DEVELOPMENT AND VALIDATION OF CELL PHONE-ANDROID APPLICATIONS FOR THE EXECUTION OF TEACHER EDUCATION CURRICULUM

FINAL REPORT OF THE WORK DONE ON THE MAJOR RESEARCH PROJECT
(From 01.07.2015 to 30.06.2018)
UGC F No. 5-101/2014(HRP) dated 15.09.2015

Submitted to

UNIVERSITY GRANTS COMMISSION
BAHADUR SHAH ZAFAR MARG
NEW DELHI – 110 002

Submitted by

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UNIVERSITY GRANTS COMMISSION

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PROFORMA FOR SUBMISSION OF INFORMATION AT THE TIME OF

SENDING THE FINAL REPORT OF THE WORK DONE ON THE PROJECT

1.	Title of the Project	Development and Validation of Cell Phone-Android Applications for the Execution of Teacher Education Curriculum.
2.	Name and Address of the Principal Investigator	Dr.S.Venkataraman Assistant Professor Department of Education Annamalai University Annamalai Nagar-608002 Tamilnadu, India. karaivenkat@yahoo.copm Mobile:8870738568
3.	Name and Address of the Institution	Department of Education Annamalai University Annamalai Nagar-608002 Tamilnadu, India.
4.	UGC approved No. and Date	F No. 5-101/2014(HRP) dated 15.09.2015
5.	Date of Implementation	01.07.2015
6.	Tenure of the Project	From 01.07.2015 to 30.06.2018
7.	Total Grant Allocated	**Rs.10,40,916.00/-**
8.	Total Grant Received	1st Installment: Rs. 7,07,400.00/-
		2nd Installment: Rs. 2,57,464.00/-
9.	Final Expenditure	**Rs. 9,39,753.00/-**

10. BRIEF OBJECTIVES OF THIS PROJECT

Objectives of this project are:

a. to develop and validate Cell phone-Android application to provide a platform to Teacher Educators and Teacher trainees,

b. to develop and validate Cell phone-Android application to provide Learning Materials to the Teacher Trainees.

c. to develop and validate Cell phone-Android application to prepare, practice and recording Micro Teaching by the teacher trainees,

d. to develop and validate Cell phone-Android application to execute and to record Action researches by the teacher trainees as well as by in-service teachers,

e. to develop and validate Cell phone-Android application to execute and to record Case Study by the Teacher trainees as well as by in-service teachers,

f. to develop and validate Cell phone-Android application to conduct tests and to interpret Test scores

g. to develop and validate Cell phone-Android application for survey questionnaire construction and execution.

h. to develop and validate Cell phone-Android application for the preparation and maintenance of Teacher Trrainees' attendance register in Teacher Education Institutions. and

i. To validate the developed Cell Phone Android Application and to find out its effectiveness in achieving the objectives.

11. WHETHER OBJECTIVES WERE ACHIEVED

Yes, Cell Phone-Android Applications for the Execution of Teacher Education Curriculum developed and validated. The Application is in use.

12. ACHIEVEMENTS

The execution and the findings of the present study adds confidence to implement Android app supported Teaching for the Teacher Education Programs. The developed Android application can be used by the Teacher Education Institutions by uploading the developed application to their Servers. This will add comfort to the Teacher Educations

institutions to make use of Mobile Application for Teacher Education Curriculum Execution. Teacher Education is the vital training centre for the future Teachers of the Nation. With the user friendly features the Android Application has been developed and it is placed in the Google play store. The faculties and students can download and take part in the activities.

The Project Fellow has done his Ph.D., and submitted his thesis in the part of this Project work. The output of this project added Technological advancement to the Teacher Education Programme and added Knowledge on the effectiveness and usage of Android Mobile Application for the Teacher Education Curriculum execution. The process of development and validation of the Android Application and the results of effectiveness testing study were published in reputed Journals and in National Seminars and Conferences.

13. SUMMARY

As the project is focused on the development and validation of the Mobile- Android Application, the requirement analysis were done as the first step and then Android Application- coding done with the help of experts in the field of Android Application development. The developed application was initially subjected two stage Testing, One was done by the Technical persons, the developers who are preparing the Application software, another one was by the Researchers. A brief analysis of the strengths & weaknesses were done. Alpha testing by the experts in the field of Android App development done. Then, Beta testing was done by selected individual users.

The Developed Mobile Application was introduced and demonstrated to the B.Ed., Trainees, and 5 Teaching Faculties, who are handling regular classes for them. The options in the Mobile application were used by Teachers and B.Ed., Trainees. The B.Ed., Trainees were instructed to make use of the Application during the Teaching Practice period also. The usage was maintained for Six months, with the execution of time to curriculum and other options in the Applications.

