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EFFECTIVENESS OF WHATSAPP MESSENGER SMARTPHONE APPLICATION IN DEVELOPING E-TEACHING COMPETENCIES AMONG TEACHER TRAINEES

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Abstract

Lot many ICT mobile based applications are becoming popular among the youths these days. The student's community are fond of using mobile phone messengers such as Line, Wechat and WhatsApp. In India, WhatApp Messenger has become a most common mobile application for exchange of messages among the students. The investigators felt that an internet enabled WhatsApp installed Smartphone would be one of the most powerful ICT Tools in developing e-Teaching competencies among the teacher trainees. The main objective of the study is to identify e-teaching competencies that can be developed using internet enabled WhatsApp installed Smartphones. The investigator followed single group pre test treatment post test design and purposive sampling technique for the study. Forty B.Ed. teacher trainees from IGNOU, Trivandrum Study Centre were selected for formation of a single experimental group. The treatment period was for two weeks. The obtained results have shown that the internet enabled WhatsApp installed Smartphones are the best effective ICT Tool for developing E-Teaching competencies among B.Ed. trainees.

Introduction

WhatsApp Messenger is a mobile messaging application which allows users to exchange messages using Smartphones on the internet platform. WhatsApp enables its users to create groups, New Broadcast lists, send each other unlimited numbers of audio and video media messages and images. WhatsApp Inc. was founded in 2009 by a couple of former employees of Yahoo Brian Acton and Jan Koum. These two American Citizens are the brain behind the development of WhatsApp application. WhatsApp claimed that 400 million active users use the service each month. As of 22 April 2014, WhatsApp had 500 million monthly active users, 700 million photos and 100 million videos are shared each day, and the messaging system handles more than 10 billion messages each day. WhatsApp comes with one year free trial and after that it charges a small subscription fee. The powerful Smartphone application Whatsapp can be used both as synchronous and asynchronous ICT online tool for developing e-teaching competencies. Teachers involved in online teaching have the opportunity to exploit fully now the provisions available with WhatsApp. They can pass on group messages to their students and get responses. Schedules can be broadcast to a list of WhatsApp broadcast users. Lessons can be photographed,

converted in the form of images, attach and sent to the students online and can get their doubts clarified.

Objectives of the Study

Following are the objectives formulated by the investigators.

1. To identify e-teaching competencies that can be developed using internet enabled WhatsApp installed Smartphones.
2. To develop and validate a tool for measuring level of e-teaching competencies
3. To find out the level of e-teaching competencies before treatment processes.
4. To design, validate and implement treatment processes and
5. To find out level of e-teaching competencies developed after the treatment.

Hypotheses for the Study

The investigators formulated following four hypotheses for this research study. They are

1. There will be significant mean difference between pre assessment and post assessment level of e-teaching competencies through treatment processes among the B.Ed. teacher trainees.
3. There will be significant mean difference between pre assessment and post assessment scores on treatment process I among the B.Ed. Trainees.
4. There will be significant mean difference between pre assessment and post assessment scores on treatment process II among the B.Ed. Trainees.
5. There will be significant mean difference between pre assessment and post assessment scores on treatment process III among the B.Ed. Trainees.

Methodology

The investigators employed single group Pre and Post tests design and Purposive Sampling technique for the study. As the experimental research is a common approach followed in finding out effectiveness of treatment, the investigators followed experimental research for finding out the effectiveness of WhatsApp Messenger smartphone application in developing e-teaching competencies among teacher trainees. The research design chosen for experimental research has four important phases such as Identification, Selection, Implementation and Evaluation. Following diagram outlines the research design followed in the experimental method

