The Application of Multimedia to EFL Reading Instruction

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Introduction

“Tell me and I’ll forget;
Show me and I’ll remember;
Involve me and I’ll learn.”

This popular saying truly reveals the nature of language acquisition. With more and more empirical research done in the process of language learning, it turned out that only when learners have been fully involved in the learning process can they naturally acquire language. The traditional pedagogy with teacher-centered structural-syllabus instruction mode cannot be responsive to different learning styles of learners (e.g., auditory, visual, tactile). And the results of years of teaching are disappointing. More and more students demand a more interesting, hands-on approach to learning (Hammonds et al, 1997).

In recent years with the development of media and computer technology, educators have begun to make use of multi-media and technology to improve their teaching including language learning. This is particularly true in such English-speaking countries as Australia, USA, Canada, and the United Kingdom. The vast majority of the published research on the effectiveness of media and technology in language instruction is encouraging. Among other benefits, new technologies present opportunities to accomplish multiple instructional goals (e.g., integrated language skills, critical thinking, and cooperative skills). They may also be responsive to different learning styles (e.g., auditory, visual, tactile). The practice of incorporating multi-media and computer technology into language instruction opens up a new horizon for EFL instructors to improve the overall quality of language instruction.

In China, there is an increasing interest in the use of CAI (computer-assisted instruction) or computer-assisted-language-learning (CALL) in class. However, the application of multimedia technology into EFL language instruction is not widespread due to various reasons. One is that instructors are still doubtful of its effectiveness in language learning. Other reasons stem from the fact that most instructors simply are unsure of how to incorporate technology into their normal language teaching. On the other hand, new direction in CAI is that recently some universities have begun to explore the effectiveness of on-line teaching or web-based learning system, tending to replace the role of traditional instruction. However, it seems impractical to substitute the entire role of traditional instruction
for web-based teaching in many remote-area universities, either for lack of fund to set up an on-line network or other barriers concerned. As an example, let’s take Datong College where the computer on-line networks have not been set up yet and most teachers here are not competent in computer operation.

In light of this situation, the author recommends to combine multimedia technology with elements of traditional EFL instruction by using PowerPoint, which can not only make full use of technology but also be easy to operate in EFL classroom. Specifically, teachers can use PowerPoint to make a lesson presentation to deliver a lecture, in which they rearrange lesson content tailored to the specific needs of the students. And students can use PowerPoint to present their homework. By making full use of multimedia technology, language instruction can be made more effective. And She confirmed that the benefit of its use with a limited study in Datong College.

1. Multimedia technology and relevant research on the application of multimedia to language instruction

Multimedia is the integration of more than one medium into some form of communication or experience delivered via a computer. Most often, multimedia refers to a computer-assisted technology that integrates media such as text, sound, graphics, animation, video, imaging, and spatial modeling into a computer system (von Wodtke, 1993).

According to Jonassen & Reeves (1996), there are two major approaches to using media and technology in schools: students learn "from" media and technology, and they learn "with" media and technology. Learning "from" media and technology is often referred to computer-assisted instruction (CAI). The instructional process usually involves exposing students to messages encoded in the media and delivered by technology with the assumption that they can perceive and encode these messages better than that with only print form. This provides quick feedback to responses as well. The findings concerning the impact of CAI in education can be summed up as: 1) Computers have positive effects on learning and are more motivating for students. 2) CAI can fulfill a given set of educational objectives in less time than needed in more traditional approaches (Reeves, 1998).

Overall, the benefits of using multimedia technology for teaching and learning purposes are multifaceted. Multimedia provides instructional variation and will stimulate more than one sense at a time (eyes, ears, the brain), and in doing so, CAI will be more attention-getting and attention-holding. Meanwhile, it reduces the time needed to accomplish a given set of objectives. In one word, it is a powerful tool for language teachers.

As for learning "with" technology, it is referred to in terms such as cognitive tools (Jonassen & Reeves, 1996) and constructivist learning environments (Wilson, 1996). In the broadest sense, cognitive tools refer to technologies, tangible or intangible, that enhance the cognitive powers of human beings during thinking,
problem-solving, and learning (Jonassen, 1996a). For example, today, computer software programs serve as exceptionally powerful cognitive tools. In the cognitive tools approach, media and technology are given directly to learners to use for representing and expressing what they know. In other words, learners learn language by designing instruction on their own with the help of software and computer technology. In doing so, learners are fully involved in the learning process. As a result, they tend to learn more about the content and develop their critical thinking and higher level learning ability. The cognitive rationale behind this approach is the Constructivist Learning theory. According to constructivism, a teacher cannot map his/her own interpretations of the world onto the learners because they do not share a set of common experiences and interpretations with learners. Cognitive tools help learners organize, restructure, and represent what they know. As Perkins (1986) maintains, knowledge is a process of design and not something to be transmitted from teacher to student. Thus, students should be engaged in designing their own multimedia. The process requires learners to transform information into dimensional representations, determine what is important and what is not, link the information segments by semantic relationships, and decide how to represent ideas. This is a highly motivating process. One of examples is a study on The Highly Interactive Computing Environments (HI-CE) Group at the University of Michigan, who has developed a multimedia composition tool called MediaText. And the results of this research are encouraging (Papert, 1993). Such learning environment helps rid language learners’ nervousness, which they usually have in a traditional class, bringing their initiative into full play.

