

## Effectiveness Of Computer Assisted Instruction (CAI) Improving The Pupils' Language Creativity In English

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**ABSTRACT.** *This study was aimed at finding out the effectiveness of computer assisted instruction (CAI) in improving the pupils' Language creativity in English. For this study CAI Programme and P.I. Material on various topics of English were developed by the researcher herself. Language Creativity Test (LCT) developed by the S. P. Malhotra & Suchita Kumari is used to collect the Language creativity scores in pre-test and post test stage. This study revealed that CAI Method is much more effective in enhancing the Language creativity of the learner than that of P. I. and traditional method.*

**Keywords:** *Computer Assisted Instruction (CAI), Language Creativity in English*

### Introduction

We live in the age of the science. Science has great impact in today's knowledge based society. Science has brought about tremendous changes in the life of man. The new technologies are instruments for change and innovation. All these advancements change the structure of society and influence the education system. The invention of computers and their application in every field is vastly increasing. Today in every life style, computers play a dominant role. In the education system also they are widely used for storing data, e-content development, e-learning, web-casting, time table management testing etc. The integration of technology in education is a growing phenomenon. It influence education enormously and play an important role in enhancing the efficiency of the teaching-learning process making children more creative and providing them with an individualized learning environment.

When we examine the Indian education system, it is observed that the main aim of the education is to preserve, transmit and advance knowledge. In the past, this aim was achieved by the education system with the help of teachers, books and some audio visual aids. It is also observed that face-to-face instruction is the most commonly used instruction practice. This system is mostly based on a teacher centered learning atmosphere where the focus of the instructional activities is learning. The main drawback of the classical system is that mass education is not possible. Also classical system is unable to provide individualization of instruction. In the last strides of the twentieth century, both school education and society have witnessed bizarre hi-tech advancements. Clearly, all these changes occurred in quick succession in school and society, coupled with new challenge to be faced in the initial decades of the 21<sup>st</sup> century. Teacher education has to remain effective and functional and updating with the new dimensions. Effective teacher education for both elementary and secondary stages of education has now to be conceived with the more comprehensive components. In this context, analysis of uses of Information Technology has become a fundamental element of present life and an indispensable instrument in most of the disciplines. **Das (2003)** in his study concluded that Students have a positive attitude and outlook, towards computer education received in their respective schools. Some students

have suggested a revamping of the traditional modes of teaching by introducing computers in teaching which they think will make their education more exciting and interesting. Hence, computers have become powerful instruments to successfully achieve a number of educational goals. Computers may have profound effect, not only upon the development of children's minds, but also upon the nature of education itself. A computer is a versatile technological instrument that can be used in fostering children's thinking and learning. Information Technology provides variety in the presentation of the content, which helps learners in concentration and better understanding and long retention of information, which is not possible otherwise.

Technology and multimedia have changed the pattern of teaching where the learner uses technology through critical thinking to manipulate the new knowledge. In this Information Technology era, we have moved from old practice of memorizing facts and information and synthesizing them for problem solving. It acts as a powerful enabling device to promote active learning and open new learning approaches. The use of new techniques that involve two way student-teacher interaction, student-student interaction gradually replacing the one-way information. The emerging technology incorporates the group qualities of interactive, classroom based learning while providing individual students, the flexibility to participate in educational programme at his own speed and place conducive to self-learning, the technology seems to provide to viable, cost effective solution to delivery education to remote areas. Due to advancement in technologies, educational become mechanical.

### **Learning through CAI**

CAI makes learning a joyful experience. Through its computer aided lessons, CAI is necessary a very encouraging response of the children. They love to click the course and see pictorial representations and they welcome this kind of joyful methods of learning. Accessories like pressure pad, which takes down the command on being pressed gently and voice - sensitive and light - sensitive devices give them joy and fantasy. CAI makes classroom learning interesting and effective, self-learning easy and successful and lifelong learning possible for all. CAI has great potential for improving the process of teaching and learning. **Jaykumar Rathod( 2005)** in his study concluded that IT based instructional package is effective for teaching English Grammar.

The following are the chief advantages of using CAI for education.

- I. Individualized instruction
- II. Improvement in quality of teaching
- III. Meeting the problem of mass education
- IV. Equalizing educational opportunity
- V. Self access learning
- VI. Providing continuing education

Of the above, the most significant are (1) individualized instruction and (2) self access learning. The rationale for having these modes of learning is that (a) No two students are like and (b) There are many permutations and combination of individual differences.

