LEARNER –ORIENTED VIRTUAL LEARNING: A BOOSTER TO PRIMARY SCHOOL LEARNERS

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ABSTRACT

The present study enlightens the impact of Learner- Oriented-Virtual Learning in enriching knowledge in Environmental Education at primary level. To achieve the expected competency in Biodiversity, various approaches were adopted in the class room transaction which were not fruitful. Hence the researcher practiced the Learner –Oriented-Virtual Learning in the classroom transaction. Experimental method was adopted in the study. Qualitative and quantitative approaches were adopted in the study. Sixty students studying at standard V in Pomanampalayam Panchayat union school were considered as sample for the study. Achievement test was considered as a tool for the study. Resarcher's self-made tool was used for pretest and post-test. After administering pretest, treatment was given through Learner-Oriented-Virtual Learning to find out the effectiveness of it. Descriptive and inferential statistics was applied for the study. Learner-oriented-Virtual Learning is more effective than traditional method in Learning Biodiversity in Environmental Education. The fruitful method can be implemented in some other classes.

Keywords: Learner- Oriented-Virtual Learning, Biodiversity, Environmental Education

INTRODUCTION

Virtual classroom also needs equivalent equipment and tools in the form of network-based software application to allow a group of instructors and students to carry out the learning process. The sophistication of such software structures vary widely, from simple electronic mail systems to systems that have been specially enhanced to support classroom – like experiences, such as virtual auditoriums. Some of them are well established on the Internet and new ones are still emerging. No physical boundary is required for getting access to virtual learning; entire universe is the classroom. But unlike the formal school learning, virtual learning is a collaborative process and emphasizes on cooperative effort and interactions. The medium of instruction in virtual learning in India is broadly restricted to English and Hindi languages, and occasionally some regional programmes are being telecasted. It would take some time to develop the software for teaching-learning in vernacular languages. The output of virtual teaching-learning process depends upon the factors like students' motivation for self-learning, subject expertise and communication skills of the teacher, on-line problem-solving facility, connectivity to e-library, and use of technology based lightly interactive multimedia, etc. Basically, there are four principles to be kept in mind for successful teaching in the virtual classroom such as dealing with i) media richness, ii) timely responsiveness, iii) organization and iv) interaction. Traditional classroom teaching is not conducive for learners' self-learning and provideds monotony of one-way communication. Hence the study endeavours to use innovative method namely virtual learning which increases the interest and retention rate of the students at primary level.

Significance of the Study

Environment education is necessary to the young learners who can foster a healthy of the society. Economical development depends upon the health of the society. Revamping the health of the society is inevitable. Environmental Education specifically, Biodiversity is to be inculcated in the minds of younger generation. Learning Environmental Education through conventional methods of teaching and learning were not fruitful to the learners in scoring more marks. Even if the teachers adopted conventional methods in different styles for teaching Environmental Education it failed to satisfy the learners in

understanding the content. Corral Sheila & Keates Jonathan(2011) recommends the Virtual learning as effective learning. Wyatt, Erin Drankwalter(2010) examined middle school students engaged in a virtual learning environment, in concern with face-to-face instruction in order to complete a collaborative research project. Hence the researcher took much effort to solve the problems of the learners by using virtual learning at primary level.

Review of Related Studies

Leppisaari, Irja; Lee, Okhwa (2012) explores a new generation of young learners often described as digital native school children who are attitudinally and technically equipped to employ social media as a social process in learning. However, few international virtual learning projects have been implemented and researched. This article examines a trial which aimed to combine viable technology with future pedagogic solutions for primary students from Korea and Finland and create an international collaboration model in virtual learning for environmental education. The results show various challenges of the operational model and suggest effective implementation strategies. The challenges were organisational, language, technical and collaboration barriers. The operational model illustrates possibilities of implementing cyber space pedagogy, visualization of knowledge using technology, cyber spaces for collaboration, and the motivational impetus provided by the model. This pilot study demonstrates the need to increase greater interactivity between teachers from the partner countries during the planning phase and provide more authentic interaction for inter-learner dialogue. Breton-Carbonneau, et.al (2012) examines comparative research in multilingual urban primary schools indicating that the pedagogical and political goals of schooling may operate at cross-purposes. Von Neuforn, Daniel Stokar (2007) supports the motivation of participants in virtual learning environments it is important to achieve a successful learning atmosphere. Therefore, it was necessary to reach the participants on a personal level and to perceive their personal needs and emotions when conversing with them. These factors of learning motivation depended on the individual perception of virtual, text

