analyses of factors such as Reading, Attendance, thinking in L1, and GTM, the researchers found that the more students thought in L1 (an outstanding feature of GTM), and the more they had been taught through the GTM, the more errors they made. Results also indicated positive influence reading has on L2 learning: "The more you read in the L2, the more you leave your L1 aside, as reading is not a translation exercise, but an exercise of processing meaning" (p. 11).

In another study, Flowerdew (2005) described English for Occupational Purposes-oriented course, a subcategory of ESP (Robinson, 1991), which draws on elements of three different but somehow related approaches to ESP syllabus design: task-based, content-based, and text-based. In this study, Flowerdew takes an eclectic approach integrating some aspects of different approaches to empower students through helping them to develop a critical awareness of their learning which will enable them to achieve real-world goals. Part of his study explains many different syllabus types proposed for ESP instruction: structural, situational, functional-notional, task-based, text-based, and content-based. According to Flowerdew, the kind of syllabus to implement depends on a previously conducted needs analysis that examines what learners are required to do (improving reading comprehension ability in our study), and also their learning needs to help them acquire language and skills obtained through the target situation analysis. Flowerdew tries to demonstrate how
communication skills course at a tertiary institution in Hong Kong through an eclectic approach combines elements from three different syllabi (task-based, content-based, and text-based).

Dhieb-Henia (2003) carried out a study on 62 Tunisian students to investigate how meta-cognitive strategy training influenced undergraduate biology students' declarative and procedural knowledge, and also to examine their choice and use of strategies while reading research articles. In this study, two groups of biology students took pre- and post-course reading tests. The results of tests and protocols revealed "the effectiveness of meta-cognitive strategy training in improving the subjects’ familiarity with and proficiency in reading research articles" (Dhieb-Henia, 2003, p. 387). Thus, the role of teaching meta-cognitive strategies is emphasized as being eminent in developing the students' reading comprehension in ESP or EAP contexts.

In the Iranian context of higher education, some researches have been carried out considering the status of EAP and ESP instruction at colleges and universities. In a recent study by Hayati (2008), he carefully observes some ESP classes in Iranian context and reviews the problems that exist in this regard. Ultimately, he proposes some suggestions for the improvement of ESP programs. In this study, the classification of different English courses for students majoring other than English and the main problems and drawbacks concerning EAP instruction in Iranian higher educational centers are discussed.

As Hayati (2008) asserts, Iranian students majoring in different fields of study have to pass a two-credit Basic English course, a three-credit General English course, and a three-credit (or more) ESP course, based on their majors, respectively. However, many students and teachers are not pleased with these classes. According to Hayati (2008), many students define their superior need as to pass the exams in the second/foreign language. Therefore, reading to get the test items, and poor translation to do the assignments would be the expected aims. However, what goes on in ESP classes does not meet these students’ needs. The classes carried out through what is called traditional method throughout this article are teacher-centered. Students are asked to read a few
lines from the text and teachers are busy translating the texts in Persian, while the students write down the translations offered by the teachers. Hayati (2008) points out that the tri-partite problem of ESP programs in Iran includes the teacher, the time, and the textbooks. He highlights the lack of teachers having an expertise to apply a sound methodology in the classroom. He also questions the methods most teachers use focusing only on the grammatical structures and the translation of the texts. Hayati (2008) concludes that a learner-centered ESP program with a sound methodology and ample time together with appropriate textbooks is the vital need of ESP programs in Iran.

However, to the authors' knowledge, there is no evidence in the literature confirming the possible effects of a learner-centered and an eclectic method of ESP instruction that implements certain strategies in relation to the development of learners' reading comprehension. This is especially important in the context of Iranian universities, where understanding the written discourse of the target language is of prime importance. Therefore, learner-centered studies focusing on some strategies to improve reading comprehension ability in ESP contexts seem to be warranted. The present study, thus, is designed to explore the possible effects of such an eclectic and learner-centered method on developing reading comprehension ability of Agriculture students of Urmia University.

Method

The study is of a comparison group design that investigates the effect of two types of treatments, namely, an eclectic method of ESP instruction, vs. a traditional (i.e. GTM) method, on the development of learners' reading comprehension ability.

