



EFFECT OF WEB BASED INSTRUCTIONS ON ACHIEVEMENT IN SOCIAL STUDIES

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Abstract

The purpose of the study was to study the Effect of Web based instructions on achievement in Social Studies. The sample consisted of 100 students from Grade 8th of schools affiliated to C.B.S.E of Ferozepur and were randomly split into two groups-control (taught by traditional method) and experimental (taught by Web based instruction) groups. Firstly pre-test was administered on both the groups; then the students in the control group were taught by conventional method while experimental group was taught by Web based instructions. Then post-test was administrated on both the groups. The Statistical techniques were then employed to data collected and analysis and interpretation of the data was done. The result of the study implied that there exists significant difference in achievement in Social Studies based on Web based instructions and conventional method. The study also revealed that there exist significant gender differences in achievement in Social Studies with Web based instructions.

Keywords: *Conventional Teaching, Web Based Instructions, Social Studies, Achievement.*



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Introduction

Recent developments have created new opportunities for powerful social studies teaching assisted by technology. Major improvements have taken place in both hardware and software. Computers are much more powerful and versatile than they were a decade ago. Although many educational programs at that time were oriented towards drill and practice, it is now easy to find interactive and engaging programs. Using the right combination of hardware and software, teachers can develop lessons that enhance student skills in information retrieval, the presentation of data, the comparison and evaluation of different perspectives, and critical reflection and decision making.

Within the social studies, technology has served a dual role as an important instructional tool that may have a significant effect on the global, political, social, and economic functioning of American society. As both a method of instruction and a topic of instruction, the impact of computers and technology on social studies is immense. However, the extent to which this potential is being fully realized in the social studies classroom has not

been sufficiently explored. Technology-based learning has the potential to facilitate development of students' decision-making and problem solving skills, data processing skills, and communication capabilities. Through the computer, students may gain access to expansive knowledge links and broaden their exposure to diverse people and perspectives; hence, affording students the opportunity to become active participants in an increasingly global and interactive world.

Social studies are the integrated study of the social sciences and humanities to promote civic competence. Within the school program, social studies provides coordinated, systematic study drawing upon such disciplines as anthropology, archaeology, economics, geography, history, jurisprudence, philosophy, political science, psychology, religion and sociology, as well as appropriate content from the humanities, mathematics and natural sciences. The primary purpose of social studies is to help young people develop the ability to make informed and reasoned decisions for the public good citizens of a culturally diverse, democratic society in an interdependent world.

Educational technology is the systematic application of scientific knowledge to improve the efficiency of teaching and learning process. It implies the use of human and non-human resources, methods and strategies, mechanical and electronic devices, media equipment and library inventories in an integrated and systematic manner. The ground work of educational technology seems to have emerged with the work of Bobbit and Charter (1945, 1951) slightly more than fifty years ago. But the most potent influence in the development of present concept of educational technology has been that of traditional technologies.

Achievement signifies accomplishment, gain or performance carried out successfully. The achievement of an individual can be found out by using an achievement test.

WBI promotes the adoption of progressive educational practices, a more holistic approach which focuses on individual student's needs. In the eyes of reformers, teacher centered methods focuses on rote memorization must be abandoned in favor of student centered and task based approaches to learning. WBI is defined as the application of a repertoire of cognitively oriented instructional strategies implemented with a constructivist and collaborative learning environment, utilizing the attributes and resources of the World Wide Web. It is used as a resource for the identification, evaluation and integration of a variety of information.