based communication. The coding and encoding of purely, text-based language required an enormous amount of compensation with regard to the absence of all verbal means of communication. For this reason it was important to determine the existence of any gender differences in the compensation for non-verbal communication or in the perception of text-based communication. In this study the gender gap in the perception of text-based communication was evaluated. The individual production and perception of text-based communication could be one reason for the decrease in the number of female participants in the majority of virtual learning environments. The objective of this survey was to define the characteristics of text-based communication, which then gave an indication of the condition of male and female participants of virtual learning environments. The results of this study provided information in relation to individual gender interpretation and production of written messages, as well as the implementation of measures which supported the motivation to learn. Singaravelu.G (2008) examined the effectiveness of Virtual learning of social science at standard V, assess the problems of the young learners using the present methods of learning Social science and find out the significant difference between the post test of control group and post test of Experimental group in achievement mean scores of the pupils in Social science.
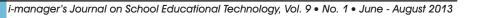
Objectives

The researcher has framed the following objective of the study:

1. To find out whether there is any significant difference in achievement mean score between the pretest of control group and post test of control group in learning Bio-diversity of Environmental Education at standard V.

2. To find out whether there is any significant difference in achievement means score between the Pre test of Experimental group and Post test of Experimental group in learning Bio-diversity of Environmental Education at standard V.

3. To find out whether there is any significant difference in achievement means score between the Post test of Control group and Post test of Experimental group.

4. To find out the impact of Learner-oriented Virtual Learning in learning Bio-diversity of Environmental Education at standard V.

Hypotheses

The researcher has framed the following hypotheses;

1. There is no significant difference in achievement mean score between the pretest of control group and post test of control group in learning Bio-diversity of Environmental Education at standard V.

2. There is no significant difference in achievement mean score between the Pretest of Experimental group and Posttest of Experimental group in learning Bio-diversity of Environmental Education at standard V.

3. There is no significant difference in achievement mean score between the Post test of Control group and Post test of Experimental group.

4. Learner-oriented Virtual Learning in learning Bio-diversity of Environmental Education is more effective.

Delimitation of the Study

The study was confined to students studying in standard V in Middle school of Pommanampalayam only. The study was confined to Environmental Education only.

Method of Study

Equivalent group Experimental method (control group and experimental method) was adopted for the study.

Sample Design

Sixty Student-teachers (30control group +30 Experimental group=60) of fifth standard students from School of Pommanapalayam Panchayat union school were selected as sample for the study.

Sample Selection

Random sampling technique was adopted for selection of the sample in the study.

Construction of Tools

The investigator's self made Achievement test was used for the pretests and post tests of both control groups and experimental groups. The same question paper was used for both pre and post tests to evaluate the performance of the learners. Fifty objective type questions were framed and each question carries one mark. It was administered to

the students.

Reliability of the tool

Test- retest method was used for the study .The co-efficient correlation was found to be 0.75 in the tool, through test-retest method.

Validity of the tool

Content validity was established for the achievement tests through expert suggestions.

Hence reliability and validity were properly established for the study.

Final tool

Researchers self-made tool and Achievement test were used for the study. Pilot study was administered for establishing validity and reliability of the tool. After establishing validity and reliability of the tool, the test was administered.

Statistical Technique

't'test was used to analyze the study.

Procedures of the Study

Phase 1: Identifying the problems of the students in learning Environmental Education in existing methods through administering pretest.

Phase 2: The problem of the students was discussed with teachers.

Phase 3: Planning for Learner-oriented virtual learning.

Phase 4: Preparation of the tool with the help of the teachers.

Phase 5: Administrating pretests to both the groups of students in learning Environmental Education and tabulating the score for evaluation.

Phase 6: Validating the virtual learning.

Phase 7: Practicing the Learner-oriented Virtual Learning in learning Environmental Education

Phase 8: Executing the innovative method

Phase 9: Administrating Post tests to both the groups of the students in learning Environmental Education.

Phase 10: Analysis and discussion.

Phase 11: Finding effectiveness of Learner-oriented Virtual Learning in learning Environmental Education.

Data Collection

The researcher administered pretest to the pupils with the help of the teachers. The question paper and response sheets were given to the individual learners and collected, evaluated and learning obstacles of the learners were identified by the pretest. The cause of low achievement by unsuitable method was found out. Learner-oriented Virtual Learning was practiced in the classroom. based on the subject matter of Environmental Education. The post-test was administered and the effectiveness of the Learner-oriented Virtual Learning was found.