Subjects

The initial sample of this study consisted of 200 freshmen agriculture students of Urmia University in different subfields. By means of a three part questionnaire and a pre-test, 72 homogeneous subjects were chosen in terms of their age range, reading
comprehension ability, and motivational features for the purpose of this study. The selected subjects were at the same level in terms of reading comprehension ability according to their obtained scores in the pre-test. The subjects were semi-randomly assigned to two experimental groups. Each experimental group included 36 students. The traditional group consisted of 10 males and 26 females and the eclectic group contained 23 males and 13 females.

_Instruments_

For data collection purposes, the following instruments were used:

1. A questionnaire: The questionnaire was used to select a homogeneous group of students and also to control some intervening variables like motivation and age. It included some questions about the subjects' demographic information, English language experience, and motivation. The first part of the questionnaire elicited some main information about subjects including age range, and gender. In fact, to control the moderating effect of age, the subjects within the age range of 18 to 22 were selected for the purpose of this study. The second section elicited data on subjects' assessment of their English as well as their exposure to it. Data from this section led to the exclusion of subjects who reported longer exposures to EFL or having stayed in English speaking countries for more than one year. Another section of the questionnaire examined learners' motivation towards English language learning. In order to have homogeneous groups in terms of motivation and to eliminate the mediating role of this important factor as much as possible, a modified version of Gardener's (1985) motivation questionnaire was used. This section contained 11 statements indicating integrative and instrumental motivation for EFL learning. It was assessed via a serious of Likert-format items that had five scales, including strongly agree, agree, neutral, disagree, and strongly disagree. Participants who were identified as not motivated integratively or instrumentally were excluded from the study.
2. General and Technical Reading Tests and Cloze-tests: Two standard and reliable tests of English reading comprehension, one as a pretest and the other one as a posttest were adopted from *Preliminary English Tests* (PET) developed by Cambridge University. Since the purpose was to match the subjects in terms of their reading ability, only the reading part of this test was used. Both tests were divided into 2 parts, namely, general and specific English.

The general English section included 1 reading passage followed by 5 multiple-choice items and 1 cloze-test with 10 multiple-choice items. The specific section contained 2 reading passages (relevant to Agriculture students), each followed by 5 multiple-choice items. Both tests were piloted on 35 students and their reliability was calculated using the KR-21 formula. The reliability of the tests was within an acceptable range (pretest: 0.69 and posttest: 0.71).

For the specific section 4 technical passages of Agriculture were adopted from "*English for the students of Agriculture* (1)" published by the organization of textbook study and collection of Iran (SAMT) publications. All reading passages were unseen to the students. In the Appendix both tests used in this study are provided.

**Procedure**

The study was conducted at Agriculture Faculty of Urmia University. The participants formed two reading classes that were held two sessions a week. One class (experimental group 1) was taught by the researcher himself through eclectic method, and the other class (experimental group 2) by the classroom teacher through traditional one. All the data was collected during 4 months. Two experimental groups, that received either traditional or eclectic method of instruction, were selected. The subjects formed two experimental classes that were held two sessions (approximately 90 minutes) every week. Both groups studied the same book (i.e. *English for the students of Agriculture* (1), published by SAMT publications) though two different methods of
instruction. In the beginning, the questionnaire along with the pretest was administered to the learners in order to establish homogeneity among subjects and commence treatment. Then, after choosing homogeneous students (in terms of age range, language proficiency, and motivation), the experiment was started.

As already mentioned, the purpose of the study was to examine how a different method of instruction which teaches students reading strategies and skills, compared with a traditional one, improved their reading comprehension ability. Therefore, cognitive and metacognitive strategies were introduced and taught through a new (i.e. eclectic) method to the students. An understanding of the teaching procedures in both experimental groups, thus, seems necessary here.

**Traditional Method**

According to what have been observed in some ESP classes and also the information obtained through interviews with some ESP instructors, the procedure followed in the traditional ESP class was as follows:

- The teacher started the lesson by either explaining or eliciting the meaning of new words on the first pages of each unit in Persian. Then, he asked some of the students to read some parts of the reading and helped them to translate those parts into Persian. When the reading was finished, the teacher went through some grammatical structures used in the text and answered the students' questions. Finally, students had to do the exercises after each reading in a limited time given by the teacher and read their answers to the class together with translating every sentence into Persian. The teacher checked their answers and corrected them if they were wrong. Sometimes, the students did the exercises as homework for the next session. In fact, the traditional method encompassed explanations or providing equivalents for new words; translations of the reading passages, explanations of the relevant grammatical structures; and doing some exercises.

