ENHANCING READING COMPREHENSION OF STRUGGLING COMPREHENDERS THROUGH COMPUTER BASED INSTRUCTION

BY

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ABSTRACT

In the computer age, challenges have gained a new quality, and teachers, especially, with their pedagogic responsibilities, have gained a new role to play. To familiarize themselves with the new technology and to become aware of its value in language education, the potentials of this new technology can be utilized to enhance the basic language skills. Reading is a complex activity that demands simultaneous application of a variety of cognitive processes. In learning to read, all students do not progress at the same rate. Hence, the reading class requires a more individualized, student-centered approach. Since computer-assisted instruction is particularly effective in presenting content which needs mastery or comprehension, and in catering to the needs of students of all levels, integration of this approach into reading curriculum can be given desired attention. This paper will focus on providing guidelines and suggestions for developing traditional and innovative activities for a self-instructional reading program that can be used in learning and testing EST reading for slow learners.

IINTRODUCTION

The role of computer in education is that of a medium. It is totally dependent on the teacher in many ways. The literature on computer assisted language learning indicates that language learners generally have positive attitudes towards using computers in the classroom (Reid,1986).Since computers are patient, consistent, and tolerant of repeated mistakes, it can provide remedial material for slow learners.

The availability of a rich hierarchy of choices to the learner makes individualized, autonomous study more feasible and rewarding. Its flexibility, instantaneous response, private practice, pace of learning, retrieving and monitoring facility and self evaluation make computer a powerful teaching machine in the language teaching and learning process.

Computer-assisted language learning has been closely associated with behaviouristic and cognitive styles of teaching as exemplified in drill and practice and tutorial programs. Behaviourists, like Skinner, use the process of reinforcement and imitation to explain language acquisition. Chomsky argues that human beings are pre-programmed to learn language and merely require exposure to language to master it. Cognitive psychologists feel that factors such as attention and memory are involved in language learning process. Social and environmental influences are also essential to improve teacher student verbal interactions. These principles can very well be integrated into the computer based language learning strategies.

Computer-based Reading Curricula-previous Research

The introduction of computers in language teaching and learning has its roots as early as 1970s. However, its prominent practice has been slow. The first major computer-based reading curriculum was the work of Richard Atkinson in 1964 at Stanford University. This was a first-grade reading curriculum aimed to lessen the need for classroom teachers (Atkinson, 1974). The effective utilization of such technologies depends on how a teacher employs. Be it for remediation or enrichment, the application of this technology has proved its potential in teaching and reading skills (Willet, 1992 and Chun and Plass, 1996). Reading and vocabulary are the two areas where computer-assisted instruction theoretically holds

the greatest promise. A series of other studies conducted by Kulik, Bangert, and Williams, 1983 have also proved significant increases in students' reading speed and comprehension. The proponents of computer-assisted instruction indicate that self-paced interactive programs would benefit the low aptitude students. The students will learn more and their performance is likely to improve if they pace themselves consistently rather than masking their work in extended sessions. Such encouraging factors motivate the teachers to identify the deterrants to learning and to facilitate the reading skills of learners with the help of computer applications.

Reading In The Content Area

Reading in science demands an orderly, systematic approach including the ability to classify, categorize, understand and memorize. The general reading abilities of students in engineering courses include the ability to interpret facts and data, to identify main ideas, to organize ideas, to interpret meanings of words from context clues, to interpret graphs, charts, and directions, and to use them in experiments. The low achievers in engineering courses encounter problems because of inadequacies in reading skills. The need for adequate practice in the problem areas necessitates the use of self-instructional reading programs in addition to the normal classroom teaching.

Suggested Activities And Methodology

An effective reading program either for teaching or testing purpose should consider three stages: identifying the participants, analyzing their communicative needs, and preparing the teaching-content specification. A positive attitude towards any reading program is dependent on the appropriateness and interest of the material. A reading program meant for additional practice can be designed by developing different reading activities based on a number of graded passages drawn from the content area. Exercises based on the passages as well as other innovative activities must offer variety to motivate the learners to practice different skills making use of reading strategies such as skimming, scanning, and prediction.

In a reading lesson in the teaching frame, the program can be presented under three sections pre-reading, while-reading, and post reading activities. The skill of anticipation is an important part of active reading. Pre-reading sections like preparing to read (a few questions related to the reading material) and glancing at vocabulary (list of key words used in the passage) can be prepared for each reading material to enable the learners familiarize with the topic and read with expectations.

