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 process of educating others using the internet. Various methods can be used for online teaching such as video calls, group video calls and webinars. You can start teaching from any location like home, coffee shop, co-working space and enrol students 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 acheivement in environmental science in relation to their intelligence 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, Acheivement ,Environmental Science

 Online teaching and learning refer to the education that takes place over the internet. Teaching online is different from teaching in the classroom. Online learning allows you to deliver content or information in ways that are more highly effective than 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. You can start teaching from any location like home, coffee shop, co-working space and enrol students from various backgrounds and geographical areas. A significant number of colleges in the US and abroad are moving from the traditional face to face classes into fully online classes.

 Online teaching offers exciting opportunities to expand the learning environment for diverse student populations. As the demand of online teaching increases, teachers may be asked to be considered teaching there classes online. Online teaching shares much with face-to-face teaching but it also has a unique set of skills and requirements.

 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.

 Online teaching and learning is becoming common even in business organisation.

 Online teaching provides instructors with greater flexibility to address varying learning styles and use different technologies.

 There are various online teaching apps like zoom, Edmodo, 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 is different from teaching in the classroom. Online education often called distance education or web-based education is currently the latest, most popular form of distance education. It has recently become an integral part of many university programs.

 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.

 Online teaching is a student-centric methodology that increases student’s interest and participation levels in virtual classrooms. The teaching skills play a great role in successful interaction with the students. Teachers have to polish their communication skills in order to ensure that student engagement is on point.

 In the classroom, the online teaching point towards a different teaching practice. In the most general sense, it usually means encouraging students to use active techniques to create more knowledge and then to reflect on and talk about what they are doing and how their understanding is changing. The teacher makes sure she understands the students pre-existing conceptions and guides the activity to address them and then build on them.

 Although innovative ideas on teaching and learning have been progressively introduced over the past few decades, traditional views have been difficult to change, such views often consider students as empty vessels waiting to filled with knowledge.

ENVIRONMENTAL SCIENCE

Environmental science is an interdisciplinary academic field that integrates the study of environment and solutions of environmental problems. Environmental studies incorporates more of the social sciences for understanding human relationships, perceptions and policies towards the environment. Environmental science deals with understanding the earth’s physical, chemical, biological and geological processes and to use that knowledge to understand how issues such as alternative energy systems, pollution control and mitigation, natural resource management and the effects of global warming and climate change influence and affect the natural systems and processes of earth.

ACHIEVEMENT

 The term Achievement signifies a performance carried out by an individual or a group on the completion of the task whether it is academic, personal, manual and social. Achievement implies the act of attaining a desired level in a field. 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.

 An achievement is something done successfully, typically by effort, courage or skill. Achievement means the desired behavioural changes which take place in an individual as a result of learning experiences. The word “achievement” has great importance attached to it in every field of life. Achievement implies the act of attaining a desired end or aim.

 Achievement is the process of achieving something. Achievement is something that is performed, particularly by great effort, courage or special skills. Achievement is the outcome of education. The extent to which student, teacher or institution has achieved their educational goals. Academic achievement is often assigned to as the degree or level of success or proficiency attained in academic work. Achievement is the measurement what the person knows or has learned from formal instruction usually in school or what one can do after training.

 According to Encyclopedia of Psychology (1968), “Achievement is the general term for successful attainment of some goal requiring a certain effort.”

 According to Crow and Crow (1956), “Achievement means the extent to which the learner is profiting instructions in a given area of learning.”

 Educationally, the word “Achievement” refers to an individual performance up to desired level in a particular field. Thus, achievement is the accomplishment or proficiency of performance in a given skill or body of knowledge.

 The achievement is of many types. It may be social achievement, vocational achievement or academic achievement. But the word academic achievement is generally applied to achievement of a student in different subjects.

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 Cronbach (1949), “A test is a systematic procedure for observing behaviour and describing it with the aid of numerical scales or fixed categories”.

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

 According to Freeman, “Achievement Test is a test designed to measure knowledge understanding and skills in a specified subject or a group of subjects”.

 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. Achievement tests are often contrasted with tests that measure aptitude, a more general and stable cognitive trait. There are different levels of school education such as elementary, secondary and higher secondary level. The level of achievement is also different levels which help in providing quality education and remedial measures.

 Achievement test scores are often used in an educational system to determine the level of instructions for which a student is prepared. High achievement scores usually indicate a mastery of grade level material and the readiness for advanced instruction. Low achievement scores can indicate the need for remediation or repeating a course. Achievement of the student is an essential aspect of student life which has to be tested on regular basis to bring quality and efficiency in education. Achievement can be tested in any subject through a test. The test can be a teacher made test or a Standardized test.

 Achievement tests are often devise with tests that measures aptitude a more general and stable cognitive trait. Achievement test scores are often used in an educational system to determine for what level of instruction a student is prepared. Science occupies an important place in education. There is need to measure the achievement in science and for this purpose, it is very necessary to construct an achievement in science and then to standardize it to know about the students understanding about the different concepts in science.

 Achievement test indicates to prepare all the aspects or in some related aspects. An achievement test is test of developed skills and knowledge. With the help of achievement test, a teacher comes to know about the general range of abilities of students in classroom and in the light of the results of test. The achievement tests are helpful in deciding the personal or group status in learning. By achievement test it can be known that how can one bring improvement on the classroom teaching and learning. Academic achievement of students can be best measured with the suitable use of achievement tests.

 The present experimental study is designed to test the effect of online teaching approach on achievement in social science. It is needed to establish the benefit of online approach in teaching of Environmental science.

 Environmental Science teaching should always be made an interesting one as it can help the child to develop in all aspects like cognitive, social, emotional development etc. It depends on the context and situation in which the child learns. If it is supportive, it will create interest in learning.

 Man is social and curious by nature. He always strives to pioneer something new about himself, his environment and his achievement. The present study has also a great scope to be explored and is fully significant and important in the present age.

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 Although innovative ideas on teaching and learning have been progressively introduced over the past few decades, traditional views have been difficult to change, such views often consider students as empty vessels waiting to filled with knowledge.

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.”

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.

Sample selection: Adequate sample comprising the students of secondary school from Amritsar city was selected randomly for the purpose of the study.

 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 find out the results obtained through descriptive statistics.

ANALYSIS OF RESULTS

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

CONCLUSIONS

 On the basis of analysis and interpretation of the data, following conclusions were drawn:

1. Online teaching method was effective method in improving the achievement of students in environmental science.
2. There were no significant differences in environmental science achievement of experimental group in relation to their level of intelligence when taught through online method.
3. There were no sex variations observed with respect to the environmental science achievement of boys and girls when taught through online method.

EDUCATIONAL IMPLICATIONS

 On the basis of analysis and interpretation of the data, following educational implications were given:

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. This methodology helps the students to make connections between the concrete and abstract level of instruction through peer interactions and carefully designed activities.
5. The government should sensitize educational institutions on need and importance of children’s achievement through online teaching.
6. School Principals and teachers should advise families on how to properly use the resources on supporting their children’s achievement in any level of education.

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