

DESIGN AND DEVELOPMENT OF E-CONTENT MODULES AND IT'S OUTCOME AMONG NATIONAL ELIGIBILITY TEST ASPIRANTS IN PHYSICAL EDUCATION SUBJECT

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Abstract

The purpose of study was to design and develop e-content modules and to see outcome among national eligibility test aspirants in physical education subject. To achieve the purpose of study the twenty male national eligibility test aspirants who had completed postgraduate in physical education in the last three years were randomly selected from Tiruchirapalli District, Tamil Nadu, India, and their age ranged from 24 to 27 years. A multiple choice test (pre-test) based on the UGC-NET syllabi was conducted for all the subjects. The subjects were randomly divided into two equal groups of ten each, named as group 'A' and 'B'. Group 'A' undergone conventional teaching along with access to the e-content modules and group 'B' undergone conventional teaching alone. The investigators prepare the e-content modules based on the latest UGC-NET exam syllabus in physical education subject and had chosen unit eight. The preparation of the e-content modules was done with the help of the mentor and technicians. The teaching of the syllabus was administered for both groups, for a period of ten working days with each session lasting for an hour each day in the morning session. The e-content modules developed by the investigators were shown to group 'A' for 15 to 20 minutes per day after the teaching session. For displaying e-content modules, the computer laboratory was used. The post test was conducted to the both groups with a different set of multiple choice questions. Both groups were assessed through pre and post-tests and their achievement scores were compiled and analyzed using appropriate statistical procedure. It was found that the conventional teaching along with access to the e-content modules group had better achievement scores than the other group among the national eligibility test aspirants in physical education subject.

Key words: Physical Education, e-content, modules and technology.

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INTRODUCTION

Throughout centuries teaching continues to be a challenging task. Teaching-centre and group-oriented methods of instruction not at all providing for individual differences of the learners. The emerging trend all over the world is towards more individualized and flexible forms of learning with an emphasis on individual learning. Recognizing this importance, the National Policy on Education (NPE) (1986) has emphasized the application of Educational Technology to improve the Quality of Education at all levels. It has also laid special emphasis on using computers in the teaching-learning process.

E-content is the latest method of instruction that has attracted more attention to gather with the concept of models. It is one of the highly powerful tools of education. E-content is valuable to the learners and also helpful to teachers of all individual instruction systems. Andrea & Ansgar, (2005) defined “E-content is digital information delivered over network-based electronic devices, which is symbols that can be utilized and interpreted by human actors during communication processes, which allow them to share visions and influence each other’s knowledge, attitudes or behaviour”. It seems that E-learning is a new trend in education. The term covers a wide set of applications and processes, such as web-based learning, virtual classrooms, digital collaboration, and computer-based learning Increased preservation, reduced learning time and cost are other benefits to students. Along with this, there are many particular advantages in e-learning.

The National Eligibility Test (NET), also known as UGC NET or NTA-UGC-NET, To identify the teaching talent the government of India currently conducts National eligibility test (NET) for appointments of teachers in colleges and universities in wide range of subjects through University Grand Commission (UGC), which is a statutory government body, charged with coordination, determination, and maintenance of standards of higher education in India. It has made NET qualification mandatory for teaching at Graduate level and at Post Graduate level since July 2009. The National Eligibility Test (NET) is conducted for determining the eligibility of Indian nationals for the Eligibility for Assistant Professor only (or) Junior Research

Fellowship & Eligibility for Assistant Professor both in Indian Universities and Colleges. Till recently, the CBSE conducted the NET in 84 subjects at 91 selected Cities of spread across the country. From December 2018 onwards, the UGC- NET was conducted by the NTA. The conventional method of teaching does not significantly help the students in easy understanding, retaining and uniform pace of learning. The usual methods adopted so far in the preparing national eligibility test aspirants have yielded limited results. According to UGC Website NET qualified candidates throughout India totally 428249, in Physical Education subject only 6115, the years from 1993 to 2017. If we use modern informative tools, it should receive maximum attention from the part of the learners, especially those who are preparing for national eligibility test aspirants. The researcher had an interest in using technology to teach on physical education subject. The main objectives of the study was to design and develop of e-content modules based on UGC-NET exam syllabus for national eligibility test aspirants in physical education subject and to find out the effectiveness of e-content among national eligibility test aspirants in physical education subject.

