An Enhanced Video Assisted Health Education System

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Abstract
Methodology plays a dominant role in any type of research. Research is a well-planned, systematic and cautious endeavour. It is a process, a way, a method, a means of finding out something new, or getting better understanding of something that we know already. A better understanding will take us nearer to reality and lead to better, wider and more forms of applicability of the phenomenon being researched. Selection of the research method was fully depending upon the nature of the study units to be followed.The purpose of the study was designed to found out the effectiveness of An Enhanced Video Assisted Health Education Module (VAHEM) in enhancing knowledge, Skill and Attitude among Secondary Teacher Trainees.

Keywords: Video Assisted Learning, Video Conferencing, Health Education.

1. INTRODUCTION

The IT infrastructure is playing an increasingly important role in the success of a business. Market share, customer satisfaction and company image are all intertwined with the consistent availability of a company's web site. Communication is not simply a matter of transmitting information. Effective health communication involves the transformation of health knowledge into messages that can be readily understood, accepted and put into practice by intended audience. Health education is concerned with establishing or including changes in the attitude and behaviour of individual and group that promote healthier living. It also provides the basic knowledge and skills that equip the individual to make positive health choice. Video show teaching modules have been claimed to be more successful at holding a patient's interest when compared with other methods of information for delivery, allow patient control and superior recall compared with other sources of information. This method has strong influence on the degree of learning and the retention of information. Many studies in different fields like in case of prostate surgery, colonoscopy, and self-insulin administration in case of diabetes by pre-post video assisted teaching showed the increased knowledge, attitude, practice, co-operation towards the particular field.

Video technology offers a considerable potential for improving the quality of education and stimulating interest and involvement in academic excellence. Since most of the schools have the gadgets, this experience has helped the teachers to be equipped in using video programs in their classrooms. Technology provides students with multiple pathways to learning. Today, educators accept the fact that the computer has indeed succeeded in providing an individualized learning environment that is too difficult for a teacher handling whole classes. This is so, since the computer is able to allow an individual student to learn at their own pace and remain motivated in learning through the challenging virtual learning environment. In the past, students solely learn through traditional teaching. Today, as innovations in teaching-learning have been developed, teachers have integrated these current technologies along with the other innovative teaching methods in their classrooms. Computer-assisted instruction, particularly the video technology, is now a primary and eye catching instructional material in schools. This type of instruction enables the learners to go through the learning process step by step. However, teachers still play

important role for they serve to facilitate the auto-instructional process or supplement the learning process in its entirety. With so many positive claims, video-assisted instruction could become powerful in socializing effects on students, and indeed, brings more interactive learning into the crowded classroom.

Technology is here and the trend nowadays is clear. Using computer for instruction is quite novel, innovative, and new. Therefore, the advent of computers through video-assisted instruction has made great impact on many fields of human endeavour, including education. There has been considerable optimism expressed concerning the future use of computer, mostly the video-assisted instruction in education. Along with this new innovation there is a need to evolve certain clear guidelines for the future trends and criteria for consideration in the matter of developing and validating video software for teaching and learning of Science and Health. In teaching, it is very important to keep abreast with technology because learning can be fed and stored into them. Nowadays, learners are generically termed as electronic learners wherein the teacher will utilize instructional tools such as the electronic media, including phone, bridging, audio and video tape and a video, as well. There are many positive effects of using video-assisted instruction in preparing blackboard augmented lesson. It adds action to the information which students receive through one way process and help students see the unseen, to test the theoretical concepts, and to comprehend abstract ideals. Students taught with computer-assisted instruction had better attendance rates, showed higher motivation, and cooperated better with peers. This student-centered approach technology provides multiple pathways of learning. Lastly, as the number of computers in the classroom increases, students are given opportunity to engage in a variety of learning modalities. Computer technology for school purposes has already been available, but it is only in the last few years that computers have begun to have a major impact on classrooms and schools. Using computers for instructional purposes have become routine for many educators and if used properly, computer holds great promise. Its potential far surpasses that of such prior instructional innovations as television, teaching machines, and projectors. Although better visual images can be obtained with slides, and better sound from audio equipment, there are things the computer can do that are beyond the capabilities of the former. While a large mainframe computers are still used and will probably still be needed for several years to come, the growth of video technology would allow learners to have completely different types of experiences. The computer can be a tutor, in effect, relieving the teachers of many activities in their personal role as personal tutors. It should be made clear, however, that the computer cannot totally replace the teacher since the teacher shall continue to play the major roles of information deliverer and learning environment controller. It is in this premise that this study was conducted to give teachers essential information about the impact of video assisted instruction to pupils' learning.