**Eclectic Method**
As previously discussed in sections 1.3 and 1.5, the procedure undertaken in the experimental group taught through the eclectic method was as follows:

- The teacher devoted the first three sessions of the class to introducing and teaching the reading strategies. Then, he tried to point out the important role of these strategies and skills in dealing with different types of English texts. Finally, he modeled a bunch of cognitive and metacognitive strategies and skills (see chapter two) and prepared the students to utilize them. In the next sessions, the teacher followed a fixed pattern. He opened the lesson by asking the students some questions to engage them in the topic and activate their background knowledge. The students had to pre-study the lesson that was going to be taught each session. Then, the teacher asked the students to read 'the words in context' part which encompassed the sentences in which the new words of each unit were used. Afterwards, the teacher made the students read the passage and implement different cognitive and metacognitive strategies while reading in order to understand the passages and answer the questions. The students were explained that the purpose of reading a text might differ in different tasks. Sometimes, a general understanding is required in order to answer the questions after a reading. For this purpose, skimming would be a good technique. However, some questions focus on specific information included in a text for which scanning technique would be more appropriate.

Randomly, the teacher asked one of the students to read one paragraph of the text, and had the other students summarize that paragraph. Sometimes, he asked the students to give the main idea of the text in one paragraph. The students were encouraged to guess the meaning of unknown words or ignore them if not possible. The teacher trained the students to use various appropriate techniques (e.g. guessing meaning, using clues, inferencing, summarizing, taking notes, etc.) whenever necessary. Thus, the students were aware of which technique to use in order to answer a specific kind of question. Therefore, the class in which the eclectic method was taught was divided into two parts: first,
teaching the students some cognitive and meta-cognitive strategies, and second, getting the students to use those strategies in the process of reading and answering the questions.

Then, after 15 weeks of instruction (2 sessions per week), the posttest was administered to both experimental groups. Consequently, the possible differences between the two teaching methods in terms of their impact on developing the learners' reading comprehension were analyzed. As it was mentioned before, the main objective was to find out if the eclectic method of teaching compared with the traditional one had any effect on the development of learners' reading comprehension ability, while taking gender as a moderator variable.

Results

In order to analyze the obtained data, two-way ANOVA was used to measure the possible effects of both traditional and eclectic method as well as gender on the development of the students' reading comprehension ability.

As stated before, a reading comprehension test was administered as a pre-test to examine whether any initial differences existed between the two experimental groups before starting the treatment. The obtained results from a set of t-test analyses showed that the means of traditional (M= 72.6) and eclectic group (M=74.4) were not statistically different to begin with. Also males (M=74.1) and females (M= 72.9) did not turn out to be significantly different in terms of their mean scores in reading comprehension.

Then, data from the post-test was analyzed to see the effect of treatment. To test the proposed assumptions, the author used two-way ANOVA with the two experimental groups and gender as independent variables and reading comprehension as the dependent one. As the comparison of the means across groups (Table 1) shows, the eclectic group (M = 82.8) performed better than the traditional group (M = 75.13). However, regarding gender, there is not any remarkable difference between males (M = 80.7) and females (M = 77.5) in performing the tests. Table 1 shows the
means and standard deviations across the groups as far as reading comprehension ability in the post-test is concerned.

<table>
<thead>
<tr>
<th>Group</th>
<th>Gender</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
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</thead>
<tbody>
<tr>
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<td>male</td>
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<td>10</td>
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<tr>
<td></td>
<td>female</td>
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<td></td>
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<td></td>
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<tr>
<td>Total</td>
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<td>79.0000</td>
<td>11.17215</td>
<td>72</td>
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</table>

Table 1
Descriptive statistics for the post-test scores

Table 2 shows the results of two-way ANOVA for reading comprehension. The results showed that the eclectic method, compared with the traditional method, has a significant effect $F(1, 68) = 7.60, P = .007$ on developing the students reading comprehension ability. Therefore, we are safe to support the main assumption that there is a significant difference between eclectic method and traditional one in terms of their effect on developing students reading comprehension ability.

However, the results revealed that there is no significant effect of gender $F(1, 68) = .031, P = .86$ on participants’ reading comprehension ability. This means that males and females gained similar ability in reading comprehension through eclectic method of instruction. Also, line five indicates that the interaction effect of two independent variables is small: $F(1, 68) = .045$. Therefore, we might claim that the difference between the groups is mainly due to the effect of instruction method. Figure 1 represents this interaction. It shows that the means of eclectic group for males and
females are nearly the same.