METHODOLOGY

To achieve the purpose of the study twenty male national eligibility test aspirants who had completed postgraduate in physical education in the last three years were randomly selected from Tiruchirapalli District, Tamil Nadu, India, and their age ranged from 24 to 27 years. A multiple choice test (pre-test) based on the UGC-NET syllabi was conducted for all the subjects. The subjects were randomly divided into two equal groups of ten each, named as group 'A' and 'B'. Group 'A' undergone conventional teaching along with access to the e-content modules and group 'B' undergone conventional teaching alone. The investigators prepare the e-content modules based on the latest UGC-NET exam syllabus in physical education subject and had chosen unit eight. The preparation of the e-content modules was done with the help of the mentor and technicians. The teaching of the syllabus was administered for both groups, for a period of ten working days with each session lasting for an hour each day in the morning session. The e-content modules developed by the investigators were shown to group 'A' for 15 to 20 minutes per day after the teaching session. For displaying e-content modules, the computer laboratory was used. The post test was conducted to the both groups with a different set of multiple choice questions. The pre and post tests question were taken from unit eight syllabi of UGC-NET and

conducted on two different set of 50 multiple choice questions which carry 1 mark for each correct answer. The level of difficult of both questionnaire were similar in nature.

DATA ANALYSIS

The statistical analysis involves mean and standard deviation at first stage. In the second stage, analysis involves analysis of co-variance. To find out the difference between the two groups analysis of co-variance (ANCOVA) was used, where the final means were adjusted for differences in the initial means, and the adjusted means were tested for significance.

Table No-I

COMPUTATION OF ANALYSIS OF COVARIANCE OF CONVENTIONAL TEACHING WITH AND WITHOUT E-CONTENT MODULES GROUPS AMONG NATIONAL ELIGIBILITY TEST ASPIRANTS IN PHYSICAL EDUCATION SUBJECT

| Test | Group A | Group B | SOV | SS | df | MS | 'F' ratio |
|---------------------------|---------|---------|-------------|--------|----|--------|-----------|
| Pre test | | | | | | | |
| Mean | 21.60 | 20.00 | B.G. | 12.80 | 1 | 12.80 | 1.512 |
| SD (±) | 3.20 | 2.58 | W G. | 152.40 | 18 | 8.46 | |
| Post test | | | | | | | |
| Mean | 37.90 | 27.70 | B.G. | 520.20 | 1 | 520.20 | 54.12* |
| SD (±) | 3.41 | 2.75 | W G. | 173.00 | 18 | 9.61 | |
| Adjusted Post test | | | | | | | |
| Mean | 37.30 | 28.29 | B.S. | 374.23 | 1 | 374.23 | 72.03* |
| | | | W.S. | 88.32 | 17 | 5.19 | |

B.G. – Between Groups **B.S.** – Between Sets **df** – degrees of freedom
W.G. – Within Groups **W.S.** – Within Sets

The table values required for significance at 0.05 level with df (1, 18) and (1, 17) are 4.41 and 4.45 respectively.

DISCUSSION ON FINDINGS

The table No. I show that the pre-test means values of conventional teaching with and without e-content modules groups are 21.60 and 20.00 respectively. The obtained 'F' ratio 1.512

for pre-test scores was less than the table value 4.41 for degrees of freedom 1 and 18 required for significance at 0.05 level of confidence. The post-test mean values of conventional teaching with and without e-content modules groups are 37.90 and 27.70 respectively. The obtained ‘F’ value 54.12 for post-test scores was greater than the table value 4.41 for degrees of freedom 1 and 18 required for significance at 0.05 level of confidence. The adjusted post-test mean values of conventional teaching with and without e-content modules groups are 37.30 and 28.29 respectively. The obtained ‘F’ value of 72.03 for adjusted post-test means was greater than the table value of 4.45 for degrees of freedom 1 and 17 required for significance at 0.05 level confidences. The result of the study indicated that there was a significant level of difference among the post-test and adjusted post test means of conventional teaching with and without e-content modules groups.

Mean difference of conventional teaching with and without e-content modules groups among national eligibility test aspirants in physical education subject are presented in Figure – I.