Quasi Experimental method was adopted for this study. Convenience sampling design has been used to select the sample. Single group design adopted for this study. In this study to find out the Effectiveness of Mobile- Android Application, Four tools were used. For this study to arrive at the results, Descriptive analysis and Differential analysis

are used, which consists of Mean, Standard Deviation, 't' tests, 'F' tests co-relational analysis and percentage calculations.

The research tools namely, Attitude towards Educational usage of Mobile Phones Scale constructed and validated by Malathy .A & Venkataraman S (2012), to find out the level of Access to Resources and Teachers using Mobile Application, Scale constructed and validated by Venkatarman S (2016), to find out the level of Perceived Assistance for Course proceedings by Mobile Application, Scale constructed and validated by Venkataraman S & Manivannan S (2016) and to find out the Perceived Assistance for Course Ubiquitousness by Mobile Application constructed and validated by Rajkumar J & Venkataraman S (2017) were supplied to the B.Ed., Trainees. The completed tools were collected from the B.Ed., Trainees after the stipulated time period before (Pre study) and after (Post Study) execution of the Developed Android Application. Later, the data collected were subjected to scoring based on the scoring key.

The B.Ed., Trainees have recorded high level in the perceived effectiveness of Mobile Application. After implantation of usage of the Android Mobile Application, the B.Ed., Trainees have recorded 33.35% increase in perceived effectiveness of Mobile Application. There is significant Effectiveness of Mobile Android Application for the Execution of Teacher Education curriculum perceived by the B.Ed., Trainees.

14.CONTRIBUTION TO THE SOCIETY

The execution and the findings of the present study adds confidence to implement Android app supported Teaching for the Teacher Education Programs. The variations in the effectiveness shows sparks to the curriculum frame workers and the Android app developers, programme executors, to identify suitable features in the Mobile Applications to suits to each of the individuals.

The percentages of increase of the selected variables, will give positive impact on the implementation of the Android applications for the Execution of Teacher education Curriculum. The B.Ed., Trainees have shown 33.35% increase in perceived effectiveness of Mobile Application. This quantified output will add data for easy understanding about

the Effectiveness of Mobile- Android Application. This study will motivate the Teachers who wants to use Android Applications for the Teacher Education curriculum execution.

The practical difficulties in the execution of Mobile Android Application to the students in an educational institution regularly found out, which will give path for the identification of remedies. Need of special effort in the execution of Mobile Android Application by the intuitional and the executor side is experienced during the experimentation, which is an essential learning to proceed successfully. The developed Android application can be used by the Teacher Education Institutions by uploading to their Servers. This will add comfort to the Teacher Educations institutions to make use of Mobile Application for Teacher Education Curriculum Execution. It's a contribution to the Teacher Education programme and to the Society.

Teacher Education is the vital training centre for the future Teachers of the Nation. The advance technologies' usage in the teacher education is providing two way application to the learners. One is as a management system from the side of the Teacher educator another one is as Teaching and Learning system. With the user friendly features the Android Application has been developed and it is placed in the Google play store. The faculties and students can download and take part in the activities. Effectiveness of a Mobile application is not static one, the effectiveness as well as user-friendliness and utility used to change regularly in line with the upgrades in Operating system and the Teachers and Students needs, hence, the Mobile applications have to be tested regularly and the application has to be updated according to the feedback of the consumers the B.Ed., Teacher Trainees, Teacher Educators and in-service Teachers and Students.

15.   Whether any Ph.D. enrolled/produced out of the project

Yes, The Project Fellow, Mr.J.Rajkumar has submitted recently his Ph.D., thesis in Department of Education, Annamalai University

16. LIST OF PUBLICATIONS

Venkataraman S & Manivnnan S (2018) A review on Effectiveness and Effective usage of Android Applications for Teaching learning process, *International Journal of Academic Research Reflector,* 7(2), 30-38.

Venkataraman S & Rajkumar J (2019) Development of Cell phone-Android applications for the execution of Teacher Education Curriculum, *Think India*, 22 (4),9284-9289.

Venkataraman S & Rajkumar J (2019) Features of Android Mobile Application for B.Ed., Curriculum Execution, *Journal of the Gujarat Research Society,* 21(9), 160-164.

Venkataraman S (2016) E-Readiness of Educational Institutions-The Reality, *Proceedings of the National Seminar on Teacher Education in the Digital Era(TEDE-2016*), 283-284.

Venkataraman S (2018) Issues in Integration ICT into Education at Higher education level – A discussion based on real time Observation, *Proceedings of the National Seminar on National Conference on Integration of ICT into Education,* 619-620.

Venkataraman S (2019) Using the personalized Mobile Applications for internal integration of Educational Community - A Safe way to use social media Technology for Education, *Proceedings of the National Seminar on National Conference on Integration of Social Media into Education,* 231-233.

Venkataraman S & Kumari C (2019) Personalised Mobile Applications as Social Media among Higher Secondary School Teachers, *Proceedings of the National Seminar on National Conference on Integration of Social Media into Education,* 606-608.