Table 2
The results of two-way ANOVA for reading comprehension

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<tr>
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<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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<td>360.496</td>
<td>3.151</td>
<td>.030</td>
</tr>
<tr>
<td>Intercept</td>
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<td>1</td>
<td>386958.870</td>
<td>3381.937</td>
<td>.000</td>
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<tr>
<td>Group</td>
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<td>1</td>
<td>869.535</td>
<td>7.600</td>
<td>.007</td>
</tr>
<tr>
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<td>3.537</td>
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<td>.861</td>
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<tr>
<td>group * gender</td>
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<td>1</td>
<td>5.116</td>
<td>.045</td>
<td>.833</td>
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<tr>
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Dependent Variable: Reading comprehension
a. R Squared = .122 (Adjusted R Squared = .083)

Figure 1. Estimated marginal means of reading comprehension
Discussion and Conclusion

As stated before, the main purpose of this study was to examine how an eclectic method of ESP instruction, compared with the traditional one, could improve students' reading comprehension ability. It was assumed that an eclectic method that utilizes some helpful skills and strategies involved in reading comprehension would possibly be more efficient than the traditional one inspired by GTM.

The results revealed that the eclectic method carried out as an alternative method of ESP instruction in Iranian context was more effective than the traditional one as far as developing students' reading comprehension ability was concerned. This study confirmed several researches (e.g. Huang, 2006; Dhieb-Henia, 2003) proposing positive effects of cognitive and meta-cognitive skills and strategies training on improving reading comprehension ability of students, especially in contexts of teaching ESP.

The findings of the study provide some evidence in favor of the idea of developing alternative methods of ESP instruction (Huang, 2006; Fiortio, 2005) to improve reading comprehension ability of learners who are reading technical texts in their specialty area. In addition, the findings emphasize the efficacy of training university EFL students in a variety of reading strategies and skills to empower them with the flexibility required to operate under different constraints in dealing with different types of reading texts (Carrell, 1996, 1998).

This is, indeed, in line with what Fuertes-Olivera and Gomez-Martinez (2004) recommend: ESP instructors may have to devote sometime to be sure that their students correctly understand and accept the daily routines of a communicative methodology. The current study highlights the crucial effect of an eclectic method of instruction on developing subjects' reading comprehension ability; however, the findings call attention to some issues to be considered in further research. This study mainly focused on a specific method of instruction (eclectic) and its
effects on developing reading comprehension ability of Agriculture students; further research might investigate the possible effects of some other methods of instruction might have on students with different levels of motivation and in different fields of study.

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References


Available:
http://langue.hyper.chubu.ac.jp./jalt/pub/tlt/98/mar/carrell.html
Fiorito, L. (2005). How is English for specific purposes different from English as a second language, also known as general English? *Teacher articles, using English.com*

Appendices

Appendix A: Questionnaire

دانشجوی عزیز،
پرسشنامه حاضرا با هدف انجام یک تحقیق برای پایان نامه دوره کارشناسی ارشد طراحی شده و هیچ ارتباطی با درس مربوطه ندارد. لذا تمامی پاسخ‌های شما کاملا محفوظ بوده و نهایت سمت تحقیق انجام تحقیق خواهند شد. از همکاری صمیمانه شما نهایت سپاس را دارم.

لطفا پاسخ مربوطه را علائم بزنید.
1. جنسیت: مرد (ب) زن (ج) ۲۰-۲۴ (ب) ۲۵-۲۹ (ج)
2. سن: (الف) ۱۸-۱۷ (ب) ۲۴-۲۱ (ج)
3. آیا تا کنون در کلاسهای آموزش زبان انگلیسی شرکت کرده‌اید؟ (الف) به چشم (ب) خیر
4. ۲۳ اگر پاسخ شما به سوال قبل مثبت است، کجای؟ (الف) در خانه (ب) در مدرسه (ج) در موسسات خصوصی (د) سایر موارد (زکر کنید)
5. به چه مدنه؟ (زکر کنید) .........

........

