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The effect of multimedia-based materials on L2 grammar proficiency development of Iranian high school EFL learners

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Abstract

Along with development of information technology and its important applications in education, the field of Computer Assisted Language Learning (CALL) has developed significantly during the past decades. This study seeks to find the effectiveness of multimedia-based learning materials in improving L2 grammar proficiency of Iranian high school learners and also investigates the attitudes of the learners toward CALL. The sample consists of 116 female high school students in Isfahan. They were divided into three groups (two experimental groups and a control group). The first experimental group was instructed through multimedia-based materials, the second one via combined use of multimedia-based materials and the textbook, while the control group was taught conventionally by means of textbook. The results showed that the use of multimedia-based materials led to higher ability of the learners in English grammar and CALL could be used as an effective instructional method for improving L2 grammar proficiency of the learners. The results of the questionnaire, on the other hand, indicated positive inclination of the learners toward the use of CALL materials in language learning. The outcomes of this study can hopefully open a new way to help EFL learners to develop their L2 proficiency more effectively.

Keywords: Computer Assisted Language Learning (CALL); language proficiency; grammar proficiency; multimedia-based materials; combined use of multimedia and textbook

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1. Introduction

Language is the human capacity for acquiring and using complex systems of communication. Language teaching is a complicated process which requires careful and diligent attention. Language teaching instructors usually attempt to find enjoyable and attractive ways for language learners. It is fashionable nowadays to know two or more foreign languages. English has become the common international language in the 21st Century. It is the language most frequently used to communicate by people who are not native speakers of the same language. Consequently, learning and using English is of great importance nowadays (Marek & Wu, 2010). Therefore, most people prefer to learn it as a necessity. They try to choose an easy and appealing method to learn a language. So language instructors do their best to find attractive, interesting and easy ways to learn and teach methods of language learning for language learners.

1.1 The Use of Technology in Education

There is broad consensus among educators, communication scholars, sociologists, and economists that the development and diffusion of information and communication technologies (ICT) are having a profound effect on modern life (MaTuchniak & Warschauer, 2010). At the beginning of the 1980s, technology came into use in the language classrooms with films, videos, television, and language labs. Also, some computer-assisted language learning / teaching software have been introduced in the form of drill and practice (Cunningham, 1998).

Computer-Assisted Language Learning (CALL) is any use of modern and mainly digital technologies for the purpose of language teaching and learning (Marandi, 2011). CALL provides an effective learning environment so that students can practice in an interactive manner using multi-media content, either with the supervision of teachers or on their own pace in self-learning. The second half of the 20th century has been the acceleration of a digital revolution that is transforming the way in which the world socializes and does business (Hanson-Smith, 1995). The digital revolution is affecting the educational revolution. The way in which computers and their related equipment can be used for language learning, can support and enhance pedagogical practices through CALL. The term CALL originated in the USA and was in common use until the early 1980s. CALL has now established itself as an important area of research in higher education (Davies, 2010).

In today's developed world, computer is one of the most beneficial and useful tools in learning. The number of systems which help learners to improve their language is increasing. CALL is a system which aids learners to improve and practice language skills. It provides a stress-free environment for learners and makes them more responsible (Shafaei, 2008). CALL systems can offer many potential benefits for both learners and teachers, because they offer learners the chance to practice extra learning materials at their convenient time in a stress-free environment (Zinovjeva, 2005). There is a significant interest in the development of CALL systems recently. Many research efforts have been made for the improvement of such systems especially in the field of second language learning (Tsubota, Kawahara, & Dantsuji, 2004).

Technology, on the other hand, offers opportunities for people from other cultures to interact with each other. It could be beneficial to language learners if technology is incorporated into the classroom (Chang & Lehman, 2002). Learning and teaching of English as a foreign language is affected by lack of a surrounding community of English speakers outside the classroom. It makes EFL/ESL learning and quality of teaching more challenging when there are no English speakers available outside the classroom. Thus, the most successful EFL/ESL pedagogies could enhance the quality of learning and teaching by applying technology-assisted teaching (Lapkin,

Shapson, & Swain, 1990). Recently, there is a great interest in development of CALL systems. There are a number of CALL systems which have been developed which cover almost every aspects of language learning. Some systems concentrate on vocabulary and grammar learning. Some focus on pronunciation learning, while some allow training of an entire situation-based conversation.