Activities such as identification of paragraph headings and topic statements for each paragraph can be prepared as while-reading activities. The learners may be asked to choose the answer from three options.

Post-reading activities may include receptive response items like multiple choice types, true or false, and matching vocabulary items. These items either in the learning frame or evaluative frame would help to assess the reading skills. Productive-response items such as summary cloze (a summary of the reading passage with gaps for learners to fill up) and identification of single words from the passage for the given phrases can be developed to evaluate their reading and vocabulary. An exercise such as, summary cloze, is really an extension of the guided short answer technique.

A few other teaching techniques to promote reading comprehension include cloze, c-Test, language development, vocabulary building, and Re-ordering. The material for the above activities can be selected from the content area and adapted suitably for developing the activities.

Cloze

The cloze procedure is a technique whereby every 7^{th} or 9^{th} word is omitted from a reading passage, and the learner is asked to fill in the blanks with suitable words. Cloze procedure provides a reliable measure of reading comprehension. It demands deeper comprehension of a reading passage than could generally be measured with oral or multiple-choice type questions. In the beginning stages, cloze procedure can be developed in a multiple-choice format to avoid the difficult nature of the

procedure. When the learners gain some confidence and the ability to make correct choices, we can switch to the standard format.

C-test

The C-Test is a variation of cloze. Instead of whole words, it is the second half of every second word which is deleted. This testing technique avoids the specific weaknesses that have been identified in cloze format.It is also a better measuring instrument and less frustrating for the test takers. It is also a reliable measure of the global reading comprehension skills of students as it demands the appropriate linguistic knowledge, textual knowledge and knowledge of the world.

Vocabulary Building

Knowledge of vocabulary is essential to the development and demonstration of linguistic skills. Lexical words, frequently used in the content area, can be selected and used in sentences in suitable context. The knowledge of vocabulary may be assessed by asking the students to pick out from three options the meaning of the word.

Insertion-language Development

Insertion of missing words is also a useful exercise for developing reading skills. Short paragraphs from the content area can be selected and gaps can be created for the learners to fill them by choosing lexical items or linking words or phrases from the list provided. This activity reinforces contextual guessing and predicting information and develops the learners' ability to understand the relation within the sentences.

Re-ordering-paragraph Structure

Rearrangement of scrambled words, sentences or paragraphs in a text is an activity for developing awareness of both the paragraph structure and rhetorical discourse organization. Sample items of all activities have been included.

Conclusions

With the advent of computers, language learning process can be conducted as well as examined. Students could also receive limitless individual practice and extensive communicative activity the areas where conventional language teaching is weak. Moreover, such self-instructional reading program ensure exciting learning environments. The teachers can also revise and refine the material easily based on students' performance and feedback. Since the recent developments in the integration of computers into language teaching in general and reading in particular have revealed encouraging results, today's teachers cannot allow the potential of this new technology pass by without using it to improve the basic language skills. The methodology of any course design in teaching EFL / ESL / EST should exploit the advantages of modern educational aids. A technology-rich curriculum is beneficial to both teachers and students.

Sample Items

1. Reading Passage Disease Detectives.

Preparing to read

Modern technology has become very much an integral part of our existence as it has conferred a number of benefits on mankind.

Pre-reading questions

1. What are some examples of modern epidemics? Do doctors or scientists know the reasons for these epidemics?
2. Do you know anyone with a transplanted organ? Do you think that organ transplants are a good idea?

   Read the following selection and circle the main idea of each section.

[A]. Two recent changes are making modern medicine a more popular and exciting field of study than ever before. First, new technology is now available to modern 'disease detectives', doctors and scientists who are putting together clues to solve medical mysteries-that is to find out the answers to questions of health and sickness. Also transplants of the heart, liver, kidney, and other organs of the body are much more common than they were ten or twenty years ago.

1. Organ transplants are very common now.
2. Two recent changes make modern medicine exciting.

3. Disease detectives can solve medical mysteries.

[B].Modern disease detectives are microbiologists, epidemiologists, and other scientists who try to find out the reason for an epidemic- a sickness that many people in one region have. They study the outside environment-dirt, plants, lakes, and areas for animals-for clues that might give them information about disease. Scientists who have the benefits of microscopes and computers share the information they find in the laboratory. Together by these disease detectives work to find the causes of modern killer diseases.

1. Modern "disease detectives" are doctors.
2. Several kinds of scientists do many things to find out the causes of diseases.
3. Microbiologists study the indoor and outdoor environment.