........
4. سطح فعال خود را در زبان انگلیسی چگونه ارزیابی می کنید؟

این تربیت مشخص کنید. از ١ تا ٤ رتبه

که گو (speaking) گفتگو (listening) خواندن (reading) نگارش (writing)

لطفا جدول زیر را که در مورد دلیل فاکتورهای زبان انگلیسی شما می باشد کامل کنید. شماره های

جدول پیانگ عبارات زیر هستند:

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به فرهنگ کشورهای انگلیسی زبان علاقه‌مند

بیشتر فیلم‌های مورد علاقه‌ام انگلیسی هستند

من فرنادات را به یاد گیری انگلیسی تشویق جوامع گرد

شغل آن‌ها من به مهارت در زبان انگلیسی تیز دارد

قصد ادامه تحصیل در کشورهای انگلیسی زبان را دارم

جهت کوبن در افتتاحات زبان‌می آموزم

به خواست والدین زبان‌می آموزم

انگلیسی زبان اول دنباه است

مهم زبان انگلیسی را دوست دارم

اگر انگلیسی یادمومگی جاگاه اجتماعی باشم خواهم داشت

من به صداهای زبان انگلیسی علاقه‌مندی
Appendix B: Pre-test

Name: 
Student number: 
Major: 

Part A. General English

- You are going to read a magazine article about an author.
  For questions 1-8, choose the correct answer A, B, C, D.
  Mark your answers on the answer sheet. (There is only one possible answer.)
  'A good book for children should simply be a good book in its own right.' These are the words of Mollie Hunter, a well-known author of books for youngsters. Born and bred near Edinburgh, Mollie has devoted her talents to writing primarily for young people. She strongly believes that there is always and should always be a wider audience for any good book whatever its main market. In Mollie's opinion it is essential to make full use of language and she enjoys telling a story, which is what every writer should be doing. 'If you aren't telling a story, you're a very dead writer indeed,' she says.

  With the main job of a writer being to entertain, Mollie is really an entertainer. 'I have this great love of not only the meaning of language but of the music of language,' she says. This love goes back to early childhood. 'I have told stories all my life. I had a school teacher who used to ask us what we would like to be when we grew up and, because my family always had dogs, and I was very good at controlling them, I said I wanted to work with dogs, and the teacher always said "Nonsense, Mollie dear, you will be a writer." So finally I thought that this woman must have something, since she was such a good teacher - and I decided when I was nine that I would be a writer.'
This childhood plan is described in her novel, *A Sound of Chariots*, which although is written in the third person is clearly autobiographical and gives a picture both of Mollie's motivation and her struggle towards its achievement.

Thoughts of her childhood brought thoughts of the time when her home was still a village with buttercup meadows and strawberry fields - sadly now covered with modern houses. 'I was once taken back to see it and I felt that somebody have lain dirty hands all over my childhood. I'll never go back,' she said. 'Never.'

To this day, Mollie has a lively friendship to children, which is reflected in the love she has for her writing. 'When we have visitors with children the adults always say, "If you go to visit Mollie, she'll spend more time for the children." They don’t understand that children are much more interesting friends. I have heard all that the adults have to say before. The children have something new.'

1. What does Mollie Hunter feel about the nature of a good book?
   A. It should not aim at a narrow audience.  
   B. It should be attractive to young readers.  
   C. It should be based on original ideas.  
   D. It should not include too much conversation.

2. In Mollie Hunter's opinion, one sign of a poor writer is…………
   A. lifeless characters.  
   B. complicated ideas.  
   C. the weakness of the description.  
   D. the absence of a story.

3. What does "its" refer to in line 18?
   A. Novel  
   B. Picture  
   C. Motivation  
   D. Struggle
4. How does Mollie feel about what has happened to her birthplace?
   A. Confused
   B. Ashamed
   C. Disappointed
   D. Surprised

5. What is the writer's purpose in this text?
   A. To describe Mollie Hunter's most successful books.
   B. To share her enjoyment of Mollie Hunter's books.
   C. To provide information for Mollie Hunter's existing readers.
   D. To introduce Mollie Hunter's work to a wider audience.

- Read the text below and choose the correct word for each space. For each question, mark the correct letter A, B, C or D on your answer sheet. (There is only one possible answer.)

Deep Sleep

Deep sleep is important for everyone. The actual amount of sleep you need depends on your age. A young child tends to sleep ten to twelve hours, and a teenager about nine hours. Adults differ a lot in their sleeping number. For most of them, seven to eight hours a night is sufficient, but some sleep longer, while others manage with only four hours.

For a good night, having a comfortable size to sleep is very important. Also, there should be plenty of fresh air in the room. A warm drink sometimes helps people to sleep, but it is not a good idea to drink coffee immediately before going to bed.

If you have to travel a very long distance, try to go to bed earlier than usual the day before. This will help you to feel more rested when you arrive.