1.2 Definition of CALL

Egbert (2005, p. 4) defines CALL as "learners learning language in any context with, though, and around computer technologies". Moreover, Jarvis (2004, p. 116) develops these broad definitions to characterize the software applications as which are "Language specific as well as more generic Information Technology (IT) programs". Learning has three dimensions namely motivation, confidence, and ability. These three dimensions are directly related and impact upon each other. If one of them increase or decrease, the other two will follow in a direct relationship. All three learning dimensions can be met only when students have cumulative experiences both in and out of the classroom. Since providing an environment in which learners have various opportunities to interact in English is critical, using technology is of great importance and can ease second or foreign language learning. Most previous methods of teaching English focused on different aspects of language learning and provided related environment in which learners' and teachers' roles are defined.

1.3 Definition of Grammar Proficiency

The language competence means that one has a good command of grammar and words, and can speak, read and write in grammatical foreign or second language. In conversation, if someone made mistakes in his pronunciation, grammar or words spelling, it will lead to misunderstanding and tedium to others, and even spoil their relationship. Therefore, we should try to develop the students' ability of using language in communication in a correct way (Li & Song, 2007).

On the other hand, language proficiency is a multidimensional construct which consists of different levels of abilities and domains (Carrasquillo, 1994); and grammar is one of the important components affecting language proficiency. Our learners should understand English language structures accurately to become fluent. Swan (1998) believed that knowing how to build and use certain structures makes it feasible to communicate common types of meaning successfully. Without these structures, it is difficult to make comprehensible sentences. He stated that in some social contexts, serious deviance from native-speaker rules can put off integration and arouse prejudice—a person who speaks badly may be considered uneducated or stupid.

1.4 The Application of Multimedia-Based Materials

Although Iranian high school students are aware of the fact that English is necessary for using computer and cell phone, having access to the internet, being successful in university entrance exam, and it has many other positive effects, they are not so much keen to learn it. As an English teacher, the researcher is interested in making the students enthusiastic to learn English. One of the disappointing elements in English language teaching process in Iranian high schools is the old-fashioned colorless textbooks which cannot attract the learners' attention. The traditional English textbooks in Iran have not been renewed for a long time. The pictures of the textbooks are so dull and uninteresting and mostly irrelevant to the subject that the learners usually neglect them. It is the teachers' responsibility to make the content or appearance of the textbooks as attractive as possible for the learners. So, a transition from traditional textbooks to modern media is required in the language teaching system in Iran. The use of multimedia devices and also multimedia-based materials are the suggested method for solving this problem which is under investigation in this research.

In the field of education, media sometimes referred to as "audio-visual aids", have long been used to help in teaching. These aids have been many and varied, and have included things like movies, videos, slides, audio tapes, overhead transparencies, along with various sorts of equipment such as cameras, recorders and television monitors. In the mid-1960s, new technological aids came into general use in the classroom-language laboratory

such as portable tape-recorder and film strip projector which were all greeted with satisfaction in all modern language departments. Use of tapes and equipment was revolutionary for language teachers. Although tape-recorder was helpful because it offered native speaking voice in the classroom, it could not provide learners by editing and self-recording facilities. Media motivate students by presenting language in a more complete communicative context and by bringing real life experience into the classroom. Media can also help students process information and free the teacher from excessive explanation, and they give them opportunities to increase their knowledge in an interesting way in the classroom (Mirhassani, 2003).

2. Review of related research

Most research done in this area has focused on the effect of technology, computer mediated instruction, CALL, and multimedia based materials. Neo and Teoh (2007) and Al-Bayati (unpublished) also found in their studies according to surveys, questionnaires and tests that with the use of computer technology, especially multimedia in classrooms, learning became interesting, enjoyable, engaging and increasing learners' motivation to learn.

Anbarestani and Ghabanchi, (2008) in their research provide brief overview of how computers have been used and also are being used now for language learning. They investigated whether CALL programs have any effect on the long-term retention in vocabulary learning, and if CALL programs have better influence on contextualized vocabulary learning than ordinary method of learning vocabulary in isolation through bilingual list. There were about 56 participants in the study. The results indicated that in using CALL program, learners have an intensive mental processing, which resulted in long-term recall of words. CALL also produced better results in contextualized vocabulary learning and pronunciation.

After all, it is worth making a reference to the point raised by Groot and Meeampol (2011) about the difference between the effect of traditional textbook based materials and technology incorporation in the modern classrooms upon learners' motivation. They stated that unlike technology- based learning materials which have a positive influence upon learners' motivation for learning, a poor acquisition context such as traditional textbook based materials cannot influence learners' motivation for learning.

