

REPORT

Capacity Building Programme for Teacher Educators of NIE-Maldives, to Develop Mobile Applications Relevant to the National Curriculum

31st Jan-4th Feb 2016

Male', Maldives

Prepared by:

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Commonwealth Educational Media Centre for Asia (CEMCA), New Delhi

In collaboration with

National Institute of Education (NIE), Maldives

Abstract

Commonwealth Educational Media Centre for Asia (CEMCA), New Delhi organised a Capacity Building Programme for Teacher Educators of NIE Maldives to Develop Mobile Applications Relevant to the National Curriculum from 31 Jan 2016 to 4 Feb 2016 in collaboration with National Institute of Education (NIE), Republic of Maldives. Twenty five teacher educators from different parts of Maldives attended the workshop. Ms. Rashmi Kathuria, National ICT Awardee, PGT(Mathematics), Kulachi Hansraj Model School, Delhi, India facilitated this five days workshop along with Dr. Manas Ranjan Panigrahi, Programme Officer (Education), CEMCA, New Delhi. The main objective of the capacity building programme was to equip them with skills for developing their own android apps as per the National curriculum. The workshop was designed to embed two elements viz. using App Inventor, a cloud based platform, for creating android mobile apps and open educational resources.

Immediately after the welcome address by the Deputy Minister Ms. Na Heed, Republic of Maldives, Dr. Manas Ranjan Panigrahi, Program Officer, CEMCA briefed the participants about the programme and its objectives. He conducted three sessions viz. Understanding of OER, Open Licensing and Creative Common Licensing, Searching of OER and Development of OER using OER-Common Platform.

Ms. Rashmi Kathuria, workshop facilitator, initiated the workshop with an ice breaking activity for motivating the participants and making them realise the need of the hour for teacher educators as change agents. All participants were connected on a G+ community and shared with resources on cloud. All participants created an account on MIT App Inventor and set up their Android devices for development and debugging. Participants were familiarised with the designer and block components through activities. They learnt about various new terms like QR Code, Emulator, Cloud Computing etc. They were given a copy of toolkit and by the end of day participants were able to do hands on with three activities viz. Text to Speech App: Loud Mouth, AccelerometerSensor App and SpeechRecognizer App: Speak to Me. Day 2 began with the recap session followed by demonstration of Activities viz. Canvas App: Scribble and Ball App: Ball Bounces. The participants were given a project work on "Orientation Sensor and Clock App: Move the Ball". Throughout the day creative discussions happened on the use of various blocks and components for designing the apps. The concepts of image sprites, creation and calling procedures, setting up of global variables, arithmetic operators, logical and control components and tiny database were covered through activities designed. Day 3: Ms. Rashmi demonstrated and hands on sessions on Activity "Camera App: Say Cheese!" and "Camcoder and VideoPlayer App: Action Capture". Participants were encouraged to use the tutorials from the tool kit to try making the apps on their own. By the end of day 3 they were able to finish three tutorials viz. Pet the Kitty, Crystal Ball and Swat the mosquito. Day 4: All the participants created quizzes and jigsaw puzzles. During the post lunch session participants were given information about how to package and distribute the apps. They learnt to export/import .aia and .apk files. Day 5: Participants were excited as some of them could finish making their first android mobile app and some participants wanted to spend more time. Their problems were troubleshooted and by the end of pre-lunch all groups were ready for the show case.

During Valedictory session, Mr. Ahmed Shafeeu, Education Minister of State was the Chief Guest for the occasion. A brief report was read by the one of the participants. Deputy Minister Education Ms. Na Heed shared her experiences about the programme and its need in the current scenario of changing educational trends in Republic of Maldives. Some of the participants displayed their self-created android mobile apps which may be used for enhancing learning and creating interest of students. Dr. Panigrahi and Ms. Rashmi shared their experiences of facilitating the workshop. In the valedictory address Mr. Ahmed appreciated the efforts of CEMCA and facilitators for achieving the desired goals. During his address he said children are digital natives and we as educators are immigrants. Our children can do multi-tasking using mobile technology. We need to know about the needs of 21st century learners

and be prepared for educating them. He also said, we need to make the best use of tools and resources which are available. He appreciated the participants for their wonderful work done during the 5 days and congratulated the entire team of NIE for their efforts. Certificates were distributed by honourable minister to all participants. The day ended on a positive note of exploring, learning and sharing and continuing the journey for the betterment of emerging societies.