6. A. size  B. number  C. amount  D. sum
Part B. Specific English

Read the following text and choose the correct answer A, B, C or D for questions 18-23 on your answer sheet. (There is only one possible answer.)

Pure and Applied Science

Science is one of the greatest achievements of mankind. It was born in the gradual collection of knowledge about nature and has been developed by thousands of different scientists. Each scientist has added more knowledge to build on the knowledge of the past, and many scientists have developed theories, concepts and classifications in order to organize that knowledge. Thus, science is a cumulative body of organized knowledge about the natural world.

There are two main branches of science: pure and applied. The goal of pure science is to discover the relationships which exist among the objects and events in the universe. In trying to explain natural phenomena, the pure scientist develops theories, which are then tested by means of observation and experiment. When they are sufficiently validated, these theories become the principles of science. In other words, the goal of a pure scientist is to find out the laws of nature. What he learns may later turn out to be useful. But his goal is only knowledge, not usefulness. In biology, for instance, discovering the life cycle of a rare species of
insect is an example of the work of pure science.

Applied science, on the other hand, has a different goal even though it uses the same method as pure science. The goal of applied science is to apply the laws of pure science to the practical problems of life. An applied scientist is interested in the usefulness of his knowledge. Determining which stage of an insect's life cycle causes the most damage to crops is an example of the work of an applied scientist of agriculture.

16. According to the text, science is ..........  
   A. a cumulative body of the natural world.  
   B. the knowledge of theories and concepts.  
   C. the collection of knowledge of mankind.  
   D. an organized body of knowledge about nature.  

17. The goal of pure science is to find out .......... of nature.  
   A. the concepts  
   B. the stages  
   C. the laws  
   D. the objects  

18. The life cycle of insects ..........  
   A. damages crops.  
   B. is studied in biology.  
   C. has different goals  
   D. builds on the knowledge of the past.  

19. The goal of applied science is to ..........  
   A. discover rare species.  
   B. explain natural phenomena.  
   C. apply the laws of pure science.  
   D. discover the laws of nature.  

20. Which word is the closest in meaning to cumulative?  
   A. Organized
B. Scientific
C. Increasing
D. Vast

- Read the passage below and answer the questions 24-30 on your answer sheet. (There is only one possible answer.)

Cereals as a Main Food Source

Cereals are the support of life to civilization. Around 70 percent of the world's harvested acreage of about thousand million hectares is devoted to growing cereals. They are the direct source of much additional food when converted to meat, milk, eggs, and other animal products.

The true cereals are all members of the grass family, the Gramineae. The fruit they produce is a grain called caryopsis, a type of fruit in which the ovary wall turns hard and durable, combining with the single seed. The major cereal crops are rice, wheat, maize, barley, rye, various millets, and a few other species.

There are a number of reasons why cereals have become man's main source of food. Most of them are yearly, or are at least adapted to cultivation as once-a-year, permitting facility in cropping. Like other grasses, cereals adapt well to a variety of soils, climates, and ways of controlling. They are also relatively efficient in gathering the sun's energy, changing it into usable food substance. In addition, they are generally strong and are not plagued by unusually large numbers of diseases and pests. Above all, the grain is a small package of stored energy, properly harvested, easily cleaned and managed, and suitably stored without need for artificial drying.

Rice, wheat and corn are the world's three major cereals, all about equally important in terms of world production. Rice is the main source of substance for tropical populations; it is grown mostly on flood plains or where the land can be seasonally covered with still water. Wheat is mainly grown on lands that were naturally prairies, too harsh, cold, and windy for maize. Maize is a
crop that grows best with ample warmth and moisture; it is widely used as a summer year-long in areas where general farming is practiced.

21. In line 12, the word **them** refers to .......... .
   A. species  
   B. reasons  
   C. cereals  
   D. products

22. The world's three major cereals are .......... .
   A. maize, corn, and rice  
   B. rice, wheat, and corn  
   C. wheat, barley, and rice  
   D. rye, corn, and wheat

23. Maize is a crop that grows best .......... .
   A. on natural prairies  
   B. on harsh lands  
   C. in cold climates with some wind  
   D. on warm, moist land

24. The main source of food for tropical populations is .......... .
   A. corn  
   B. wheat  
   C. maize  
   D. rice

25. In line 21, the word **artificial** means .......... .
   A. simple  
   B. difficult  
   C. ordinary  
   D. unnatural
Appendix C: Post-Test

Name:
Student number:
Major:

Part A. General English

• Read the text and questions below. For each question, mark the correct letter A, B, C or D on your answer sheet. (There is only one possible answer.)