2.1 This Study

Research Questions: This study aims at answering the following question:

1. Do the multimedia-based materials as one medium of teaching have any significant effect on the L2 grammar proficiency development of Iranian high school EFL learners?
2. Do the combined application of multimedia-based materials and the textbooks improve the grammar proficiency of Iranian high school learners in EFL classrooms?
3. How is the attitude of the Iranian high school EFL learners toward the application of multimedia -based materials?

3. Method

3.1 Participants

The sample in this research consisted of the female students in grade one of high school. The number of the participants, who were 15 or 16 years old, was 130. They studied English two sessions a week, each session for 85 minutes. The duration of the research was predicted 12 sessions, considering the time of the tests. The participants were selected through Intermediate Nelson Proficiency Test. Then, they were divided into three groups randomly: two experimental and a control group.

The first experimental group (EG1) was the multimedia group in which all the materials including vocabulary, grammar, reading comprehension, pronunciation, and language function were presented in multimedia form. The students were placed in dyads and for each group a PC was provided. Marandi (2002) found that dyads rather than groups "*coupled with the obligation to exchange information, were the best for the language production, negotiation and modified output*"(p. 18). During the experiment, the teacher was present in the class but just some teaching points were presented by the teacher and most of the teaching subjects were taught through audio or visual media. The second experimental group (EG2) was exposed to both multimedia based materials and the textbook which means teaching grammar points were presented through multimedia and other parts were taught through the textbook. The third group which was the control group (CG) received the materials in traditional form in which all the teaching materials were taught by the teacher and through the textbook. It must be mentioned that these classes were equipped by electronic board which is a sort of multimedia. However, the board of the CG was replaced by an ordinary white board to prevent using any form of multimedia.

3.2 Materials

The instruments employed in this research included a Nelson Proficiency Test, pretest, posttest, and a questionnaire. Other materials like multimedia-based materials, textbook, and electronic board were also used according to each group's treatment.

Before starting the research, in order to select homogeneous participants, a proficiency test was administered. It was the intermediate level of standard Nelson Proficiency Test. It contained 50 multiple choice-items and the participants had to select one of the four options in 40 minutes. As the researcher found out through the pilot study that answering the test items through the computer made a lot of mistakes and problems both for the participants and the researcher, all the tests through the experiment (including Nelson test, pretest, posttest, and the questionnaire) were administered via paper and pencil. Although about 14 who were not in the expected range were omitted from the experiment, they took part in all parts of the research such as pretest, posttest, and the questionnaire.

At the beginning of the research, a pretest was prepared by the researcher. As it was a teacher-made test, the reliability and the validity of the test had to be determined. The reliability of the pretest and also the posttest (which were the same) was determined through Cronbach Alpha which was 0.87. So, it shows the high reliability of the test. Likewise, to be sure about the validity, the form and the content of the test were shown to some of the experts and experienced teachers. The pretest contained 40 multiple-choice items on vocabulary, reading comprehension, and grammar of book one of high school. The questions were based on the lessons taught during the experiment. The pretest was administered without any announcement and the aim was to determine the students' proficiency level before the beginning of the treatment.

For the two experimental groups (EG1 & EG2), the multimedia-based materials which included the software prepared by Iran Ministry of Education were used. Besides, for listening practices, the other software was used. A native speaker had read the reading comprehension parts of the high school textbook. The participants could listen to it many times. Besides, they could replay each paragraph or section they wanted to have better understanding. Furthermore, the researcher had provided films and pictures based on the teaching points.

At the end of the experiment and after 10 sessions of treatment, the posttest was administered to the three groups. The posttest and the pretest were similar in content while they had some differences in form. For example, the order of the items was changed and also the choices were scrambled to avoid any effect of the students' short term memory on answering the questions. They were given 30 minutes to answer by means of paper and pencil.

Finally, in order to evaluate the learners' attitude towards multimedia as the means of education or as a teaching aid, and also their attitude towards the textbook, a questionnaire was prepared by the researcher. As it is

imperative to pilot any questionnaire (Nunan, 1991), the researcher took into account the significance of taking this essential step through asking ten students to answer this questionnaire. The questionnaire included 20 items which, based on Likert Scale (1-5), had five options to be replied: strongly disagree, disagree, unsure, agree, and strongly disagree. At first the questionnaire contained 30 answers, but after consulting five of the English experts, it was reduced to 20 and changed in some cases. The participants had 15 minutes to answer it. As the participants were not in an advanced level, to avoid misunderstanding, the questionnaire was prepared in Persian language. The reliability of the questionnaire was determined through Cronbach alpha. It turned out to be 0.83. The participants replied to the questionnaire at the last session of the experiment. It must be mentioned that the control group (Textbook group) did not complete the questionnaire, as they were not exposed to the multimedia-based materials and CALL.