Research Design: Experimental Method

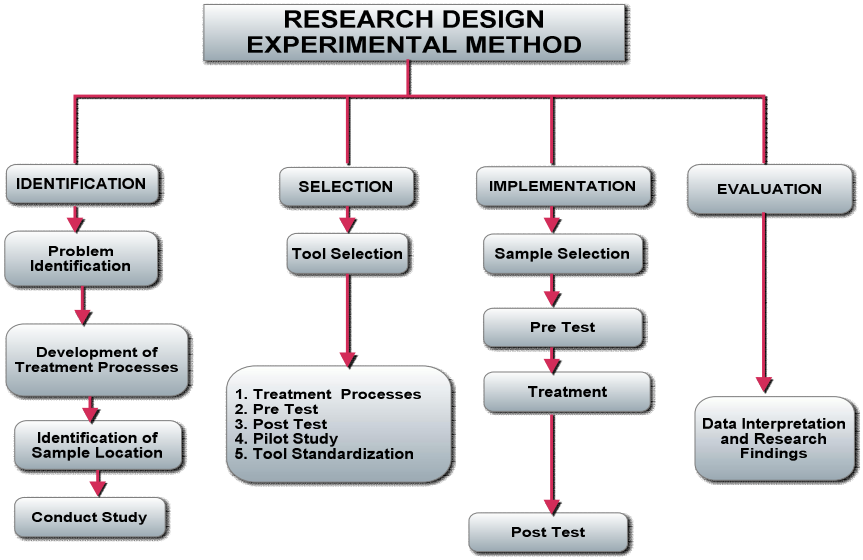

Figure 1: Research Design

PRE-ASSESSMENT-TREATMENT-POST-ASSESSMENT DESIGN

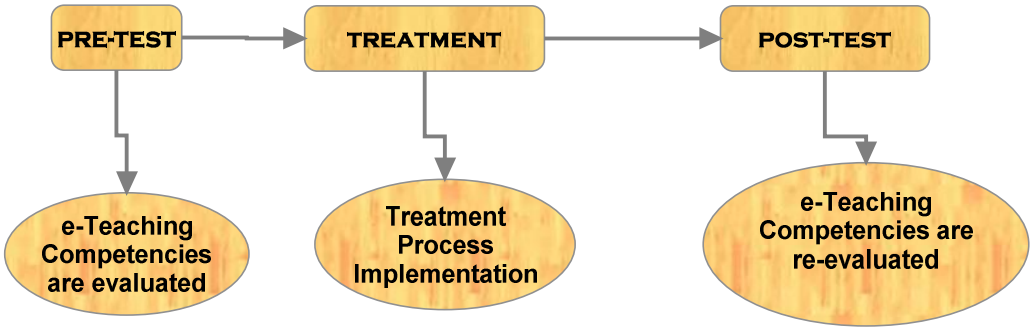

Figure 2: Pre-Assessment - Treatment - Post Assessment Design

Experimental Group Formation

Forty B.Ed. trainees from IGNOU Study Centre, Trivandrum were selected for the study using random sampling technique. An advantage of selecting trainees undergoing B.Ed. from IGNOU is that all are in-service teachers having a minimum of two years

teaching experience in various recognised schools in different part of the country. The Trainees had been asked to demonstrate the skill sets required for operation of WhatsApp application using the internet enabled smartphones. Based on the exhibition, their scores were evaluated for the pre assessment test. The investigators are of the strong opinion that e-teaching competencies can be evaluated through demonstration by asking the students to perform practically.

Tools Deployed

1. A treatment process kit consisting of three treatment processes was developed and validated by the investigators for training the experimental group.

2. Investigators constructed e-teaching competency scale. The tool was duly validated by the investigators with assistance of field experts.

Conducting Experiment

The investigators developed three treatment processes such as treatment Process I, II and III consisting of over 95 percentages of practical activities using internet enabled WhatsApp installed smartphones. Each treatment process aimed at developing a certain set of e-teaching competencies. They are

Treatment Process I

Competency to create new user group and broadcast list using WhatsApp.

Treatment Process Ii

Competency to manage Chats, exchange messages, send and receive audio, video media messages and images, share locations, contacts, photos, record a video or take a photo in real time, select a picture for their groups form the picture gallery.

Treatment Process III

Competency to manage favourites, change settings and status, to add, edit and delete users, to edit name or profile picture, to select fond size, to change wallpapers, to manage timestamp settings and block and release contacts.

The experimental group had 40 in-service teacher trainees. They were taken to computer laboratory and trained them using internet enabled WhatsApp installed smartphones. After briefing them about internet and Messengers, they were trained on how to locate and install WhatsApp. They were guided individually during the process of software location and installation as most of them appeared to be new in the technology.. During the training phase proper care was taken to ensure that each student acquired competency to the level of expectations. The teacher trainees were trained for two weeks using three treatment processes. After two weeks training, a post assessment test was conducted all the trainees separately. They were asked to demonstrate how to attach a

picture and send it to other WhatsApp users. A Full score was awarded if a trainee did it correctly. Effort had been taken to evaluate all the e-teaching competencies expected of after the completion of implementation of all the three processes.

Staistical Techniques Employed

Following descriptive statistical analysis were performed in the study.

1. Mean
2. Standard Deviation

Following inferential statistical analysis was performed in the study.

t-test for computing the significance difference between two sub groups.

