FUTURISTIC TRENDS IN SOCIAL SCIENCES:

EFFECT OF ONLINE TEACHING ON ACHEIVEMENT IN ENVIRONMENTAL SCIENCE AMONG 9th CLASS STUDENTS

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ABSTRACT

Online teaching is the methodology of educating others using the internet. Various techniques can be used for online teaching such as video calls, group video calls and webinars. Online teaching can be started from any location and students can be enrolled from various backgrounds and geographical areas. Online teaching encourages student participation, student cooperation and encourage active learning. Online teaching and learning provide great opportunities and great challenges. It has benefits for the students and instructors. It offers the convenience of time and space, cost-effectiveness and flexibility. In the present study the effect of online teaching on achievement in environmental science among 9th class students was studied.*Online teaching method was found to be effective method in improving the achievement of students in environmental science.*

KEY TERMS: Online teaching, Achievement ,Environmental Science

 Online teaching is the education that takes place over the internet. Teaching online varies from teaching in the classroom considering physical presence of teacher ,live interaction and presence of infrastructure. Online learning allows the teacher to deliver content or information in ways that are highly effective than class room lectures. Online teaching is the process of educating others using the internet. Various methods can be used for online teaching such as video calls, group video calls and webinars.

 There are various online teaching apps like Zoom, Edmodo, Google meet,google classroom etc. Zoom is an easy to use video conferencing program that allows for multiple participants, audio and video sharing, screen sharing, work on a whiteboard and recording.

 Online teaching has become a popular approach to effective teaching within the wider academic community because of the extensive use of web systems in teaching especially during emergency conditions like COVID.

ENVIRONMENTAL SCIENCE

Environmental science is an interdisciplinary academic field that integrates the study of environment and solutions of environmental problems.

ACHIEVEMENT

 Achievement means all those behavioural changes which take place in an individual as a result of learning experiences after the specific training or instruction has been imparted.. Achievement is the accomplishment or proficiency of performance in a given skill or body of knowledge. Thus, the achievement in all fields is the essential element.

ACHIEVEMENT TEST

 Test is a set of standardized questions, problems or tasks designed to elicit response for use in measuring the traits, capacities or achievements of individuals.

 According to Gronlund (1977), “Achievement test is defined as a systematic procedure for determine the amount a student has learnt through instructions”.

 An Achievement test is a test developed to measure the achievement of the students in any particular field. This test is to measure the level of the developed skill or knowledge.

 In the present experimental study achievement test consisted of 25 questions based on topics of environment science of 9th class .

DEFINITIONS OF THE KEY TERMS

Online teaching: Online teaching is the process of educating others via the internet like Zoom, ePathshala.

Achievement: Achievement means the extent to which a learner is profiting from instructions in a given area of learning. Freeman defines a test of achievement as a test “designed to measure knowledge, understanding and skills in a specified subject or a group of subjects.”

Environmental science: Environmental science is an interdisciplinary academic field that integrates the study of environment ,and solutions of environmental problems.

DELIMITATION OF THE PROBLEM

1. Students of 9th class of secondary schools.
2. Topics of Environmental Science from text book of 9th class students for CBSE and PSEB board.

OBJECTIVE

To study the effect of online teaching in environmental science achievement of secondary school students.

HYPOTHESES

Significant differences exist between the mean achievement scores of experimental group and control group in teaching environmental science.

METHOD AND PROCEDURE

Design: The present study falls under the domain of experimental research. The experimental group was taught by online teaching and control group by traditional classroom teaching.

Sample selection: A sample of about 120 students of 9th class of secondary school of Amritsar city was selected randomly for the purpose of study.

TOOLS

Achievement test was prepared from the list of selected topics for teaching environmental science to 9th class students.

STATISTICAL TECHNIQUES

* T-test was applied to analyse the results .

ANALYSIS OF RESULTS

Significant difference exists between the mean achievement gain scores of experimental group and control group in teaching environmental science through online and traditional method.

Table showing Mean, Std. Deviation and t value of experimental group and control group

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | GROUP | N | MEAN | STD.DEVIATION | STD. ERROR MEAN | t | INTERPRETATION |
| ACHIEVEMENT GAIN SCORE | EXPERIMENTAL GROUP | 60 | 11.367 | 3.0530 | .3941 | 5.207 | SIGNIFICANT AT 0.05 LEVEL |
|  | CONTROL GROUP | 60 | 7.633 | 4.6394 | .5989 |  |  |

The mean of experimental group and control group is 11.367 and 7.633 respectively. The standard deviation of experimental group and control group is 3.0530 and 4.6394 and the standard error of mean is .3941 and .5989 respectively. The obtained ‘t’ value is 5.207 which in comparison to table value is found to be significant at 0.05 level of significance which shows that significant differences exist between the mean gain scores of experimental group and control group in teaching environmental science.

CONCLUSIONS

The analysis and interpretation of the data, concludes that:

1. Online teaching method was effective method in improving the achievement of students in environmental science.
2. There were no sex variations observed with respect to the environmental science achievement of boys and girls when taught through online method.

EDUCATIONAL IMPLICATIONS

After analysis and interpretation of the data the following educational implications can be highlighted:

1. New innovative methods like online teaching should be adopted by the teachers to teach science in schools.
2. As the secondary level of education is a turning point in student’s life because at this stage the students have to take decisions about their future life, so to help them to take intelligent decisions about their future, online teaching and guidance and counselling cells must be made an integral part of every senior secondary school.
3. The students should be helped to accomplish their goals more realistically keeping in mind their interest through online teaching.
4. The government should sensitize educational institutions on need and importance of children’s achievement through online teaching.
5. The presence of teacher is very important along with physical infrastructure in online mode as this methodology enables students to enhance understanding by carefully designed activities related to topics by teachers as think pair share puzzles etc.
6. School Principals and teachers should advise families on how to properly use the resources related to online teaching on supporting their children’s achievement in any level of education.

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