Chen (2009) studied the implementation of asynchronous web based instruction platform on assisted teaching and this study compares the learning achievements of traditional training method and web based instructional method and found that web based instructional method is used as an assistance tool for advancing and promoting learning achievements of students. **Acikalin, M. (2010)** studied exemplary social studies teacher's use of computer-supported instruction in the classroom and revealed that all of the participants agreed that the computer is a powerful research tool which facilitates students' work and makes the work faster and easier for the students. The use of the Internet and software programs such as Microsoft Power Point, Word, and Excel were the most common use of computer-supported instruction in the classrooms observed. **Horzum (2012)** studies the Effect of Web based instruction on web pedagogical content knowledge, academic achievement and general satisfaction and found that the web pedagogical content knowledge and the attitude towards web based instruction of the experimental group are higher than control group. **Hwang, G.J (2014)** studied an integrated contextual and web-based problem-solving approach to improving students' learning achievements, attitudes and critical thinking. The result indicates that the experimental group exhibited significantly better learning attitudes, learning achievement, and better critical thinking than the control group, suggesting the effectiveness of the integrated contextual and web-based problem-solving approach in helping the students to use the Internet resources to solve problems. **Osman, G. and Oruc, S. (2016)** studied effect of the use of multimedia on students' performance: a case study of social studies class and concluded that multimedia technique increased the academic success of students in social studies lesson compared to the traditional classroom.

Objectives

1. To study the effect of web based instructions on the achievement in social studies of secondary school students.
2. To compare the achievement in social studies based on web based instructions and traditional method.
3. To study the gender difference with respect to achievement in social studies based on web based instructions.

Hypotheses

1. There exists significant difference in achievement in social studies based on web based instructions and traditional method.
2. There exists significant gender difference in achievement in social studies.

Design

The present study was experimental in nature. Experimental group was taught through web based instructions and control group through conventional teaching.

Sample

The school sample was drawn from the representative secondary schools where medium of instruction was English. For this investigation, 100 students were randomly selected. After selecting the schools, the student sample was drawn randomly. The students were randomly divided into two groups. The sample consisted of total 100 students of class 8th. These two groups were experimental group of 50 students and control group of 50. Further the experimental group was divided into two groups of 25 each of boys and girls to see the gender difference among them when taught in same group.

Measures

1. Entry behavior test (self-prepared).
2. Achievement test (self-prepared) used both as pre-test and post-test.
3. Formative test was (self-prepared).
4. Web based instructional package (self-prepared).

Web based instructional package was developed by the investigator. The whole content of the web based instruction site was analyzed. If there were any spelling errors or lack of information, they were edited. In this project, considerable time was spent on converting and redesigning original text book content to produce a rich online learning experience. Main goal was to implement an easy way to use the instructional package so that students using computers learn more, rather than making their task more difficult by having struggle with learning and using the computer system itself.

Treatment

First of all, when the investigator started giving instructions to the students, all the students divided into two groups: control group (treated with conventional teaching) and experimental group (subjected to web based instructions).

Phase 1 (pre-test)

In this phase, scores were obtained pertaining to achievement in social studies by administering achievement test to students as pretest on both groups.

Phase 2 (Experimental phase)

The students in control group were taught by traditional method while experimental group was taught by web based instructions.

Phase 3 (post-test)

In this phase both control and experimental group were administered the same achievement test in social studies as post-test.

Data Analysis

The pre and post-test scores of both the groups (control group and experimental group) were listed. After preparing the lists of both test scores of each group, the means, standard deviations and difference of the mean scores were computed. Significance of difference between the mean scores on pre and post-test of the experimental and control groups were tested at both 0.05 and 0.01 level by applying t-test.

Results of the Study

The analysis and interpretation of the data obtained through pre-test and post-test scores from both control and experimental group is summarized as the significance of difference between the mean scores of the control and experimental group on pre-test and post-test scores in the selected topics of social studies.

Performance of students in Social Studies after Pre-test and Post-test:

Achievement test was administered to all the students in the form of pre-test and post-test. Pre-test was administered in the form of entry behavior test to all the students and then the group was divided into two groups: experimental group and control group. Experimental group was taught by web based instructions and control group by conventional method and after that post-test was administered to see the difference in achievement. The results are presented in the following table:

Table 1 Showing difference in the mean scores of students in social studies after pre-test and post-test:

CATEGORY	N	MEAN	S.D	'T' Value	INFERENCE
PRE-TEST	100	7.7	1.64	5	Significant At Both 0.05 And 0.01 Level
POST-TEST	100	14.1	2.49		

It is obvious from the results given in the table 4.1 that the mean score of pre-test is 7.7 and S.D is 1.64 and mean score of post-test is 14.1 and S.D is 2.49 and 't' value is 5. The obtained value of 't' is more than the table value i.e. 2.16 at 0.05 level and 3.01 at 0.01 level which is significant at both levels. It indicates that there is significant difference in achievement in pre-test and post-test.

