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Awareness & Achievement of Multimedia in Teacher Education

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Abstract

Multimedia is media and content that uses a combination of different media content forms. Multimedia term was coined by Bob Goldstein in July 1966. This research study aimed at to know the awareness of Multimedia programme for teacher education; and to apply the Multimedia programme for the teacher education at Master of Education (M.Ed) level and to find out their achievement level. This experimental method was adopted the convenience sampling of 50 Master of Education trainees with biology background in ten different colleges of education in Namakkal and Salem District of Tamilnadu State of Indian Country. They have to shown the prepared "Genetics" multimedia contents and also noted their achievement along with filled the Multimedia awareness questionnaire. The investigators found out that, there is a significant difference in their awareness ('t'-7.17) in relation to Gender as well as in their achievement ('t'-5.38). They concluded that a multimedia content can have a strong effect on their mind and senses. This paper also gives importance of multimedia in education and its types as well as recommendations.

Introduction

Multimedia is media and content that uses a combination of different media content forms. Multimedia means, combination of text, audio, still images, animation, video and interactivity content forms delivered electronically. Multimedia may be broadly divided into linear and non-linear categories. Linear active content progresses without any navigational control for the viewer such as a Cinema Presentation. Non-linear content offers user interactivity to control progress as used with a video game used in self-paced computer based training. The term "multimedia" was coined by Bob Goldstein in July 1966 at Southampton, Long Island. On August, 10, 1966 Richard Albarino explained the utility of Multimedia in seminars. In India, this concept was started in 1993.

Commonly recognized examples of new literacy's include such practices as instant messaging, blogging, maintaining a website, participating in online social networking spaces, creating and sharing music videos, pod casting and video casting, photo shopping images and photo sharing, emailing, shopping online, digital storytelling, participating in online discussion lists, emailing and using online chat, conducting and collating online searches, reading, writing and commenting on fan fiction, processing and evaluating online information, creating and sharing digital smashups, etc. (Bumpus, M. A. 2005)

Utility of Multimedia in Teaching

When we watch a movie or Television program, superficial and even deep feelings and emotions are elicited, such as excitement, anger, laughter, relaxation, love, whimsy, or even boredom (Prensky, M. 2006). These emotions are often triggered or heightened by the mood created by specific visual scenes, the actors, and the background music.

A multimedia content can have a strong effect on our mind and senses. It is so powerful that we may download it off the Internet or order the DVD from any interested subject along with the CD soundtrack so we can relive the entire experience over and over again. This attraction to multi media videos extends to movies, TV programs, commercials, and music videos.

Multimedia learning theory

Over the past decade a corpus of studies has accumulated that investigates the effects of multimedia strategies on learning. Multimedia typically refers to the presentation of material in two forms: auditory/verbal and visual/pictorial (Higgins, J. A., & Dermer, S. 2001). The strategies have included PowerPoint (Sherin, M.G. 2003), Educational games (Nachimuthu, K. 2010), and computer-assisted video learning (Vijayakumari, G. 2009) in a variety of content areas, in addition to auditory and video media.

The empirical findings of research on the effectiveness of videos embedded in multimedia classes or modules are very encouraging. Numerous studies in specific areas such as teacher education have produced significant results favouring videos (Borko & Pitman, M.E. 2008)

If we observe the students, they can utilized the following electronic gadgets; (a) Listening to music; (b) Playing PC & video games; (c) Talking on iPhone; (iv) Sending text & picture messages; (v) Watching videos and or Television; (vi) Using Face book, Orkut & Twitters ; (vii) Utilizing videos from You tube, Skype, other Yahoo and Google messengers (Champoux, J. E. 2005).

Types of Multimedia contents

There is a wide range of multi media categories that can be used in the classroom. The actual choice will depend on the instructional purpose or outcome and the characteristics of the students and their interests. The multi media sources having different way of contents expressions viz., (a) drama, (b) action, (c) romantic, (d) comedy, (e) romantic comedy, (f) documentary, (g) television programs, (h) commercials, (i) college music videos, and (j) faculty or student made videos.

All of these types of multi media contents can evoke or induce anger, excitement, terror, activity, motivation, love, laughter, whimsy, tears, dreams, calmness, relaxation, sleep, and a coma (Moreno, R., & Mayer, R. E. 2004).