All in all, fifty years of educational research indicates that media and technology are effective in language learning. Both learning “with” and learning “from” increase their performance.

2. How to incorporate multimedia into EFL traditional classroom

The main multimedia forms include text, static images, animation, video, audio and virtual reality. The author proposes using POWERPOINT to combine various multimedia forms into their instruction. Since a few of the functions of this software will do the work well, it is not necessary to know all the functions of POWERPOINT to gain its benefits. Learning the usage of such main functions as using the Master templates to make slides, inserting either sound or graphic files, linking files, and showing the slides will realize most of benefits. Learning these basic functions is not difficult and is used by most of the faculty in Datong College outside the classroom. Therefore, in the future they are expected to incorporate multimedia forms into their lectures. Two specific ways are recommended:

1) Teachers can use PowerPoint to make lesson presentations and deliver lectures

   For an intensive reading course, the author recommends the following steps:

   First: Choose the default template or one of the Slide Master templates available and use it to design courseware. In the first slide, EFL instructors can
follow the prompt in the dialog box to fill in the title of the text and lesson goals in the first box and to fill in lesson objectives in the second box. With a clear purpose in mind, the students will be aware of their goals and become more confident in learning. In a formal lecture, the instructors can make use of an overhead projector in the multimedia classroom to show slides in order to arouse everyone’s attention.

**Second:** Pre-reading activities are designed and shown to activate students’ prior knowledge. According to schema theory, comprehending a text is an interactive process between the reader’s background knowledge (previously acquired knowledge) and the text (Carrel & Eisterhold, 1983). This cognitive process of activating prior knowledge can be supported by many instructional activities, such as using an advance organizer, using video clip with voice over, or using static pictures with several key vocabulary items and their annotations on it. An advance organizer can facilitate readers to get the main idea of the text as well as activate and process prerequisite knowledge. Using video clips with voice over can effectively arouse learners’ curiosity about the content of the text. In that way, learners are more active and involved. Moreover by using pictures with vocabulary items critical to the topic under discussion, learners may narrow down their prediction of the text and avoid distraction of minor events. These three forms of activities all serve to provide a conceptual bridge between what the reader already knows and what he is yet to read in the text. Instructors can make slides to incorporate all these activities with the help of POWERPOINT. During the lecture, teachers can organize a class discussion or group discussion after viewing this part of slides to promote interaction among students. They can talk about and predict the content of the text with the clue from the title, video clips, picture and vocabulary.

**Third:** In the process of text reading and learning, instructors can use the following ways to aid in reading comprehension:

A. **Design activities to facilitate cognitive process**

   According to Chun & Plass (1997), the process of text comprehension comprises (a) paying attention to and selecting relevant information; (b) building internal connections (i.e., reorganizing the new information in short term memory into a coherent form); (c) building external connections (i.e., integrating new information with the existing prerequisite knowledge into the learner's mental model). Instructors should help students to improve these skills. For example, by designing some comprehension exercises with immediate feedback or asking them to scan for specific information to direct their attention and select relevant information quickly. Similarly, using pictures or sound files can reinforce the visual and textual modes to integrate the new information into the learner’s mental model.

B. **Use multimedia technology to facilitate comprehension**

   1) Making key linguistic elements salient.

   It is wise for instructors to make important linguistic features in the text salient by highlighting them in a different color when they appear on the screen. According to Second Language Acquisition (SLA) theory, an important aspect of the learners' apperception is their noticing aspects of the input. Differences in color in
some part will attract the students’ attention to it and they will recognize its importance. During the verbal instruction, teachers can give further illustrations on those key points.

2) Linguistic input can be provided through either written or aural language.

For example, in order to help students learn a new word quickly and effectively, various forms of annotations for it should be provided in the courseware, such as: definitions in L1, translations in L2, and pictures and video visualizing the word. In addition, the pronunciation of the word is provided using a sound file. Other linguistic input can also be delivered in this way.