Video-assisted learning is a growing strategic teaching approach in many modern classrooms. Educational videos are now more accessible than ever and teachers are increasingly making use of this readily available resource. Video-assisted learning at its core is simply using videos in lessons. But as technology has advanced, so has the dynamic between student and teacher. This means that nowadays, many schools are beyond the times where all students simply strive for the same goal of just a job and merely just sit quietly and listen. We want them to become innovators and creators, to argue and question the things around them, and to grow up to be better well-rounded, and happy individuals. Videos, television, and movies are nothing new, but how we can optimize them for learning is relatively new. Videos can help students perform better not just academically but also emotionally and socially. Videos can provide students a completely new world, even if the scope is still quite limited.

2. VIDEO ASSISTED LEARNING

Video-Assisted Learning (VAL) is defined as a strategic teaching approach to using videos – either educational or conceptual – to improve a student's comprehension, cognitive ability, or social-emotional skills. What that means is that videos are more than just a way to pass time or provide additional information on a specific learning

objective. Video-assisted learning takes videos and transforms them into an important part of both general education and student wellbeing. Videos – whether they are short, targeted clips or television programs – have some proven benefits to different aspects of a student's development and educational progress. How this impacts the student depends on the type of video you use and the practices you wish to use. Video-assisted learning is not ideal for isolated use but rather should be an addition to the already existing curriculum or individualized education plans (IEP).

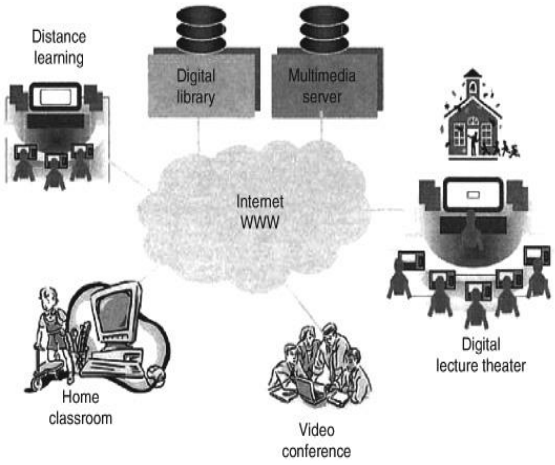

Figure-1: Video Assisted Learning

Figure-1 shows the Video Assisted Learning scenario. Educational supplements refer to the videos, short movies, or films where the primary purpose is to educate on a particular topic or learning objective. Common types of educational videos are short clips, documentaries, tutorials, some cartoons, and other forms of video media with the intent to teach. These videos are used purely for supplementary materials to help reinforce ideas taught in the classroom. Many teachers are probably familiar with this form of VAL as they are an easy and effective way to enhance lesson plans that may be lacking in otherwise physical materials. Most modern classrooms are equipped with a projector or laptop, and even if you are a true 'old school' teacher, you probably at least have a TV with a DVD, Blu-ray, or VHS player where you can play an educational video.

3. OBJECTIVES OF THE RESEARCH

The objectives of the present study are to develop Video Assisted Health Education Module, to find out the effectiveness of An Enhanced Video Assisted Health Education Module(VAHEM) in enhancing knowledge attitude and also find out the attitude of Secondary Teacher Trainees towards Video Assisted Health Education Module.The main objective of the experimental study is to enhancing knowledge, attitude and skill in health education. The main objective of this study is enhancing knowledge, Attitude and skill among the Secondary Teacher trainees. So the study is intended to prepare a tutorial type of enriched learning environment to acquire the specific objectives. This type of videos are integrated with the curriculum in a more obvious way and the students can achieve the learning objectives without further instructions such as demonstration, step-by-step tutorials etc.,

- To assess the pre test and post test level of knowledge among the secondary teacher trainee.
- To assess the effectiveness of video assisted teaching by comparing the pre test and post test scores of knowledge, attitude and skill among the secondary teacher trainee.

4. STATEMENT OF THE PROBLEM

An Experimental Study is conducted to Assess the Effectiveness of Video Assisted Teaching Program on Level of Knowledge, Attitude and skill among the Secondary Teacher Trainees. The main focus of the research is "Development and effectiveness of Video Assisted Health Education Module in Enhancing Knowledge, Attitude and skill among the Secondary Teacher Trainees".The content of the video which is directly connected with the Biology experiments, especially two important areas in Biology experiments such as physiology experiments and microscopic observation. This area was selected because it develops the important and basic concept for developing any type of scientific experimentation and curiosity among the Biology learners.

