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EFFECTIVENESS OF WEB BASED LEARNING ON STUDENTS ACHIEVEMENT IN SOCIAL SCIENCE

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ABSTRACT

The purpose of the study was to ascertain if the use of Web Based teaching-learning significantly improved the Secondary School Students' performance in Social Science and to compare the effectiveness of the traditional teaching-learning with the Web Based Learning

using pre-test and post-test measurements. This study adopted pre-test, post-test experimental design for the collection of data. The sample consisted of 100 Secondary School Students from Belagavi city studying in IX Standard. The data collected were analyzed using appropriate statistical methods i.e., descriptive statistics. Students in the treatment group were given a questionnaire regarding their perceptions and attitudes toward web based learning. The results indicated that the use of Web based learning significantly impacted students' scores from pre-test to the post-test. The findings of the study revealed that the effectiveness of web based learning in Secondary classroom setting was better than that of the traditional teaching-learning. The study also revealed that web based learning had a positive impact on students' achievement.

KEYWORDS *:Web based learning, secondary school students, attitude towards web based learning, traditional teaching etc.,*

INTRODUCTION

E-learning, web based learning, online learning and distance learning are widely used as interchangeable terms. However, these terms represent concepts with subtle, with minor differences. A clear understanding of these concepts and their fundamental differences is important for both the

educational and training communities. A thorough familiarity with each concept and its distinctive characteristics is a critical factor in establishing adequate specifications, evaluating alternative options, selecting best solutions, and enabling and promoting effective learning practices.

The traditional teaching-learning methods in secondary schools have been questioned, as majority of the educators search for alternative ways of presenting material, engaging students and improving academic performance. As a result of such enquiry, the use of computers and the internet have become integral part of today's classroom. Moreover, the internet has facilitated the development of Web Based Learning for students' learning and assessment across various disciplines.

Web based learning is that which makes use of the internet or a local intranet. There are many ways in web based learning, such as tutorials, online discussion groups and online evaluation. Online tutorials are similar to face-to-face teaching. They provide information structured by the teacher in a way that will facilitate the learning. Tutorials are often enhanced by features such as multimedia (sound, pictures, movies, and animations), links to online resources (full-text journal articles etc.) and self-assessment tools. In online discussion, teachers act the role of facilitators, monitoring and guiding the discussion as needed and helping students to find additional resources.

Web based learning is becoming a phenomenon in education today because of its flexibility and convenience, it is vitally important to address those issues that adversely impact retention and success in this environment. To generate principles of effective asynchronous web based resources specifically applicable for secondary level students based upon the perceptions of those who have developed effective web based content. The development and formulation of an instructional approach for effective use of web based learning is generally in all school subjects and particularly in Social Science. Web based learning is more appropriate to be used as a supplementary tool in teaching-learning process. Web based instruction enables the learning process interesting and more meaningful since it provides multisensory experience to the students. The paradigm shift from teacher centred to learner centred education has emphasized the use of web based instruction. Students have to use a variety of strategies in learning to accomplish classroom academic tasks. Web based learning help students and teachers and also institutions in improving overall learning process. The authorities need to focus on the integration between the technology and the pedagogical practices. Learners' perspectives toward web based learning have offered valuable insights into a way to make the connection between the teacher's goal and learners need while learning in a web based instructional environment.

In the modern education technology, the web based teaching and learning has been found to be more effective and time saving. The web resources play the most crucial role in making the web based teaching and learning and it is more functional and effective.

IMPORTANCE OF WEB BASED EDUCATION:

In the presence of great social diversity in India, it is difficult to change the social background of students, parents and their economic conditions. Therefore the only option left is to provide uniform or standard teaching-learning resources or methods. For high quality education throughout India there must be some nationwide network, which provides equal quality education to all students, including the students from the rural areas. The one and only simple solution to this is Web Based Learning (WBL).

India is a country of millions of youth minds, seeking knowledge to move ahead in contrary to their limit. This time is important for India to get prepared for the future, hence requiring education in full fledge. Though, we have many schools, enough teachers and facilities for students and teachers. But the great variation in the quality of education is found due to some factors like social background of

students, different standards of teacher training programs, all teachers cannot deliver the same message to all learners. This fetches the need of Web Based Learning.

The Web Based Education or Learning has the potential to meet the perceived need for flexible pace, place and face. The web allows education to go to the learner rather than the learner to their education. As far as India is concerned there are many problems that one will face to use Information Technology in education like funds, infrastructure etc.

NEED AND IMPORTANCE OF THE STUDY:

Many experiments have been done in various subjects till date to find the effectiveness of web based learning resources. Most of the results show positive outcomes, with students being enthusiastic about new methods of learning. Most of the experiments suggest that this innovative approach to teaching is more effective than traditional approach to teaching. Taking the findings of experiment in account, many schools have also adopted this innovative approach to teaching in their classrooms. In the last few years increasing efforts in developing and using e-learning resources for teaching in theory and practice are being observed. It becomes new method of teaching and learning.