1. INTRODUCTION

The National Institute of Education (NIE) is mandated to develop the National Curriculum and provide continuous support for teachers to ensure the proper implementation of the curriculum. A new national curriculum has been rolled out in schools at the beginning of the academic year 2015. This is a competency based curriculum with effective use of media and technology as one of the key competencies. However, the technology infrastructure in most of schools in the country is poor and teachers are finding it very challenging to integrate technology in their teaching. Although this is the situation, the curriculum cannot wait to be implemented until the constantly changing infrastructure is established. Therefore it is realized the importance of making the best use of available technology and ensure that students gain the intended curriculum competencies. At present, the possession of smart phones is increasing rapidly in the Maldives. Most of the students, teachers and parents use smart phones with android operating systems. Considering the concept of the maximum use of available resources, these smart phones have the potential of integrating technology in the classroom with the availability of applications that are specifically designed for the curriculum.

A training workshop under the name Android Mobile Applications Development was organized by the National Institute of Education in collaboration with the Commonwealth Education Media Center for Asia (CEMCA) from 31st January to 4th February to address the above explained need. This training was also funded and facilitated by the CEMCA. The training was focused to build the capacity of professional staff of the National Institute of Education on developing android applications.

The sessions by Ms. Rashmi Kathuria and Dr. Manas Ranjan Panigrahi have created a profound impact on the teacher educators to provide professional development support for schools. In addition, the training has boosted up the motivation and confidence of participants to support schools with the implementation of the new curriculum.

2. OBJECTIVES

The workshop covered an in-depth knowledge of covering the below objectives

1. Gain a comprehensive understanding and familiarization with AI2 platform
2. Use the designer and blocks editor.
3. Prepare simple educational applications.

3. WORKSHOP ORGANIZATION

The Android Mobile Applications Development training was held in Male', at Ghazee Building Seminar room from 31st Jan-4th Feb 2016.

As per the training schedule it was organized for 5 days. Throughout the sessions of the five days, all the participants did a very productive work; as a result of their commitment, 95% of the participants developed their own applications. Some participants developed the applications as a group but most of them did as an individual task.

The workshop was coordinated by Teacher Educator Ms. Thohira Abdulla with the assistance of the head of the School of Teacher Development, Ms. Shuhudha Rizwan. The coordination of the training was supported by all the dedicated staff of the School of Teacher Development.

4. PARTICIPANTS

Although the training was focused to all professional staff of Teacher Training and Development school of NIE, other professional staff from different departments also took part in the training. From the beginning till the end of the workshop the facilitators were continuously guiding and encouraging the participants. Participants' list is attached in the appendix A.

5. WORKSHOP CONTENT

The whole training was focused mainly on android applications development and open education resources.

The facilitator for the android mobile applications development Ms. Rashmi Kathuria started the training from the ABCs of app development and continued the whole training through hands on step by step procedure. Ms. Rashmi was also guiding the participants to create their own android app, focusing on teaching and learning.

Even though at the beginning of the training participants were struggling to design and arrange the blocks of the apps, the facilitation has made the participants to meet the aim of the training by the end of it.

Further, the informative sessions by Dr. Manas Ranjan on Open Educational Resources were very helpful to the participants. In addition, the supportive documents provided by CEMCA which would really enhance the understanding and transfer of what the participants have learnt, especially the toolkit on educational app development and the manual for app development.

6. DAILY SCHEDULE

Schedule is attached as appendix –B

7. CERTIFICATION

All the 25 participants achieved the “Certificate of Participation” as per the NIE guidelines.

8. WORKSHOP EVALUATION

The workshop was evaluated through a questionnaire provided by CEMCA. Evaluation was done at the end of the workshop. In the Questionnaire there were 12 statements with a 5-category rating scale. 23 of the 25 participants participated in the evaluation.

A summary of the responses are given below as a graphical representation in figure-1. The total number of responses to each Question is converted to a percentage.