### **Role of Teacher in CAI**

The introduction of computer assisted instruction in general education in advanced countries has created a fear in the teacher community that its use in teaching learning will take the place of the teacher from the teaching scene. As a matter of fact, CAI may become a

powerful tool for the teacher in the instructional process. It is not to exclude the teacher from the classroom. Machines mean relief from the more mechanical aspects of the teacher's work.

In computer assisted instruction the teacher has the chance to use new tools which will enhance his individual satisfaction and increased his efficiency. **Evans, C. A (2002)** stated that teacher made CAI is more effective than the commercially developed CAI programs. It can elaborate graphs and drawings and perform sophisticated retrieval of information from large data banks.

They can and should play the following roles as 'multi facilitators' to learners;

- I. Content facilitators; Assist learners in understanding the course content
- II. Process facilitators; facilitate on-line learning activities
- III. Adviser/counselor; Provide individual counseling support to learners
- IV. Assessor; provide grades and feedback on performance
- V. Administer; manage learner records
- VI. Designer; Devise worthwhile learning tasks.

### **Creativity in Language**

Perhaps one of the most unobvious acts of creativity is the use of language. It is a highly automated ability. Most of what we hear or speak are created rather than recalled from memory. Language is stored as knowledge of speech, sound of word pattern and rules for creating word and stringing them together. Having developed these automated skill and knowledge language use become almost entirely sub-conscious and almost entirely creative. Creativity can also be used to bring learning styles into "The scheme of things". Styles are preferences or tendencies toward particular ways of learning and doing things. The use of language is perhaps the most common creative act that all humans possess and exhibit as a regular part of their daily lives. Our skills of creating language are likely the result of the genetic disposition for such creative behavior. An earlier discussion of semiotics and representational competence points to skills that allow humans to represent and re-represent meaning using system of symbols. Creativity in language has conventionally been regarded as the preserve of institutionalized discourses such as canonical literature and the discourse of advertising. Language Creativity it is ability of a person to find something new in Language. There are several people in India and abroad who are creative in the field of language who has ability to Play with words they creates something new with the same words and that combination of words give us a new ideas and feeling and we enjoy it so much. We always listen songs that are so much enjoyable for us we read prose and poetry that teach us a new lesson and give us new ideas and feelings.

### **Significance of the study**

The face of the classroom is changing. The teacher education Institutions should prepare in service teachers to keep up with the technology utility in the classroom. ICT is not only an essential tool for teachers in their day to day work, but it also offers them opportunities for their own professional development. The process of learning must be made as important as content and the teachers should take CAI as a challenge and equip themselves with various CAI skills to face the changing need and trends in education. Especially it is noticed that English in schools is teach in very uninteresting manner by the teachers. It can be teach better by using CAI in classroom which enhances learning by adding graphics, drawings and audio in teaching. It provides more freedom to teacher and student and freedom to make mistake without the fear of ridicule or personal embarrassment. It is generally known

that the overhead projector and video player make little impact on teaching style. But computers are different from any previous technologies because multimedia and hypertext give educators/teachers access to new ways of thinking through dynamic images, simulations and models. The use of CAI in teaching and their integration in the classroom and in the teaching training institute has remained almost completely unexplored. In India many computer programs are developed but especially in mathematics and sciences. But, in India very less work had done in the field of English. Very few experimental researches are carried out in India. As far as English is concern it is an important subject in life as well as in study of higher education. So to find out the effectiveness of teaching English with the help of computer this research work is under taken.

### **Objectives of the study**

1. To design and develop instructional plan for teaching selected topics in English from the prescribed course of study at class viith based on Computer assisted instruction
2. To study effectiveness of CAI on Language Creativity in English.
3. To compare the effectiveness of CAI and Conventional Method of Teaching on language creativity of students.

### **Hypotheses of the study:**

1. There will be no significant difference in the Pre test and post test mean scores of Language Creativity of the groups of students taught through CAI Package.
2. There will be no significant difference in the post test scores of Language Creativity of the groups of students taught through CAI Package and Conventional Method.

### **Methodology of the study**

The investigator employed pretest, post-test parallel group design with equivalent purposive sample in the form of intact section of class VII of the school. After making intensive study of the literature related to CAI, the experimental procedure was executed. Two experimental and one control group were formed. The experimental group was taught English through CAI and the control group was taught English through conventional method. These design comprised three stages: the first stage involved pre-testing of all the students of all groups (on Language Creativity Test). The second stage involved treatment of 5 weeks. The experimental treatment consisted of teaching English to VII grade through CAI to experimental group and through conventional method to control group. The third stage i.e. post-test stage, the students were post-tested on Language Creativity Test just after the treatment so as to determine the effect of treatment.