3.3 Procedures

At first it is worthwhile to mention that before starting the research a pilot study based on the procedures of the research was conducted in one class for about three sessions. Some problems and difficulties were observed such as using the software correctly, doing the homework through computer, and the use of internet by some of the students. The researcher tried to solve these problems and find appropriate ways to help the learners.

After dividing the participants into three groups, each group underwent different teaching procedures. The class of the first experimental group (EG1) was held in the computer site. Before starting the research, the necessary software was installed on the PCs. A session was also dedicated to teaching the participants how to work with the computer. They were also given instructions about the use of the software, and the way of preparing their homework at home by the computer. Besides, the direction was given about the way of sending their homework through email. They were also taught about using the researcher's weblog. The researcher's weblog contained some English teaching subjects and articles appropriate for the intermediate level, some sample tests, a fun section including jokes, puzzles, and some games, and also some useful links for the learners. The students could contact the teacher through the weblog or email.

The second experimental group class (EG2) was held in the classroom. They had data show system and e-board. They also had textbook as a source of information. Some parts of the teaching points were presented through multimedia and they partially used the textbook in the classroom. The EG2 participants did their homework as usual on the notebook. Sometimes they listened to the recorded voice and sometimes the teacher read the texts. They could either do their homework on the notebook or email it to the teacher.

The control group (CG) had textbook as the only source of learning and teaching. They did not have any source of multimedia, neither visually nor auditory. As it was mentioned before, to prevent being exposed to CALL, the e-board was replaced by an ordinary white board. They studied just via textbook and did their homework on the notebook. To avoid John-Henry effect, a few films were prepared irrelevant to teaching and learning English just as a hobby.

4. Data analysis and results

The data analysis in this research was conducted by SPSS software (19^{th} version). The mean scores of the participants of the groups in pretests and posttests were determined. A one-way ANOVA was conducted on the pretest scores of the participants to be sure about their homogeneity. The t–test was conducted to compare the scores of the pretest and posttest of each group separately to determine the level of proficiency development of each group. In addition, paired sample t-test was conducted on the posttest scores of the groups to identify which method was more successful in improving L2 language proficiency of the learners. The one-way ANOVA was used to compare the scores of the pretests and posttests of three groups to determine which group developed more than the two others to reveal the most effective teaching language method among these three. Furthermore, multiple comparisons were conducted to recognize the difference between groups.

The result of the questionnaire was analyzed through Chi square to determine the attitudes of EG1 and EG2 members. A t-test was conducted on the questionnaire scores of the groups to find out whether they had similar or different attitudes toward the CALL and multimedia-based materials. For each question, a frequency table and graph are presented and the questions were analyzed separately. For each question, an explanation was presented to compare the responses of every group. The scores of the three groups' posttests are compared through a One-Way ANOVA. The results are shown in Table 1.

Table 1

Results of the ANOVA for the Posttests

The test		Sum of scores	*df*	Mean of scores	*F*	*Sig.*
Pretest	Between groups	295.470	2	147.735	4.789	0.010
	Within groups	3486.142	113	30.851		
	Total	3781.612	115			

Here, level of significance is .010 (lower than .05); therefore, there is significant difference among the mean scores of the posttests of three groups. Table 2 indicates a multiple comparison on the posttest performance of three groups.

Table 2

Multiple Comparisons for the Posttest

Variable	Name of group	Name of group	*MD*	*SE*	*Sig.*
Posttest	Multimedia and textbook	Multimedia	0.94	1.266	0.459
	Multimedia and textbook	Textbook	3.744	1.258	0.004
	Multimedia	Textbook	2.804	1.266	0.029

According to the Table 2, the mean proficiency development in multimedia and textbook group and the textbook group is significantly different (sig = .004); beside, there is a significant difference between the mean scores of the multimedia group and the control group (textbook group) because the sig. =.029 which is less than .05. While the p-value of multimedia and textbook group and the multimedia group is .459, and it is easily understood as the p-value is more than .05, so there is no significant difference in the mean proficiency development of these two groups. In other words, it can be claimed that groups taught through the multimedia or the combination of the multimedia and textbook performed, in large extent, the same; and both of them had better performance than the textbook group.