4.1. HYPOTHESIS: Post-test level of knowledge score for girls who are exposed to video assisted teaching program will be significantly higher than the pre test level of knowledge.

There will be a significant association between pre-test level of knowledge on Secondary Teacher Trainees and selected demographic variables such as age, education, mother's education, mother's occupation, type of family, birth order, religion, and source of information and place of living.

There will be a significant association between post-test level of knowledge on Secondary Teacher Trainees and selected demographic variables such as age, education, mother's education, mother's occupation, type of family, birth order, religion, and source of information and place of living.

4.2. ASSUMPTION: Pre test level of knowledge will be less than the post-test level of knowledge, skill and attitude among Secondary Teacher Trainees.

Video assisted teaching program may improve the knowledge, skill and attitude among Secondary Teacher Trainees.

5. RESEARCH METHODOLOGY

To attain the purpose, thirty (N=30) Secondary Teacher Trainees second year students studying in SreeRaajaRaajan College of Education at Amaravathiputhur, Sivaganga District, Tamilnadu, India, during the year 2018-2020 were selected as sample. The sample selected for his experimental study was the purposive sampling. The students were selected for this study was those who were select Environmental science as their elective. The sample were divided at random into two groups of fifteen each (n=15).The students are numbered in the ascending order as per attendance one to thirty, odd numbered students are considered as Experimental Group (n=15) and Even numbered students are considered Control Groupas (n=15). Group-I underwent Video Assisted Health Education Module (VAHEM), Group-II acted as Control. The following figure represents the research methodology.

There were two types of validity namely; i) Internal validity and ii) External validity for the experimentation through Video Assisted Health Education Module (VAHEM).The number of the students selected purposely for the sampling was presented in the following Table-1.

Name of the School	Groups	Number of samples
Sree Raaja Raajan College of Education at maravathiputhur, Sivaganga District, Tamilnadu, India	Video Assisted Health Education Module (VAHEM)	**15**
	Control group	**15**

	Total number of Samples	**30**

Table –1 : Distribution of the Sample Students

Validation of the Video Assisted Health Education Module include the judgment belonging to diverse angles; the effectiveness of the modules in assisting for the knowledge, attitude and skill development and its efficacy for the population of the student for whom the programmes has been developed. These judgments were done based on collection and analysis of various types of data.

Thus the developed Video Assisted Health Education Modulewere validated with the help of Education Professors and Professors with sound technological knowledge to modify and evaluate the Video Assisted Module. This was done with the help of four Education professors and three technology profound professors who are highly competent to produce e- content and other Multimedia programmes in the field of Health Education.The Video Assisted Module used for the treatment was designed and developed by the researcher in consultation with experts from the field. In addition, comments made by the experts were incorporated into the design. Thus, experts' comments also helped to validate the design and the content of the materials.

6. EXPERIMENTAL RESULTS

The influence of independent variables on the health education achievement mean scores and Unit wise mean achievement Scores such as Concept of Health, Understanding of Body System, Communicable & Non-Communicable, Diseases, First Aid-Principles and Uses and Food and Nutrition on Deferential Analysis were presented mean achievement scores of Unit wise as below.

The results of the dependent – test on the data obtained for Health Education Achievement Mean scores of the subjects in the pre-test and post-test of the VAHEM and control group have been analyzed and presented in Table - 2 and shown in Figure-2.

Test	Descriptive Statistics	VAHEM group	Control Group
Pre Test	Mean	42.00	35.47
	SD(±)	5.08	4.55
Post Test	Mean	72.40	53.73
	SD(±)	4.27	5.68
't' Test		17.72*	9.72

Table-2: Summary of mean, Standard Deviation and dependent 't' test for the pre and post tests on health education achievement mean scores of experimental group and control group to their total achievement (health education achievement mean scores are expressed in marks)

*Significant at 0.05 level.

The table value required for 0.05 level of significance with df 28 is2.15.