The researcher is keen to know if the Web Based Learning approach to teaching is really effective as most of the researches claim to be. Research results may totally differ from the real classroom situation result when e-learning resources to teaching are extensively and regularly used. The performance generally improves when the way material presented is changed. Sometimes just being new is enough to get a positive response from students even if they don't learn concepts any better.

It is therefore, decided by the researcher to take up this study to find out how effective Web Based Learning Resources to teaching in the schools is? and is it going to remain effective when used extensively and regularly as norm in schools?

STATEMENT OF THE PROBLEM:

"Effectiveness of Web Based Learning on Students Achievement in Social Science".

OBJECTIVES OF THE STUDY:

1.To compare mean scores of control group and experimental group in their pre-test.
2.To compare mean scores of control group and experimental group in their post-test.
3.To compare the mean scores of control group in their pre-test and post-test.
4.To compare the mean scores of experimental group in their pre-test and post-test.

HYPOTHESIS OF THE STUDY:

1.There is no significant difference between control and experiment groups with respect to pre-test scores of achievement in Social Science.
2.There is no significant difference between control and experiment groups with respect to post-test scores of achievement in Social Science.
3.There is no significant difference between pre-test and post-test scores of achievement in Social Science of students in control group.
4.There is no significant difference between pre-test and post-test scores of achievement in Social Science of students in experiment group.

VARIABLES OF THE STUDY:

1.Independent Variables: Web Based Learning and conventional learning
2.Dependant Variable: Students Achievement in Social Science

DESIGN OF THE STUDY:

The study was conducted by employing mainly experimental method. Experimental method is a systematic and logical method of manipulating certain stimuli, treatments or environmental conditions and observing how the condition or the behaviour of the subject is affected or changed. The manipulation is deliberate and systematic. Experimentation provides a method of hypothesis testing. After defining a problem, the researcher proposes a tentative answer or hypothesis. The hypothesis is further tested to confirm or disconfirm it in the light of the controlled variable relationship that has been observed. In an experimental method there is experimental group which is given a treatment. A control group which is not given a treatment, both are made homogeneous.

SAMPLE OF THE STUDY:

The present study focused on 100 samples in two groups i.e., conventional instructional group and web based instructional group containing both boys and girls. The study consists of 50 students in control group (25 girls and 25 boys having equal intelligence) and 50 students in experimental group (25 girls and 25 boys having equal intelligence).

TOOLS USED FOR DATA COLLECTION:

Data was collected by using:

(a)Raven's Standard Progressive Matrices (R-SPM, 1983 Edition) to measure the intellectual capacity of the students for the purpose of paired matching.
(b)Achievement test prepared by the investigator has been used as pre-test and post-test.
(c)Web Based Learning Package compiled by the investigator.

Procedure for Data Collection:

The experimental group students received treatment in the form of Web Based Learning method of instruction in the computer laboratory of the school.

The pre-test was administered to both the groups just before the beginning of treatment. Both groups were equated on the basis of Raven's SPM test scores. After the completion of the treatment (teaching with developed Web Based Instructional Package) the post-test was administered immediately.

Data were collected from 100 students (50 control group and 50 experimental group), out of 50 (25 boys + 25 girls) from each group. The purpose of this test was to measure the achievement of students constituting the sample of the study.

Attitude towards Web Based Learning Scale was administered to the students of experimental group after immediate completion of the treatment to collect their attitude towards Web Based Learning Package.

Statistical Techniques used:

After the data had been collected, it was processed and tabulated in Microsoft Excel. The data was analyzed with reference to objectives and hypotheses. The analysis is done by using 't' test and results obtained thereby have been interpreted.

DATA ANALYSIS AND INTERPRETATION:

Hypothesis1: There is no significant difference between pre-test scores of achievement in Social Science of control group and experimental group.

TABLE-1: Mean, Standard Deviation and 't' value of Pre-test Achievement Scores of Control and Experimental Group.

Tests	Group	N	Mean	Std. Deviation	't' Value	Significant at 0.05 level
Pre-test	Control	50	34.5200	4.10197	0.473	NS
	Experimental	50	34.8600	3.00347		

The mean pre-test scores of Achievement in Social Science of the control and experimental group are tested for significance. It was found that, the obtained 't' value 0.473 is less than the table value, thus it is not significant. Hence the null hypothesis "There is no significant difference between pre-test scores of achievement in Social Science of control group and experimental group" is accepted.

Hypothesis2: There is no significant difference between post-test scores of achievement in Social Science of control group and experimental group.

TABLE-2: Mean, Standard Deviation and 't' Value of Post-test Achievement Scores of Control and Experimental Group.