### **Sample of the study**

The present study was conducted on a sample of 60 students studying in class VII of The Aryan Public School .One section of 30 students formed experimental group and one section of 30 students formed the controlled group. The school for the investigation was selected because it is English Medium and have computer as a compulsory subject. The selection of the school was purposive but the selection of the students was randomly. The strength of the students of the VII class was 150. At first students were classified into three groups on the basis of their socio economic status. Then students from each group were distributed randomly among two groups i.e. Experimental group and Control Group.

### Various Tools used in the study

S.No.	Variable	Tools	Prepared by
1.	<i>Language Creativity</i>	<i>Language Creativity Test (LCT)</i>	<i>S. P. Malhotra &amp; SuchitaKumari</i>
2.	<i>CAI</i>	<i>Package of CAI</i>	<i>Investigator herself</i>

### Development of CAI Programme

To construct a CAI Package, the following steps were involved.

- Selection of the subject area
- Defining the entering behavior
- Defining the terminal behavior
- Content analysis
- Sequencing
- Selection of the model
- Media contents
- Interface designing
- Editing and review of the programme
- Testing and evaluation of the programme

The programme has been developed by using HTML4 ( Hypertext Markup Language), CSS ( Cascading Style Sheets), Java Script, PHP( Hypertext Processor Language), and My SQL. The medium of instruction for the subjects is English. So, the Programme was also set in the language “ English”. Programme has an inbuilt Assessment for the subjects. The whole CAI Package was divided into five different screens for easiness:

**1.Home page:** The home page is the starting point of the programme. The subjects have to click on the start button to run the CAI Package. As shown in the figure below



**2. Content page:** This is the next page to the home page. It displays all the chapters available in the CAI Package. By choosing any of the chapter the learner can move to the main page, which further links the text, videos, assignment and FAQs of the selected topic. There are total eight chapters in this page, these chapters titles are the links for further execution of the programme.

**3. Main page:** After the content page the consecutive next page is the main page which consists of a video screen, text screen, popup menus, FAQs Button, Assignment Button, and Video Selection pop up, Subtopic Selection Popup. These Buttons links further screens with the Main screen. The strongest element of this screen is the Video, which has been delivered using media player. Video proved to be an effective supplement to text and images and provided and enhanced experiences. As shown in the figure-

**4. Assignment Page-** This screen contains multiple choice questions for self evaluation by the student. This is prepared for practice session.

**5. FAQs Page-** This screen contains multiple choice questions for the evaluation of the student by the teacher. This is prepared for the Evaluation session.

#### Analysis and Interpretation

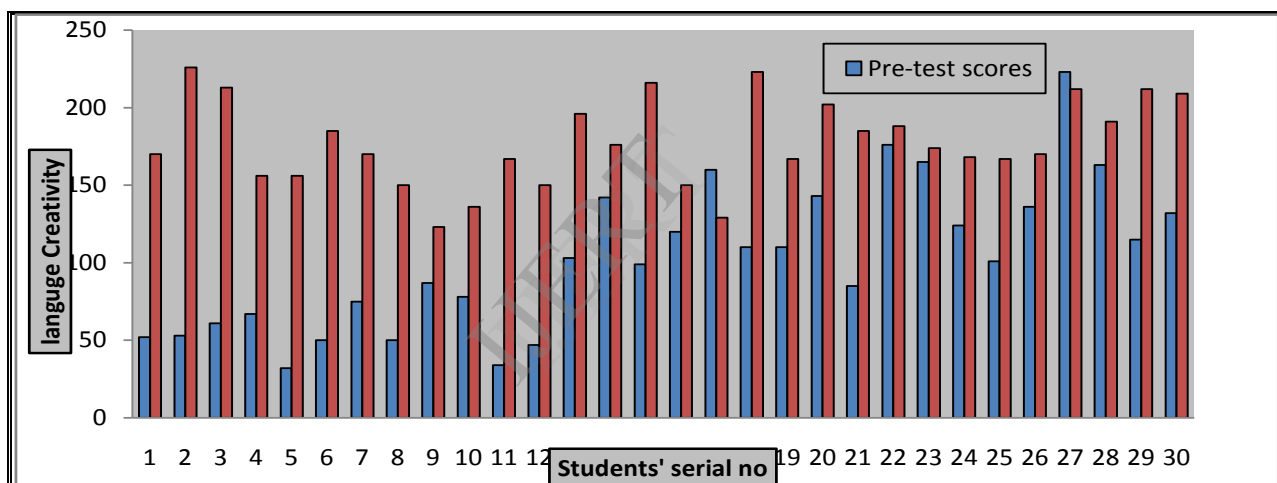
There will be no significant difference in the Pre test and post test mean scores of Language Creativity of the groups of students taught through CAI Package.