Ainsley Harriott

I have always been a bit of an entertainer and played a funny man. I was a part-time comedian for years, so I learned how to stand in front of audiences. It made me sure of myself. I like being liked and I love making everyone smile.

I've lived in London all my life and have just moved to a larger house with my wife Clare and our two children Jimmy and Madeleine. We spend a lot of time just singing and dancing around the house. I grew up with music because my dad is the pianist, Chester Harriott, who is still playing, by the way. My working day is divided between television and writing cook books, though TV takes most of my time. I spend about five days a fortnight working on the cooking programmes I appear in. I eat all sorts of things at home but I only buy quality food. When I'm cooking, I experiment with whatever in the fridge - it's good practice for my TV series.

I'm a football fan and enjoy going to matches, but I'm a home-loving person really. I don't like going to the pub but we do go out to eat about twice a month. There's nothing better than a night at home playing with the children. I rarely go to bed before midnight. Late evening is when fresh thoughts on cooking usually come to me, so I often write or plan my programme then. When I eventually get to bed, I have no trouble sleeping.

1. What is the writer's main purpose in writing the text?
A. To describe how he lives  
B. To say what makes him laugh  
C. To talk about his cooking ideas  
D. To explain how he started in TV  

2. What would a reader learn about Ainsley from the text?  
A. He is a very good musician.  
B. He likes to plan family meals.  
C. He is nervous about performing on stage.  
D. He enjoys spending time with his family.  

3. What does the writer say about himself?  
A. He loves going out and meeting people.  
B. He is very similar to his father.  
C. He enjoys being popular.  
D. He should go to bed earlier.  

4. What does he say about his working life?  
A. He would like to appear less on TV.  
B. He gets his best ideas at certain times.  
C. He prefers being a comedian.  
D. He should practice cooking more.  

5. What does "it" refer to in line 3?  
A. Being a bit of an entertainer  
B. Playing as a funny man  
C. Being a comedian for years  
D. Standing in front of audiences  

Choose the word that best completes each blank. Mark the correct letter A, B, C or D on your answer sheet. (There is only one possible answer.)
Sign language

When you wave to a friend, you are using sign language. When you smile at someone, you mean to be (6) ______. When you put one finger in front of your (7) ______, you mean, "Be quiet." Yet, people in different countries may use different sign languages.

Once an Englishman was in Italy. He could (8) ______ a little Italian. One day while he was walking in the street, he felt (9) ______ and went into a restaurant. When the waiter came, the Englishman (10) ______ his mouth, put his fingers into it and took them out again and moved his lips. In this way, he (11) ______ to say, "Bring me something to eat." But the waiter brought him a lot of things to (12) ______ first tea, then coffee, then milk, but no food. The Englishman was sorry that he was not able to tell the waiter he was hungry. He was (13) ______ to leave the restaurant. When another man came in and put his hands on his stomach. And this sign was (14) ______ enough for the waiter. In a few minutes, the waiter brought him a large plate of bread and meat. (15) ______, the Englishman had his meal in the same way.

6. A. well    B. friendly    C. fine    D. careful
7. A. eyes    B. legs    C. mouth    D. head
8. A. write    B. read    C. say    D. speak
9. A. hungry    B. tired    C. cold    D. ill
10. A. pointed to    B. reached for    C. touched    D. opened
11. A. needed    B. meant    C. decided    D. had
12. A. eat    B. watch    C. drink    D. read
13. A. ready    B. sure    C. again    D. afraid
14. A. quick    B. big    C. strong    D. clear
15. A. at once    B. at last    C. at first    D. at times

Part B. Specific English

Read the following text and choose the correct answer A, B, C or D for questions 16-30 on your answer sheet. (There is only one possible answer.)
Energy from the sun

Energy is defined as the ability or capacity to do work. Nearly all the energy used by man is derived from the sun, either directly or indirectly, in the form of heat rays or light rays.

Solar energy provides the light and warmth necessary for all animal and plant life upon the earth. The sun's light is essential in the process of photosynthesis, in which chlorophyll-bearing cells transform radiant energy from the sun into the chemical energy of carbohydrates. These carbohydrates serve as the basic substance in the food materials of plants and also the animals which consume plants.