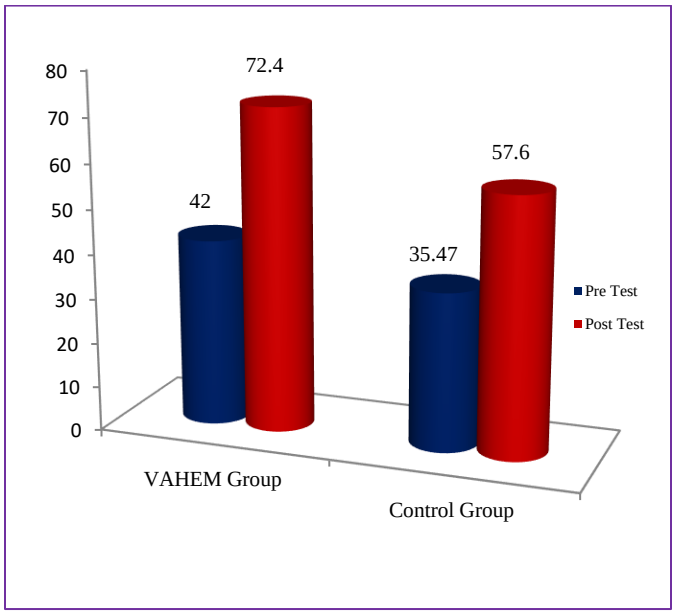

Figure-2: The Pre-test and Post-test Mean values of VAHEM and Control Group on Health Education Achievement Mean Scores (In Marks)

The results of the dependent – test on the data obtained for Health Education Achievement Mean scores of Female and male in the pre-test and Pre-test of the VAHEM and control group have been analyzed and presented in Table -3.

Test	Descriptive Statistics	VAHEM group	Control Group
Female	Mean	41.90	36.40
	SD(±)	5.65	3.92
Male	Mean	42.20	36.60
	SD(±)	4.32	10.45
	't' Test	0.1038	0.0549

Table-3: Summary of Mean, Standard Deviation and Dependent 'T' Test for the Pre Tests on Health Education Achievement Mean Scores of Female and Male Experimental Group and Control Group To Their Total Achievement (Pre-test Health Education Achievement Mean Scores of Female and Male are expressed in Marks)
*Significant at 0.05 level.

The table value required for 0.05 level of significance with df 13 is 2.16.

Table-3 shows that the pre-test of female mean and standard deviation of Health Education Achievement Mean Scores of VAHEM group and Control group are 41.90±5.65 and 36.40±3.92. The pre-test of male mean and standard deviation are 42.20±4.32 and 36.60±10.45. The obtained dependent t-ratio values between the pre-test

female scores and male scores means on Health Education Achievement Mean Scores of VAHEM group and Control group are 0.1038 and 0.0549. The table value required for significant difference with df 13 at 0.05 level is 2.16. It was concluded that VAHEM group Control group had registered not significant difference in the pre-test of female and male Mean Scores in Health Education Achievement.

The pre-test of Female and Male mean values of VAHEM and Control group on Health Education Achievement Mean Scores are graphically represented in the Figure-3.

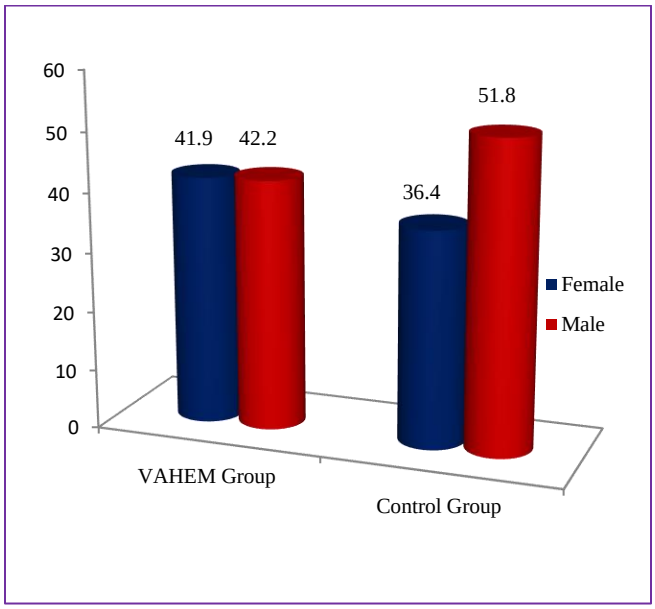

Figure- 3: The Female and male Mean values of VAHEM and Control Group on Health Education Achievement Mean Scores of Female and Male (In Marks)

The results of the dependent – test on the data obtained for Health Education Achievement in knowledge Mean scores in the pre-test and post-test of the VAHEM and control group have been analyzed and presented in Table-4.