**Table 1. Language Creativity scores of students taught through CAI Package**

<i>Sr.no</i>	<i>Pre-Test scores</i>	<i>Post-Test scores</i>	<i>Sr.no</i>	<i>Pre-Test scores</i>	<i>Post-Test scores</i>	<i>Sr.no</i>	<i>Pre-Test scores</i>	<i>Post-Test scores</i>
1	52	170	11	34	167	21	85	185
2	53	226	12	47	150	22	176	188

3	61	213	13	103	196	23	165	174
4	67	156	14	142	176	24	124	168
5	32	156	15	99	216	25	101	167
6	50	185	16	120	150	26	136	170
7	75	170	17	160	129	27	223	212
8	50	150	18	110	223	28	163	191
9	87	123	19	110	167	29	115	212
10	78	136	20	143	202	30	132	209

**Figure 1. Language creativity scores of students taught through CAI Package**



**Table 2. Pre-test and Post -Test Mean, S.D., N ,SE<sub>D</sub> and t-value of language creativity of the group of students taught through CAI Package**

Testing	Mean	SD	N	SE <sub>D</sub>	t-value
Pre-Test	103.10	47.41	30	9.06	8.258*
Post-Test	177.90	27.99	30		

\* Significant at 0.01 level of significance

From table 2 it is evident that the t-value of the Pre-test and Post-test language creativity mean scores of students taught through CAI Package is 8.258 which is significant at 0.01 level of significance with df 58. It indicates that the mean scores of the Pre-test and Post-test of language creativity of students taught through CAI Package differ significantly.

Thus the null hypothesis that “There will be no significant difference in the Pre test and post test mean scores of language creativity of the groups of students taught through CAI Package” is **Rejected**. Furthermore it indicates that the mean score of Post-test language creativity (177.90) of students taught through CAI Package is higher than their Pre-test language creativity mean score (103.10) .It may therefore be concluded that CAI Package is very effective in improving language creativity of students in English.

### Comparison of CAI Package and Conventional Method

**Table 3 : Mean, N, D ,SE<sub>D</sub> and t-value of Post test language creativity in English of Students taught by CAI Package and conventional Method**

Groups	Mean Scores	N	D (M <sub>1</sub> -M <sub>2</sub> )	SE <sub>D</sub>	t-value
CAI	177.90	30	24.03	2.50	<b>9.612*</b>
Conventional Method	153.87	30			

#### \*Significant at 0.01 level of significance

From table 3 it is evident that the t-value of Post –test language creativity in English of students taught by CAI Package and conventional Method is 9.612 which is significant at 0.01 level of significance with df 87. It indicates that the mean scores of students taught by CAI Package and Conventional Method differ significantly. And therefore null hypothesis stands rejected. Furthermore it indicates that the mean score of students taught by CAI Package (177.90) is higher than the mean score of students taught by Conventional Method (153.87) .It may therefore be concluded that CAI Package is more effective than Conventional Method in teaching of English for developing language creativity of the students.

#### Conclusion

It is revealed in the major findings of the study that CAI Package prepared by the Investigator has shown immense impact on learning of English. The creativity of the students in English Language can be increased by using the computer based learning. There is no significant difference between the control group and experimental group in the pretest. But in the posttest the experimental CAI group performed better than the control group. Students are better motivated and interestingly participated in computer assisted learning. They did not hesitate to clarify their doubts through computer assisted learning where the learning is self paced. Students actively participated in learning process due to uniqueness of the CAI package. CAI Learning is based on visuals, audio as well as text; it contains all the media which appeals the students for learning. From the above study, the investigator found that CAI provides greater opportunities for the students to develop creativity. It is better than the conventional method of learning. It brings a new kind of experience for the students. The researcher makes an appeal to the authorities and policy makers to include this in preprograms. This will help the teachers as well as learner to a great extent.



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