3) It’s better for instructors to use a static picture rather than an animation when explaining grammar or complex language phenomenon.

In a more recent study, Schnotz and Grzondziel (1996) compared learning from static pictures and animated pictures. They concluded that the use of animated pictures may result in a more superficial processing of the subject matter than the use of static pictures. So instructors should be careful when they use animated pictures for learning purposes.

4) Support interaction between the learner and the computer, the learner and the learner, the learner and the instructor.

An instructor should pay more attention to the interactive features of his/her instruction. So when planning a lesson, they can use such advanced PowerPoint functions as online collaboration. Specifically, they can assign a task and ask students to complete the task by using this function.

During instruction, online collaboration can not only involve students in real communication but also help them improve reading and writing ability by exchanging ideas between classmates.

Fourth: Design a 5 to 10-minute activity to summarize the major instructional content for each 100-minute lesson, such as a cloze exercise or conducting a listening quiz by linking a sound file.

This activity helps to hone students’ listening skills. For example, one kind of quiz form can be dictation of certain paragraph of the text.

Fifth: Design follow-up activities

Just as any ESL lesson, a follow-up activity is crucial to help students consolidate and extend the language or skills learned in class. One follow-up activity is to write a summary of the text or a story based on the theme of the text. They are evaluated by the written work they do. A second activity is to ask students to do homework using PowerPoint.

2) Students use PowerPoint to present their homework.

Since fully involving students in the learning process is the core of this approach, the author suggests assigning more intriguing homework with the help of PowerPoint. For instance, design three or more task-areas according to their level, such as the discussion area, the learning area, the information area. This can be accomplished by following a few simple steps.

First, several computers should be provided to students. If there are not enough computers for each student, they can be divided into several groups, and
each group has one computer.

Secondly, it is necessary to coach the students on basic knowledge and usage of this PowerPoint before they use it. This is best done by cooperation with the computer science teacher.

Thirdly, instructors should tell students what information should be included in their multimedia homework presentation. In the discussion area, students are required to write down opinions or evaluation of the text learned. If they still have some questions on the text, they can also raise their question in this area and we will organize group discussion about them next class. In the learning area, students are required to review grammar points and make sentences with vocabulary learned in class. In the information area, students are required to gather further information related to the text theme on the Internet or from other resources. This will promote their further reading and improve their ability to research information. And they are required to share with peers the information they’ve gained next class. In doing so, the students are more involved in the learning process, because the process requires learners to transform what they have learned into presentations, learning, seeking other sources for assistance, and recognizing their strengths and weaknesses. This activity will effectively help students become more independent and go toward self-directed learning. This work will be evaluated by the content as well as the multimedia features students have designed in their presentation.

3 Evaluate the effectiveness of PowerPoint-Supported instruction

Evaluation is an important part for the whole course which serves to give instructors a clear conception of how effective the instruction is and therefore provides vision on how to modify their courseware in order to improve the overall quality of instruction. SLA research provides some clear guidance for the evaluation of instructional activities. Usually, we can evaluate instruction through self-evaluation and students’ feedback. The following questions are helpful for evaluation:

1) Did I accomplish my teaching goals?
2) Did the students complete a set of objectives in the given time?
3) Were they motivated?
4) Was the designed courseware like an interactive textbook? And was it better than instruction/books in a conventional classroom? And did it allow students a certain amount of autonomy?
5) What other cultural points (knowledge) do you think we need to mention?
6) How well have you learned the key words and expression?
7) What other grammar points did you not understand yet and/ or need to discuss besides the points we mentioned?
8) Do you have any suggestions to improve it?

Instructors should modify their courseware according to the evaluation and the students’ feedback.
4. **A small range of experiment on this approach**

This semester, we conducted an experiment in two classes to test the effectiveness of this approach. One class adopted this multimedia approach; another class followed the traditional instruction. The results were encouraging. The experiment class outperformed the compared class in both reading and writing ability. Besides showing more enthusiasm in learning, the students in the experimental class performed standard reading level in 3 months while those in the compared class took 7 months to reach the same level. The experimental class scored higher in writing when they took the CET Band 4 than the compared class.

**Conclusion**

In this paper, we introduced an approach to applying multimedia technology into traditional EFL reading instruction. In this approach, we recommended using PowerPoint as a tool to present lesson as well as to promote students toward autonomous learning by making their homework presentation with this tool. With the aid of multimedia, the traditional reading instruction tends to become more effective. In the long term, this approach has the potential to provide a general framework for the development of EFL instruction. Further empirical research is needed to verify its effectiveness.

**References**


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