The results of the questionnaire were analyzed both qualitatively and quantitatively. The results indicated that the means of the attitudes of the language learners in two groups are positive and the same. Although the attitude of the learners in multimedia and textbook group is more positive than the other group, the difference was not statistically significant and meaningful.

4.1 Discussion

As it was mentioned the findings of the research yield that CALL materials can enrich the grammar proficiency of the learners. To understand the reason of the higher scores in the CALL groups, the researcher could refer to the dual-coding theory introduced by Paivio (1971). Based on this theory, memory and cognition are served by two independent and separate systems, one of which deals with verbal information, such as the words in a printed text or speech sounds, and the other deals with nonverbal information, like pictures and visible objects and environmental sounds.

According to Paivio, Rogers, and Smythe (1968), although the two systems are separate and independent, they are interconnected and thus represented in one system, and thus, can activate each other. Based on Paivio's

theory, using multimedia technology to present nonverbal audio-visual information causes easier activation of the verbal information and consequently, it will be quite logical that the language proficiency of the learners using the multimedia CALL treatment advanced more than the students learning through conventional treatment in the simple setting of the classroom with traditional textbooks.

Based on Alty (2002), Dual Coding Theory has quite specific predictions about how information in different media is stored, manipulated and recalled. Different combinations of media are expected to have significant effects upon the recall and retention of information. This obviously may have important consequences in the design of computer-based programs. More to the point, reasonable theories can be considered here in accordance with the findings of this research. An instance is cognitive load theory. Based on Kalyuga (2009, p.124), if too many elements of information are processed simultaneously in working memory, its capacity may become exceeded causing cognitive overload. Processing limitations of working memory and associated cognitive load represent a major factor influencing the effectiveness of instruction in general and multimedia presentations in particular.

An additional supporting point is the effect of repetitive situation in which the learners had the opportunity to review the learning materials, not only through written form (textbook) but via supplementary multimedia-based materials besides audio-visual basic materials either in the class or at home. Based on Richards (2002), the high frequency of exposure can enhance the input, and therefore facilitate learning.

4.2 Implications of the Study

In order for the findings of this study to be pedagogically valid and applicable, they must be first subjected to replication and empirical validation. In that situation, the results and findings can be generalized to other population. The study, however, enjoys a set of implications, the most important of which are as follows:

The main goal of the educational system in language teaching is to improve the proficiency level of the students so that they can communicate in the target language. To do so, the teachers and syllabus designers should try to select the most suitable and effective way. Technological revolution affects all aspects of the human life. This study and many previous ones showed that technology can be efficient in education, especially language learning and teaching to improve the proficiency level of the learners.

The internet makes the globe a small village in which all the people can easily communicate. The learners need every now and then to communicate through the Internet. To this end, they should be equipped with English language. Moreover, multimedia based materials and CALL programs challenge the traditional textbooks. The findings of this study and other relevant ones indicate that CALL programs can make the learners more motivated than the traditional methods. Multimedia are more interesting than the printed materials. So the teachers should replace the conventional materials by the fashionable ones.

5. Conclusion

According to Warschauer (1996) the benefits of adding a computer component to language instruction are many, and include: multimodal practice with feedback, individualization in a large class, pair and small group work on projects, either collaboratively or competitively, the fun factor, variety in the resources available and learning styles used, exploratory learning with large amounts of language data, and real-life skill-building in computer use.

The study was an attempt to shed light on the point whether the use of multimedia -based materials could bear any influence on the L2 grammar proficiency development of Iranian high school EFL learners. As it was illuminated in the preceding section of the study, the findings of the study revealed that firstly, CALL is effective in improving grammar proficiency of the learners. The study also delineated the priority of the multimedia-based material method to the textbook method. Second, as it was mentioned before, the results of this study are

strongly and positively in line with almost all the previous studies carried out on CALL and multimedia-based materials. Finally, based on the current research, along with the previous ones, the participants have positive outlook towards the use of the multimedia-based materials and the application of computer in the classrooms.

The preliminary purpose of this study was to probe the effect of CALL on the second language grammar proficiency of the Iranian high school learners. However, in order to complement the findings of the present research, the topic needs to be explored in some other studies. As the study of multimedia-based learning materials is relatively recent and ongoing in Iran, more studies are required to investigate this subtle and mature field. This can be investigated not only at the level of high schools, but it can be extended to include guidance schools with different foci, too. In addition, the current study, which was carried out in a formal high school, can be replicated in private schools or language institute contexts.