Multi media can have powerful emotional effects. Instructors need to decide the effect they want to produce in a given learning situation. Applied inappropriately, the multi media clips can distract and decrease learning even incites students to riot. Unless rioting is a specific learning outcome, instructors should be very discerning in their choices.

Objectives & Hypotheses of the study

The objectives of the study are; (i) to know the awareness of Multimedia programme for teacher education; and (iii) to apply the Multimedia programme for the teacher education at Master of Education (M.Ed) level and to find out their achievement level. The hypotheses of the study are; (i) there is a significant difference between the awareness of Multimedia for the M.Ed trainees and (ii) there is a significant difference between the achievement in given multimedia content among male and female M.Ed trainees.

Sample for the Study

Experimental method was adopted with the convenience sampling size of 50 M.Ed trainees with Biology background were selected among 700 populations of ten different colleges of education in Namakkal and Salem District of Tamilnadu State of Indian Country. In this study, Master of Education subject refers to the Postgraduate level of Education.

Methodology for the Study

For this research, a multimedia programme for "Genetics", a biology content were prepared in Flash software file in December 2011 and it was found out the content validity by biology professors of Periyar University, Salem in Tamil Nadu State of India and the Multimedia awareness questionnaire was also prepared by the investigator and that was found out with face validity and reliability (0.79). There are three volumes of Multimedia contents was stored in a single file related to "Genetics" with text, audio, video, references, links and MCQ formats.

That Biology Multimedia presentations were distributed to the biology based M.Ed students and they can finish the chapters with in their self face through the computer. The time was noted down as per the questions involved in the Multi media content and that scoring was taken as their achievement. The collected data was analyzed and interpreted with mean, standard deviation and 't' test. The table -1, explains the multimedia awareness between the M.Ed trainees according to their gender wise. The acquired 't' value (7.17) is greater than sample 't' value (1.97 at df of 24) and the acquired 't' value is significant. Hence the multimedia awareness between male and female M.Ed teacher trainees are significantly differ each other. So, the research hypothesis is accepted.

Table-1: Multimedia awareness of M.Ed Trainees (Gender wise)

Variable	Strength	Mean	S.D	't' value
Male	25	12.5	2.64	7.17**
Female	25	26.3	3.42	

(** - Significant at 0.05 level)

Table-2: Multimedia Achievement of M.Ed Trainees (Gender Wise)

Variable	Strength	Mean	S.D	't' value
Male	25	9.38	1.98	5.38**
Female	25	19.73	2.57	

(** - Significant at 0.05 level)

This result depends on the gender character and their opinion of multi media awareness. The table -2, explains the multimedia achievement between the M.Ed trainees according to their gender wise.

The acquired 't' value (5.38) is greater than sample 't' value which is significant. Hence the multimedia achievement scoring between male and female M.Ed teacher trainees are significantly differ each other. So, the research hypothesis is accepted. This result depends on the scoring of the Multi media achievement in that 'Genetics" content.

The findings of the study are; (a) Multi media programme is differ awareness for students learning in teacher education programme at M.Ed. level; (ii) Multi media programme is effective in teacher education programme at M.Ed. level; it improved competencies of the particular subject (Biology) and learning approach.; and (iii) Multimedia programmes created more awareness about use of technology in teacher education

Conclusion

The conclusions of the study are as follows; 1) The use of multimedia programme impacts positively on the M.Ed teacher education program; (2) It improves effectiveness of practice teaching lesson; (3) It motivates M.Ed teacher educator trainees for practice teaching lesson; (4) It improves M.Ed teacher educator trainees knowledge of ICT; (5) It able the M.Ed teacher educator trainees to plan and implement practice lessons more efficiently and more effectively; (6) It paves the attention towards the ICT; (7) It develops knowledge and skills for effective teacher education programme; (8) It develops the ability of interest attitude and creativity in the mind of teacher educator trainees; this view was supported by Wang, J., & Hartley, K. (2003); and (10) It helps the trainees to think, to act and to evaluate differently.

My suggestions for this research study is; (a) The teacher education institution should develop good Multi media resources; (b) The B,Ed and M.Ed trainees should be provided with Multi media based training; (c) Multimedia programmes should be mandatory in teacher education programmes; (d) For creating awareness about Multimedia more research is necessary in education and (e) Multimedia programmes should be introduced in practicum of ICT in teacher Education Institutes and Universities.

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