Hypothesis Testing

Hypothesis 1

There will be significant mean difference between pre assessment and post assessment level of e-teaching competency scores through treatment processes among the B.Ed. teacher trainees.

Table 1: Difference Between Pre Assessment and Post Assessment Level of e-teaching Competency Scores through Treatment Processes among the B.Ed. Teacher Trainees

Treatment Processes	Mean	Standard Deviation	Calculated "t" Value	Remark at 5 % Level
Pre Test	3.317	0.502	60.49	**Significant
Post Test	7.875	0.655		

(At 5 percent level of significance)

The calculated t value is 60.49 which is many times greater than the table value of t at 5 %. Therefore the hypothesis is accepted. It is inferred from the above table that there is a significant mean difference between pre assessment and post assessment level of e-teaching competency scores through treatment processes among the B.Ed. teacher trainees.

Hypothesis 2

There will be significant mean difference between pre assessment and post assessment scores on treatment process I among the B.Ed. Trainees.

Table 2: Difference Between Pre Assessment and Post Assessment Level of e-teaching Competency Scores through Treatment Process I among the B.Ed. Teacher trainees

Treatment Process I	Mean	Standard Deviation	Calculated "t" Value	Remark at 5 % Level
Pre Test	3.35	0.53	34.046	**Significant
Post Test	8	0.68		

(At 5 percent level of significance)

The calculated t value is 34.046 which is many times greater than the table value of t at 5 %. Therefore the hypothesis is accepted. It is inferred from the above table that there is a significant mean difference between pre and post tests level of e-teaching competency scores through treatment process I among the B.Ed. teacher trainees.

Hypothesis 3

There will be significant mean difference between pre assessment and post assessment scores on treatment process I among the B.Ed. Trainees.

Table 3: Difference Between Pre Assessment and Post Assessment Level of e-teaching Competency Scores through Treatment Process II among the B.Ed. Teacher trainees

Treatment Process II	Mean	Standard Deviation	calculated "t" Value	Remark at 5 % Level
Pre Test	3.23	0.42	37.198	**Significant
Post Test	7.65	0.62		

(At 5 percent level of significance)

The calculated t value is 37.198 which is many times greater than the table value of t at 5 %. Therefore the hypothesis is accepted. It is inferred from the above table that there is a significant mean difference between pre assessment and post assessment level of e-teaching competency scores through treatment process II among the B.Ed. teacher trainees.

Hypothesis 4

There will be significant mean difference between pre assessment and post assessment scores on treatment process III among the B.Ed. Trainees.

Table 4: Difference Between Pre Assessment and Post Assessment Level of e-teaching Competencies through Treatment process III among the B.Ed. Teacher Trainees

Treatment Process III	Mean	Standard Deviation	Calculated "t" value	Remark at 5 % level
Pre Test	3.375	0.54	35.394	**Significant
Post Test	7.975	0.62		

(At 5 percent level of significance)

The calculated t value is 37.198 which is many times greater than the table value of t at 5 %. Therefore the hypothesis is accepted. It is inferred from the above table that there is a significant mean difference between pre assessment and post assessment level of e-teaching competencies through treatment process III among the B.Ed. teacher trainees.

Major Findings

- There is a significant mean difference between pre assessment and post assessment level of e-teaching competency scores through treatment processes among the B.Ed. teacher trainees. All the three treatment processes were together found to be effective in developing e-teaching competencies.
- There is a significant mean difference between pre assessment and post assessment scores on treatment process I among the B.Ed. Trainees. The treatment process I is found to be more effective in developing e-teaching competencies. Creating new groups and broadcast list are treated as e-teaching competencies covered in the treatment process I.
- There is a significant mean difference between pre assessment and post assessment scores on treatment process II among the B.Ed. Trainees. Managing chats is again an e-teaching competency covered in the treatment process II
- There is a significant mean difference between pre assessment and post assessment scores on treatment process III among the B.Ed. Trainees. Managing favourites and changing the settings are dealt in this treatment.

Conclusion

Gilly Salmon (2000) defines the most essential competencies required for an online teachers under the 5 categories such as Understanding online environments, Technical Competencies, Online Communication Competencies, Content Expertise. An attempt has been made to make use of WhatsApp application to develop online competency. WhatsApp is undergoing updation. In future, it will be able to offer more number of services. When such services are extended to society, we will be able to find more opportunities to develop further more e-teaching competencies. The present study focussed only to develop e-teaching competencies to the teacher trainees. The same philosophy may be extended to the students of other domain as well.

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