[C]. Organ transplants are common today. Because of modern technology, they are more successful than they were in the past; In other words, people with a new heart, liver or kidney can live much longer than they did previously. Not long ago, transplant patients often died after a few days because their bodies fought against the new organ. A new drug, however, helps the human body accept its new part.

1. In the past, people did not live very long after receiving organ transplants.
2. Heart and liver transplants are dangerous because the human body fights against a new organ.
3. Because of modern medical science, transplants are now more successful than ever before.

Questions:

1. Say whether the following statements are true or false.

a. The author believes in the use of modern technology to solve health problems.

b. She thinks that new developments are bad for people.

c. With the help of new technology only doctors are trying to solve the medical mysteries.

d. Doctors try to find out the reason for an epidemic.

e. In the past, transplant patients lived for a long time.

II Complete the following passage by filling in the blanks with the appropriate words given below.

Technology is a mixed package; it has its benefits and its ----------.Technology is the ------- derived from the application of knowledge. This power has been utilized to improve the ------ of living of people all over the world. It cannot be denied that advances in technology have had a tremendously beneficial ------- on food production, health care, transport, communication, and other important ---------- of life. Technology has made human life more comfortable. Turning to the other side of the picture, we find that technology has led to the ------- of the environment. The concentration of human and material resources at a few centres has resulted in large scale ---------- of rural population to urban areas and the consequent ---------- of urbanization and slums. The import of technology at ------- costs has the additional disadvantage of widening the gap between the rich and the poor, effecting cultural --------.

[prohibitive, distortion ,impact , sectors disadvantages, problems, pollution, migration power, standard]

III. Vocabulary Development

Pick out from three options the meaning of the underlined word as it is used in the sentence.

1. The project was proved to be economically <u>viable</u> after several experiments.

a. successful b. specialized c. Develop

2. It is advisable to develop <u>indigenous</u> technology wherever possible.

a. natural b. native c. Independent

3. Vast quantities of energy can be <u>derived</u> from a very small quantity of nuclear fuel.

a. obtained b. developed c. to originate

4.In hydel units, electricity is <u>generated</u> by heating water.

a. caused b. produced c. Developed

5. The existing coal reserves will fast become <u>depleted</u> if we continue to use such a large amount of coal.

a. weakened b. reduced c. Lacked.

IV. Sentence Comprehension

Choose the word or phrase that completes each sentence.

1. Mars is the planet _____ orbit is nearest to the earth.

a. of which b. whose c. of whose

2. There are two types of deposit, _____: placer deposit and lode mine.

a. which is b. including c. Namely

3. Nuclear fuels _____ uranium and plutonium are radioactive.

a. like b. such as c. Likewise

4. A hydrogen balloon will rise _____ hydrogen is lighter Than air.

a. since b. because of c. Despite

5. Fire extinguishers are painted red _____ people will see them clearly.

a. so as to b. so that c. in order to

V .Ordering Sentences

The following sentences are not in the correct order. Rearrange them so that they become a well-ordered paragraph. Choose from four options the correct sentence order.

1. Radar ranges into space and detects objects in its path.
2. The signals travel in a straight line at about 300 million meters / second, and when they strike an object in their path, they are reflected from this object.
3. A transmitter sends out signals by way of a directional antenna which keeps revolving at one thirty times a minute.
4. The name radar comes from the italicized letters in the following words: Radio detection and ranging.
5. Part of the reflected energy then returns to the revolving antenna from which the pulses originally went out

a. 1-3-4-2-5 b. 4-5-3-1-2

c. 4-1-3-2-5 d. 3-4-1-2-5

VI.Cloze

In the following passage some words have been deleted. Read the passage carefully and insert appropriate words.

Most people would describe water as a colorless liquid. They would know that in very _____ conditions it becomes a solid called _____, and that when heated on a fire it _____ a vapor called steam. But water, they would say, is a _____. We have learned that water consists of _____ composed of two atoms of hydrogen and _____ atom of oxygen, which we describe by the _____ H20. But this is equally true of the _____ called ice and the gas called _____. Chemically there is no difference between the _____, the liquid, and the solid.

VII. C-Test

In the following passage some words have been deleted. Read the passage carefully and insert the suitable words with the help of clues.

We do not know how the first fire was made. Early fi_____ on t_____ earth we_____ certainly cau_____ by nat_____, not b_____ Man. Some we_____ caused by ligh_____ in a st_____; others, per_____, by the h_____ material wh_____ came o_____ of a Vol_____.

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