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Appendix 1

The Pretest and Post test

1. Parvin ……..on Azadi Avenue, doesn't she?
 a. does live b. lives c. lived d. doesn't live
2. The children …….to the cinema, didn't they?
 a. didn't live b. don't live c. lived d. didn't
3. Mary …….French well, can she?
 a. can't speak b. can speak c. spoke d. didn't speak
4. When …….the bridge built?
 a. has b. had c. must d. was
5. Who ……in the accident?
 a. injured b. has injured c. was injured d. was injuring
6. "What happened to your car?" "It's in the garage. It …….soon."
 a. will fix b. was fixed c. will be fixed d. has been fixed
7. Our holidays ……..next month.
 a. will be begun b. will begin c. have been begun d. have begun

8. Betty's uncle ……to hospital for an operation last night.
a. is taken b. is taking c. was taken d. had taken
9. This book ……..in the next spring.
a. will publish b. publishes c. will be published d. is being published
10. Everybody ……..by the news.
a. are shocked b. were shocked c. was shocked d. will shock
11.Mr. Amini's house is …….house in this city.
a. large b. as large as c. larger d. the largest
12. Mina will not come to the party, ……?
a. will she b. will Mina c. won't Mina d. won't she
13. My room……every year.
a. was painted b. is painted c. will be painted d. painted
14. I am happy because I .....a new car.
a. buy b. bought c. have bought d. buying
15. English ……all over the world.
a. will be spoken b. is spoken c. is speaking d. speaks
16. Did they paint the house last year? No, it …….two years ago.
a. is painted b. will be painted c. painted d. was painted
17. They …….their new house since last year.
a. have had b. have c. had had d. had
18.She …….her watch yet.
a. has repaired b. hasn't repaired c. was repaired d. wasn't repaired
19.……is it from here to your home? It is 2 kilometers.
a. How b. How far c. How long d. How much
20. It was easy for him ……...home.
a. walk b. walked c. walks d. to walk
21. I think …….easy to learn English .
a. there is b. this is c. it is d. that is
22. Has Jimmy got his books now? Yes, my brother……..yesterday.
a)gave them to him b)gave to him them c)has given them to him d)has given to him them
23. Jim is ……..boy in the class.
a. the smaller b. smaller c. the smallest d. smallest
24. Bill and I ……good as you.
a. are as b. am as c. as d. we're as
25.Sarah ……..tennis on Sundays .
a. plays never b. never plays c. is never playing d. never is playing
26. When ……..football?
a. do Jim plays b. plays Jim c. Jim plays d. does Jim play
27. I've put ……..water in the bottles.
a. a lot of b. much c. many d. any
28. Have you visited Edinburgh? ……..
a. Not yet b. Not ever c. Already d. Ever
29. Donald …….sixteen tomorrow.
a. is being b. going to be c. shall be d. will be
30. I feel fine because I went……
a) to the bed early last night b) to bed early last night
c) to the bed early tonight d) to bed early tonight

Appendix 2

The Questionnaire

Items were ask to rank according to: Strongly agree, Agree, Unsure, Disagree, and Strongly disagree

1. When I receive the materials through CALL, they are interesting for me.
2. When I receive the materials through CALL, I become more interested in learning the language.
3. When I receive the materials through CALL, I become more motivated to learn language.
4. When I receive the learning materials through textbook, they are boring for me.
5. When I receive the materials through CALL, they are not so serious for me and as just a hobby.
6. When I receive the materials through CALL, I learn them better.
7. When I receive the materials through CALL, they are more interesting than the textbook materials.
8. When I receive the materials through auditory CALL, they are more attractive than the teacher's voice.
9. When I receive learning materials through the e-board, I am more interest in them.
10. When I study the textbook at home, it is dull and boring for me.
11. Learning all the materials by means of computer is boring for me, and I prefer to learn some of them through the textbook.
12. The textbook material is so interesting and attractive for me.
13. Noticing the learning materials through the colorful pictures and videos through the CALL makes me learn more and better.
14. Teacher's voice is calmer for me than the computer voice.
15. The merits of the CALL are more than its demerits.
16. When I receive the materials through CALL, I can concentrate more on learning materials.
17. When I receive the materials through CALL, learning materials remain longer in my memory.
18. When I receive the materials through CALL materials, I learn faster.
19. When I receive the materials through textbook, I am more confident than through CALL materials.
20. I hope to learn materials though CALL in future.