Analysis and Interpretation

Testing of Hypotheses

Table 1 shows the achievement scores in percentage between pretests of control (26)group and experimental group(27) and post-tests of control group(27) and experimental group(77).Scoring marks in pre-tests in both groups confirm the existing problems of the students in learning Environmental Education.

Hypothesis Testing-1.

There is no significant difference in achievement mean score between the pre-test of control group and post test of control group

Table .2 shows theat calculated value is (0.4344) is less than table value(2.00). Hence null hypothesis is accepted at 0.05 level. It shows that there is no significant difference in achievement mean score between the pre-test of control group and post-test of control group.

Hypothesis Testing-2.

There is no significant difference in achievement mean score between the Pre-test of Experimental group and Post

Groups	Percentage of score Pre-test	Percentage of score Post-test
Control group	26	27
Experimental group	27	77

Table 1. Students of standard V have problems in learning Bio-diversity in Environmental Education through traditional methods Difference between pre-test and post-test

Control group	Mean	S.D	N	t	df	Level of significant
Pretest	3605	1045	30	0.4344	58	P<0.05
Posttest	37.25	1094	30			significant

Table 2. Significance difference means scores of Pre test of control group and post test of control group

test of Experimental group

Table 3 shows that the calculated value is (10.5836)greater than table value(2.00). Hence null hypothesis is rejected at 0.05 level. It shows that there is significant difference in achievement mean score between the Pre-test of Experimental group and Post-test of Experimental group.

Table 4 shows that the calculated value is (10.4000)greater than table value(2.00). Hence null hypothesis is rejected at 0.05 level. It shows that there is significant difference between Post-test of Control group and Experimental group.

Hypothesis Testing-4

Table 5 shows indicates the effectiveness of Learner-Oriented Virtual Learning in learning Environmental Education. Score using Learner-Oriented Virtual Learning is 78% and mean is 68.00 which are higher than score using traditional methods which is 28% and mean 37.25. It shows the effectiveness of Learner-Oriented Virtual Learning in learning Environmental Education at standard V.

Findings

1. There is no significant difference in achievement mean score between the pre-test of control group and post-test of control group in learning Bio-diversity of Environmental Education at Standard V.

Experimental groups	Mean	S.D	N	t	df	Level of significant
Pretest	37.34	10.45	30	10.5836	58	P<0.05
Posttest	68.00	11.94	30			significant

Table 3. Significant difference means scores of Pre test of Experimental group and Post test of Experimental group

Groups	Mean	S.D	N	t	df	Level of significant
Post Control	37.25	10.94	30	10.4000	58	P<0.05
Post Experimental	68.00	11.94	30			significant

Table 4. Significance difference means scores Post test of Control group and post Experimental group

Methods	Post tests scores in percentage	Post tests mean scores
Traditional	28	37.25
Learner-- Oriented Virtual Learning	78	68.00

Table 5. Learner-Oriented Virtual Learning is more effective than traditional methods Difference between post tests scores in control group and Experimental group

2. There is significant difference in achievement mean score between the Pre-test of Experimental group and Post-test of Experimental group in learning Bio-diversity of Environmental Education at Standard V.

3. There is significant difference in achievement mean score between the Post test of Control group and Post test of Experimental group.

4. Learner-oriented Virtual Learning in learning Bio-diversity of Environmental Education is more effective.

Educational Implications

1. Learner-oriented Virtual Learning in learning can be extended to other subjects.

2. It can be encouraged to be implemented in School Education

3. It may be implemented in Higher Education.

4. It may be implemented in alternative schools.

5. Slow learners can improve by using it.

Recommendations

Virtual Learning can simplify the learning of the younger generation. Young learners are attracted by the technology, games and real learning. It can encourage the young learners to understand the fact by their eyes. Perceptual learning is happens through virtual learning. It paves way to the learners to learn in their own pace. Retention power of the learners can be increased through Virtual learning. It may be implemented in teachers education also. Slow learners and Average learners can improv by using it. It may be more supportive to promote Sarva Siksha Abhiyan in grass root level.

Conclusion

The study reveals that the students of standard V studying in Pommanapalayam Panchayat union school had problems in learning Bio-diversity in Environmental Education by using traditional method. Learner-oriented Virtual Learning is more effective in learning Environmental Education. Hence it will be more supportive to the primary and upper primary education.

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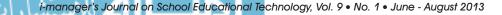
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