

ATTITUDE TOWARDS LEARNING BOTANY AND ACHIEVEMENT OF HIGHER SECONDARY STUDENTS

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ABSTRACT

Learning is an important process of life. This process starts from the individual from womb to tomb. Educational Technology is not a new- corner, although the concept as such is comparatively new in the field of education. Both software and hardware constitute the concept of educational technology, and both of them go hand in hand to maximize the effects of the teaching-learning process. Thus, increased efficiency of the process is the keynote of the Educational Technology. In this study, the investigator would like to find the influence of "Attitude towards learning botany and achievement of higher secondary students. An experiment study was conducted. Simple random sampling technique was used to select the samples. 't', 'r' and percentage analysis were used to analyse the data. It was found that the attitude towards leaning botany did not influence the achievement of higher secondary students.

Key words: *Attitude, Botany, Achievement, Experiment study,*

INTRODUCTION

Learning is an important process of life. This process starts from the individual from womb to tomb. Almost every aspect of an individual's development is related to 'learning'. The meaning of learning is generally regarded as reforming the behavior. Reform in behavior does not mean the external behaviour. Learning brings desired changes in thinking and imagination as well, thus, any act which develops the individual and modifies one's later behavior and experience can be called learning.

Educational Technology is not a new- corner, although the concept as such is comparatively new in the field of education. The educational process was teacher-centered, the method of rote-learning was important, a few textbooks were the main resource of it. Subsequently, some audio-visual materials, film projectors, slide projectors, language laboratories, tape-recorders, cassettes, radio, television, video-tape recorders, computers and so on, are educational technology. Both software and hardware constitute the concept of educational technology, and both of them go hand in hand to maximize the effects of the teaching-learning process. Thus, increased efficiency of the process is the keynote of the Educational Technology.

Educational technology can be interpreted in a rather narrow sense as the use of sophisticated hardware in teaching or broad senses the use of any new educational technique, all the media and methods, materials and techniques used for better teaching and learning. It should involve greater psychological and pedagogical preparedness, a scientific attitude and a coordinated approach to the educational process as a whole. It should reflect one's professional interest and zeal for making experiments and innovations for development and success of education (*Rashmi Aggarwal, 2013*).

NEED AND SIGNIFICANCE OF THE STUDY

Learning takes place in every aspects of life of all the species especially human beings. Though it takes place, certain psychological, sociological and cognitive factors determine its level of successfulness in learning. When it is discussed with respect to the higher secondary students those are in adolescent period their attitude, interest, ability to grasp the concepts should be considered. In this study the investigator has keeping this in mind, the investigator has taken an attempt to study the adoption of integrating technology i.e. information and Communication Technology in their learning and other intervening factors like attitude towards learning botany among higher secondary students.

OBJECTIVES OF THE STUDY

1. To find the level of attitude towards learning botany among the control and experiment group higher secondary students.
2. To find the level of gain scores of control and experiment group higher secondary students.
3. To find whether there exists any significant influence of attitude towards learning botany on gain scores of the higher secondary students of control and experiment group.
4. To find whether there exists any significant difference in attitude towards learning botany between control and experiment group students.
5. To find whether there exists any significant difference in gain scores of control and experiment group students.

Hypotheses are formulated based on the above objectives

METHODOLOGY

An experiment method was adopted by the investigator using pre test - post test two equivalent group design.

SAMPLE

The investigator has selected sixty four higher secondary students using simple random sampling technique.

RESEARCH INSTRUMENTS USED

a. An e-content on 'Plant Physiology' for standard XI students was developed by the investigator and the guide in 2016.

b. An achievement test in plant physiology

An Achievement test in Plant Physiology was developed by Arunchinthan and Kanmani(2016), which comprised of seventy five questions(75) as a whole. After careful validation and standardisation of the items, it was reduced to thirty six(36) items. Item wise analysis was used to validate the items. The Items which has the difficulty values between 30% to 80% and the discriminating index 0.3 to 0.8 are selected for the study. Split -half method was used to find the coefficient of reliability, and it was found to be 0.77 which is highly reliable.

c. A scale on attitude towards learning botany

A scale on Attitude towards Learning Botany was developed by Arunchinthan and Kanmani(2016), which comprised of 40 questions , after careful validation and standardisation of items, it was reduced to 26 items. Likert's item wise analysis was used to find the reliability of the tool. the items which carry the likert value '1' and above are selected for the study. The final scale on ATLB consisted of 26 items. Test-retest method was use to find the coefficient of reliability and it was found to be 0.996 which is highly reliable.

STATISTICAL TECHNIQUES USED

Percentage analysis, Pearson's product moment correlation and critical ratio are used for analysing the data.

FINDINGS

- i. 75% of the experiment group students have average of attitude towards learning botany.
- ii. The Control and experiment group students did not differ in attitude towards learning botany.
- iii. The control and experiment group students differ significantly in their gain scores total and in the attainment of objectives like knowledge and application. When their mean scores are compared, the mean scores of experiment group students are better than the control group students, i.e. 3.77,2.62 and 1.24. Further, when it was compared, the mean score of the control group students in attainment of the objective: understanding is better than the experiment group students. i.e. 1.99
- iv. The control and experiment group students did not differ significantly in the gain scores in attainment of the objective : skill
- v. The control and experiment group students differ significantly in their retention test scores and in the attainment of objectives: knowledge, understanding and application. When their mean scores are

compared, the mean score of the experiment group students is better than the mean score of the control group students and in the attainment of the objectives : knowledge, understanding and application. i.e. 13.09,10.59,4.25 and 29.91.

vi. The control and experiment group students did not differ significantly in their retention test scores attainment of objective: skill.

EDUCATIONAL IMPLICATIONS

Based on the findings of the study the investigator recommends the stakeholders that the schools may adopt teacher made teaching - learning module to teach difficult concepts in botany. The findings of the study reveals that there is no impact of the intervening variable attitude towards learning botany on achievement in botany among higher secondary students. therefore, it can be inferred from the study findings that the e-content developed by the investigator in "Plant Physiology" influenced the achievement in botany. Further, it can be interpreted that the experiment group students performed better in retention test than the control group students. Therefore, the teachers also may take an effort to develop efficient e-content on the subjects they teach.

CONCLUSION

In this study the investigator has taken an effort to implement technology integrated teaching and learning process which is inevitable at this era. In the attempt of the study , the investigator has succeeded. Therefore, the findings of the study result may serve as the database for future researchers who intended to do experiment in their specialised field.

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