Test	Descriptive Statistics	VAHEM group	Control Group
Pre-Test (Knowledge)	Mean	33.47	27.93
	SD(±)	3.98	3.92
Post-Test (Knowledge)	Mean	57.60	42.33
	SD(±)	3.66	4.61
‘t’ Test		17.28*	9.21

Table-4 : Summary of Mean, Standard Deviation and dependent 't' test for the pre and post tests on Health Education Achievement in knowledge mean scores of experimental group and control group to their total achievement (health education achievement mean scores in knowledge are expressed in marks)
*significant at 0.05 level.
The table value required for 0.05 level of significance with df 28 is 2.04.

Table-4 shows that the pre-test mean and standard deviation of Health Education Achievement in Knowledge Mean Scores of VAHEM group and Control group are 33.47±3.98 and 27.93±3.92. The post-test mean and standard deviation are 57.60±3.66 and 42.33±4.61. The obtained dependent t-ratio values between the pre and post- test means on Health Education Achievement in Knowledge Mean Scores of VAHEM group and Control group are 17.28 and 9. 12. The table value required for significant difference with df 28 at 0.05 level is 2.04. It was concluded that VAHEM group had registered significant improvement in Health Education Achievement in Knowledge Mean Scores.

The pre -test and post-test mean values of VAHEM and Control group on Health Education Achievement in Knowledge Mean Scores are graphically represented in the Figure-4.

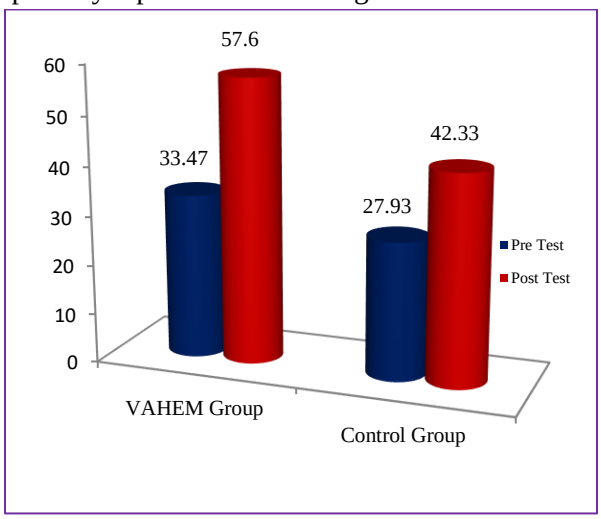

Figure-4: The Pre-Test and Post-Test Mean Values of Vahem and Control Group on Health Education Achievement in Knowledge Mean Scores (in Marks)

7. CONCLUSION

The present study reveals that the Video Assisted Module is very effective than the traditional method of enhancing Knowledge, Attitude and Skill among Secondary Teacher Trainees. The potential for Secondary Teacher Trainees health education to improve health and save lives is significant. If we as a nation want to keep children and adolescents healthy, it is important to find better ways to provide quality school health education. One of excellent way is providing health education for Secondary Teacher Trainees it will enhance the Knowledge, Attitude and Skill competencies of the future teacher and also leads our young buds life in a healthy way.

The main objective of this study was to develop Video Assisted Health Education Module (VAHEM) in Enhancing Knowledge, Attitude and Skill among Secondary Teacher Trainees. It consists of relevant information to attain the educational objectives after viewing the Video Assisted Health Education Module (VAHEM). The steps involved in the development of Video Assisted Module where framing objectives, planning, production, programing and evaluation. The developed Video Assisted Health Education Module were administered for the subject for the period of forty days. The secondary teacher trainees were exposed to the Video Assisted Health Education Module for one hour daily. The effectiveness of video assisted module treatment was carried out by a pretest and post test. There is a significant difference between pre and post- test Mean Scores of the experimental group in enhancing the Knowledge and Skill among Secondary Teacher Trainees through Video Assisted Health Education Module than the traditional method. This shows that the developed Video Module is highly useful in enhancing Knowledge and Skill among Secondary Teacher Trainees. There is no significant difference between the scores of Male and Female Secondary Teacher Trainees towards enhancing Knowledge and Skill through Video Assisted Health Education Module. This vividly shows that both male and female are acquainting the Knowledge and skill and the gender has no specific role in determining the enhancing Knowledge and Skill.

8. FUTURE ENHANCEMENTS

The present study is conducted at the Secondary Teacher Trainees second year only. Studies may be taken up for the D.T.Ed., and M.Ed., level.A similar study may be carried out in some other subjects such as Psychology, Curriculum etc.The study can be conducted in more number of Secondary Teacher Trainees covering one or more districts.This study can offer as short time developmental course for the students in online learning.

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