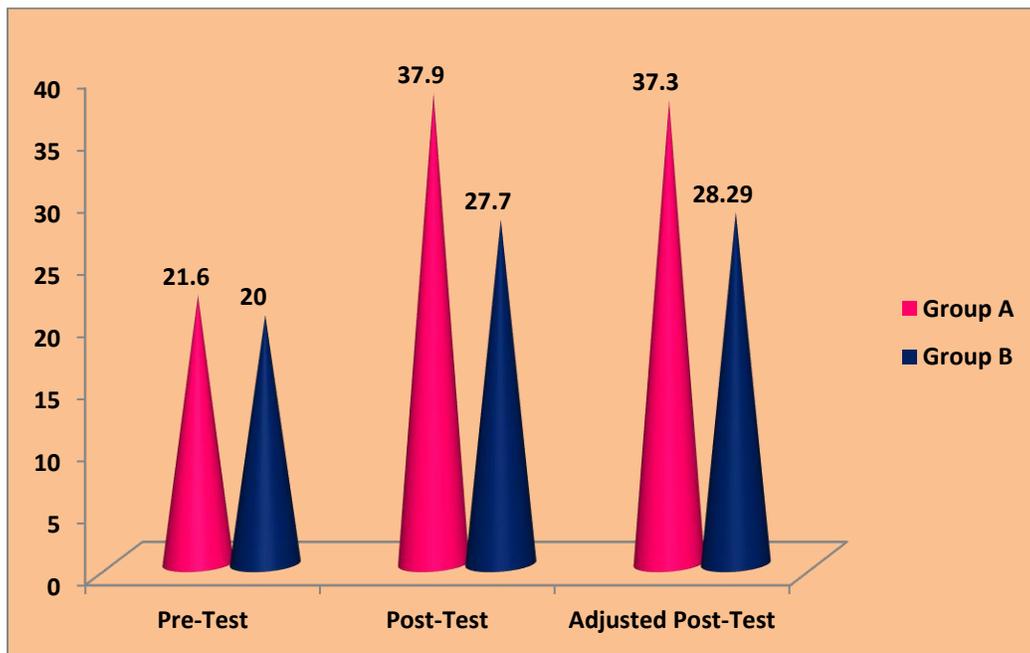


Figure –I PRE, POST AND ADJUSTED POST TESTS MEAN VALUES OF CONVENTIONAL TEACHING WITH AND WITHOUT E-CONTENT MODULES GROUPS AMONG NATIONAL ELIGIBILITY TEST ASPIRANTS IN PHYSICAL EDUCATION SUBJECT

From the discussion, the conventional teaching along with the access to e-content modules approach has good efficiency in learning and improve the knowledge among the national eligibility test aspirants in physical education subject and the researchers suggest that teachers and trainers should give due importance to e-learning modules while preparing physical education students for national eligibility test at all levels. Similar effort was carried out by Rekha & Muthuchamy (2013) conducted a similar study on the development and validation of e-content on DNA replication in Botany at Higher secondary level. The result was found that it was highly significant for the higher secondary school children for their development of e-content modules. Jabakumar et.al. (2011) conducted a study on influence of e-content based coaching on selected fundamental skills in field hockey. This study was also brought out similar result which the researchers were intended. The study found that the teaching and coaching combined with e-content package group showed significant improvement on all selected fundamental skills in field hockey. Sathya (2016) examine the developing an e-content module on the poem “The Road Not Taken”. It is an experimental study, the result was brought out 90% of the students accepted that the e-content module paves way for self-learning. 85% of the students agree that it improves language skills. 95% of the students conveyed that it helps to learn at any time, at anywhere and at any place. 92% of the students recommended e-content module for other subjects too. 95% of the students accepted that it is user-friendly and flexible. Chong et. al. (2005) did the development and evaluation of an e-module for pneumatics technology. The aim of the study was to produce an e-module prototype with a multimedia approach in an attempt to assist students’ understanding of lesson contents. The result was found that the e-module produced confirms to the requirements by students in terms of contents, teaching strategies, the teaching presentation, and software application. The e-module is also found to be suitable to serve as an alternative learning material that assists the learning of pneumatics in the subject of industrial automation. Vasuki et. al. (2014) in the study found that e-content is effective in teaching history at the secondary level. Amutha (2016) conducted a study on the impact of e-content integration in science on the learning of students at Tertiary level. The result was found that it was a positive impact on science learning among undergraduate Botany students for both genders. The empirical study proved that e-content enhances the achievement of the students at the tertiary level. Hamdi and Hamtini (2016) conducted a study on designing and effective e-content development framework for the enhancement of learning programming.

In this study, the result was found that studied computer programming used e-content group had significantly improved among secondary students.

CONCLUSION

The conventional teaching along with the access to e-content modules approach has good efficiency in learning and improve the knowledge among the national eligibility test aspirants in physical education subject and the researchers suggest that teachers and trainers should give due importance to e-learning modules while preparing physical education students for national eligibility test at all levels.

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