The light and heat energy derived from fuel also comes indirectly from the sun. Coal was made by the pressure of rocks on vegetation which died millions of years ago. That vegetation grew with the aid of sunlight, from which carbohydrates were formed. Petroleum is another form of stored solar energy. Plants, together with the animals which fed on them, died millions of years ago, and their remains were pressed under the rocks in the earth. These dead animal and vegetable remains formed petroleum, from which gasoline and oil are now obtained.

Electrical energy is also obtained indirectly from solar energy; for example, it can be derived from the power of water falling down a mountainside. The sun's heat first causes water to evaporate from the surface of the earth. This water vapor rises, condenses on cooling, and falls upon mountains in the form of rain or snow, which later flows down the mountainsides in rivers. The electrical energy generated by windmills is also derived from the sun because all winds result from the uneven heating of different parts of the earth's surface by the sun.

Thus, it can be said that the sun is the source of nearly all our energy and that in the absence of the sun's heat and light, no life could exist on the earth.
16. In line 21, the word it refers to ………
   A. an example
   B. petroleum
   C. solar energy
   D. electrical energy

17. According to the text, cells containing chlorophyll……….
   A. provide warmth and light for plants 
   B. form carbohydrates by using radiant energy 
   C. transform chemical energy into radiant energy 
   D. serve as the basic substance in plants' food 

18. Which statement is correct about the sun's heat?
   A. It condenses the water on the surface of the earth 
   B. It evaporates water from the surface of the earth 
   C. It warms the earth surface evenly 
   D. It causes rain to fall upon the mountains 

19. Animal and plant life would disappear from the earth if………..didn't exist.
   A. light energy 
   B. solar energy 
   C. chemical energy 
   D. electrical energy 

20. The remains of vegetation which died millions of years ago………..
   A. grew without the aid of sunlight 
   B. were pressed under the rocks to form coal 
   C. formed carbohydrates 
   D. made the rocks of the earth
Read the passage below and answer the questions 21-25 on your answer sheet. (There is only one possible answer.)

**Plant diseases**

Crop plants are subject to many diseases that can reduce production and quality. The study of plant diseases—that is, the science of plant pathology—includes some insufficiency diseases caused by an imbalance in plant nutrients; most plant diseases are, however, caused by micro-organisms which live as parasites on plant hosts. A parasite which is the casual factor of a disease is called a pathogen.

The three main groups of microscopic plant pathogens are fungi, bacteria, and viruses.

**Fungi.** Fungi are the pathogens that cause the most damage to the greatest number of crops. Fungal infection spreads quickly from one host plant to another mainly by means of spores, which are the reproductive elements in fungi and which are comparable to the seeds in flowering plants. Vast numbers of tiny spores are produced by fungi and are spread by means of wind, water, and insects. Most parasitic fungi go directly into plant tissue to obtain their food. Common fungal diseases resulting in large crop losses are various types of blights on crops such as potatoes and various types of smuts and rusts on crops such as cereals.

**Bacteria.** Pathogenic bacteria enter plants only through natural openings, such as stomata, or through open wounds. Once inside the plant, they reproduce very rapidly. Insects are an important factor in the sending of bacterial disease, including various blights on fruit trees.

**Viruses.** Although many non-parasitic species of fungi and bacteria are known to exist, all known viruses are parasitic on plant or animal hosts. Viruses are commonly sent by insects, especially aphids; they usually enter plants through wounds caused by insect feeding or other means. Viral disease called mosaics which may infect potatoes or other crops, are characterized by a spotted pattern of yellow and green areas on plant leaves. Many viral diseases, however, are difficult to distinguish because they
affect the plant in a general way by mild growing or yellowing and a reduced production.

21. Fungi and bacteria are………
   A. either parasitic or non-parasitic
   B. all parasitic micro-organisms
   C. non-parasitic species of micro-organisms
   D. pathogens that do little harm to crops

22. In line 22, the word they refers to………
   A. bacteria
   B. stomata
   C. wounds
   D. openings

23. In line 28, the word they refers to………
   A. insects
   B. aphids
   C. viruses
   D. hosts

24. According to the reading, pathogens are…………
   A. micro-organisms living on plant hosts
   B. the cause of insufficiency diseases
   C. parasites which cause plant disease
   D. non-parasitic species of fungi and bacteria

25. Many viral diseases are difficult to distinguish because they………
   A. are not caused by parasites
   B. do not reduce crop production
   C. affect the general condition of the plant
   D. cause yellow and green spotted patterns