Tests	Group	N	Mean	Std. Deviation	't' Value	Significant at 0.05 level
Post-test	Control	50	36.0200	2.96572	32.835	S
	Experimental	50	59.2000	4.01528		

The mean pre-test scores of Achievement in Social Science of the control and experimental group are tested for significance. It was found that the obtained 't' value of 32.835 is greater than the table value, which was found significant at 0.05 level. Hence the null hypothesis is rejected. This prompted the researcher to formulate the alternate hypothesis as, "There is a significant difference between post-test scores of achievement in Social Science of control group and experimental group."

From the table 2 it can be observed that the mean value of experimental group 59.2 which is greater than the mean value of control group post-test mean value 36.02. This indicates that the web based teaching program used in experimental group is effective after providing successful treatment.

Hypothesis3: There is no significant difference between pre-test and post-test scores of achievement in Social Science of control group.

TABLE-3: Mean, Standard Deviation and t-value of Pre-test and Post-test Achievement Scores of Control Group.

Group	Tests	N	Mean	Std. Deviation	't' Value	Significant at 0.05 level
Control	Pre-test	50	34.5200	4.10197	2.095	NS
	Post-test	50	36.0200	2.96572		

The mean pre-test and post-test scores of Achievement in social science of the control group are tested for significance. It was found that, the obtained 't' value 2.095 is less than the table value, thus it is not significant. Hence the null hypothesis "There is no significant difference between pre-test and post-test scores of achievement in social science of control group" is accepted.

Hypothesis4: There is no significant difference between pre-test and post-test scores of achievement in Social Science of experimental group.

TABLE-4: Mean, Standard Deviation and 't' Value of Pre-test and Post-test Achievement Scores of Experimental Group.

Group	Tests	N	Mean	Std. Deviation	't' Value	Significant at 0.05 level
Experimental	Pre-test	50	34.8600	3.00347	34.324	S
	Post-test	50	59.2000	4.01528		

The mean pre-test and post-test scores of experimental group are tested for significance. It was found that the obtained 't' value of 34.324 is higher than the table value, which is clearly significant at 0.05 level. Hence the null hypothesis is rejected. This prompted the researcher to formulate the alternate hypothesis as, "There is a significant difference between pre-test and post-test scores of achievement in social science of experimental group."

From the table 4 it can be observed that the mean value of post-test experimental group is 59.2 which is greater than the mean value of pre-test experimental group i.e., 34.86. This indicates that the web based learning program used while providing treatment to the experimental group was effective.

CONCLUSION:

Web Based Learning is one of the most effective tool to accelerate the learning process in highly customized manner. Classroom experiences are also enriched by the use of such instructional packages. Based on the findings of this study, it can be concluded that Web Based Learning Packages help teachers in effective teaching as compared to traditional or conventional teaching methods. Thus, it can be said that, the teachers teaching and pupils learning will be more effective when Web Based Learning Packages are used.

EDUCATIONAL IMPLICATIONS:

1.Web Based Learning Packages will be easy to use with minimal technological problems.

2.It encourages students' learning interest, builds up students' self-confidence, and assists students to know more about themselves, and develops comprehension skill as well.
3.Web Based Learning Packages provide for significant scholastic achievement of secondary school students.
4.They have the potential to improve student learning of basic and higher level concepts.
5.Web Based Learning Packages are effective for establishing long term habits of remembering, understanding, applying, analyzing, and evaluating Social Science based concepts.

BIBLIOGRAPHY:

1.Aiello, N. C., & Wolfe, L. M. (1980). A meta-analysis of individualized instruction in science. Boston: American Educational Research Association.
2.Amutha S and Sudha A (2015), Higher Secondary Learner's Effectiveness Towards Web Based Instruction (WBI) on Chemistry, Universal Journal of Educational Research, Vol.3, No.7, http://www.hrpub.org, Pp 463-466
3.Das M.N (2015), Effectiveness of the Web Based Learning in Secondary School Education, International Journal of Information and Futuristic Research, Vol.2, Issue 8, ISSN (Online): 2347-1697, Pp 2456-2461
4.Kay, R. H. & Knaack, L. (2008c). A multi-component model for assessing learning objects: The learning object evaluation metric (LOEM). Australasian Journal of Educational Technology, 24(5), 574-591Kay, R. H., Knaack, L., & Muirhead, B. (2009). A formative analysis of instructional strategies for using learning objects. Journal of Interactive Learning Research, 20(3), 295-315.
5.O'Donoghue, J. Singh, G. and Dorward, L. (2001). "Virtual education in universities: a technological imperative", British Journal of Educational Technology, Vol.32, No.5, pp.511-523.
6.Robin K (2013); "Exploring Individual Differences in the Impact of Web Based Learning Tools (WBLTs)"; Research and Practice in Technology Enhanced Learning, Vol. 7, No. 2. Pp 89－１０４
7Wozney, L., Venkatesh, V. & Abrami, P. (2006). Implementing Computer Technologies: Teachers' Perceptions and Practices. Journal of Technology and Teacher Education, 14(1), pp. 173-207

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