Hypothesis 1

Performance of students in social studies of control group and effect of web based instructions on the performance of students of experimental group:

As mentioned earlier, students of control group (treated with conventional method) and experimental group (subjected to web based instructions) were administered to achievement test in social studies. By applying appropriate statistics, the raw scores obtained of each student of both the groups are compared. The results are in the table given below:

Table 2 Showing difference in the mean score of achievement in social studies of control group and experimental group:

CATEGORY	N	MEAN	S.D	't' value	INFERENCE
CONTROL GROUP	50	11.6	0.98	3.70	Significant at both 0.05 and 0.01 levels
EXPERIMENTAL GROUP	50	15.5	1.66		

It is obvious from the result given in the table 4.2 that mean score of control group is 11.6 and S.D is 0.98 and mean score of experimental group is 15.5 and S.D is 1.66 and 't' value is 3.70. The obtained value of 't' is more than the table value i.e. 2.31 at 0.05 level and 3.36 at 0.01 level which is significant at both the levels. It indicates that there is significant

difference in achievement in social studies based on web based instructions and conventional method. Hence hypothesis which states that “There exists significant difference in achievement in social studies based on web based instructions and traditional method” is accepted.

Hypothesis 2

Performance of the Students Showing Gender Difference in Achievement in Social Studies with Web Based Instructions:

There is a gender difference in social studies with web based instructions. By applying appropriate statistics, the raw scores obtained by both the sexes are compared. The results are in the table given below:

Table 3 Showing difference in the mean score of achievement in social studies among boys and girls with web based instructions:

CATEGORY	N	MEAN	S.D	‘t’ value	INFERENCE
BOYS	25	12.3	0.96	4.39	Significant at both 0.05 and 0.01 levels
GIRLS	25	16.4	0.98		

Table 4.3 shows that mean score of boys is 12.3 and S.D is 0.96 and mean scores of girls is 16.4 and S.D is 0.98 and ‘t’ value is 4.39. The obtained value of ‘t’ is more than the table value i.e. 2.45 at 0.05 level and 3.71 at 0.01 level which is significant at both levels. It indicates that there is significant difference in gender difference in achievement in social studies with web based instructions. Hence hypothesis which states that “There exists significant gender difference in achievement in social studies with web based instructions” is accepted.

Conclusions

1. There was significant difference between web based instructional group (WBI) and traditional group on achievement in social studies. Students who were taught by using web based method achieved better score in comparison to the students taught by conventional method. So, WBI provided the students a variety of teaching learning experience. It was found to be more innovative, interactive and activity oriented. This method catered to all their senses and cause simulation of their senses. It provided

them freedom from the old and monotonous conventional method. The web based atmosphere allowed more effective interaction between the students and enabled the learner to participate successfully in the learning process.

2. There was a significant gender difference in achievement when web based instructions were imparted. As compared to boys, girls showed more scores in terms of achievement. This could be further inferred from the fact that girls are more interested in computers. Anything taught using computers is able to catch their attention for a longer period of time.

Educational Implications

1. In web based instructional environment, every student may not be expected to be comfortable with the ongoing instructional strategies. Therefore it might be better if the course could offer alternative, additional learning strategies.
2. The students may be benefitted from the web sites and can better understand its importance in daily life.
3. In web based environment, web based instructions can enhance the learning environment in terms of time and place.
4. The implication of web based learning in the course may include activities engaging the online communication tools to make them more attractive.
5. The students may get positive ideas and attitude about computer mediated communication, if the instructor, plan the content well so that students can well benefitted with the instructions.

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