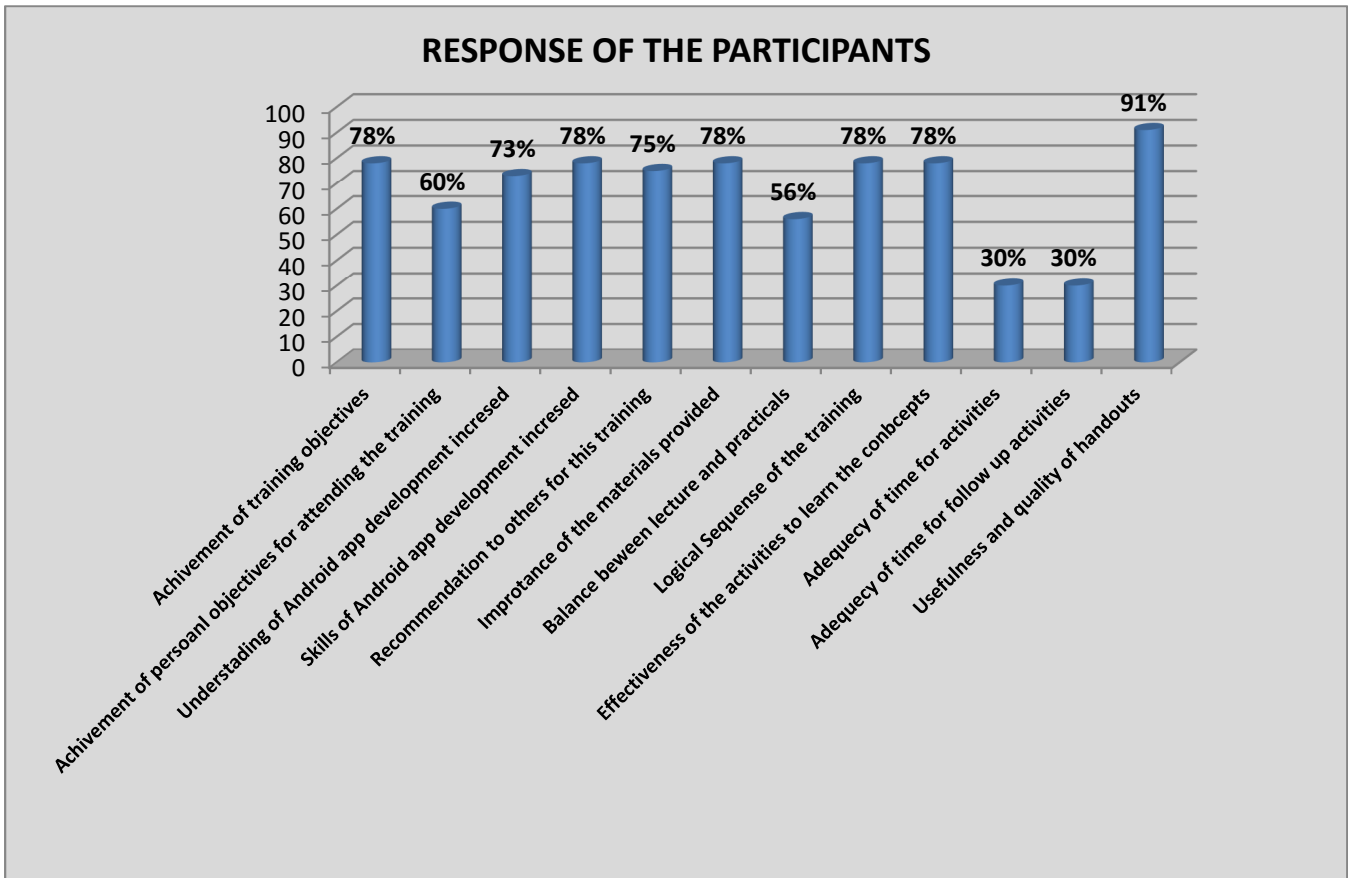


Figure 1

Conclusions are drawn based on the information in the evaluation forms as mentioned above. The percentages of the responses (Figure-1) clearly indicates the level of attainment, or fruitfulness of the workshop. In figure-1,

- 78% of the participants agreed that the workshop training objectives were achieved.
- 60% of the participants agreed that the personal objectives for attending the training were achieved.
- 73% of the participants agreed that their level of understanding of Android app development increased.
- 78% of the participants agreed that their skills of Android app development increased.
- 75% of the participants agreed that they would recommend others for this training.
- 78% of the participants agreed that the provided materials were necessary for the training.
- 56% of the participants agreed that there was a sense of balance between lecture and practicals.
- 78% of the participants agreed that logical sequencing existed in the training.
- 78% of the participants agreed that the activities were effective to learn the concepts.

- 30% of the participants agreed that the time for activities were adequate but 70% the majority of the participants disagree with this conclusion.
- 30% of the participants agreed that the time for follow up activities were adequate but 70% the of the participants disagreed.
- 91% of the participants agreed that the handouts were useful and of good quality.

The analysis of the evaluation shows that except for the time factor participants were very much satisfied with the training.

10. RECOMMENDATIONS

- Because of the nature of training time for activities and for follow up needs to be extended.
- Theory sessions on arrangement of blocks for different activities need to be added to the training.

11. AKNOWLEDGEMENT

I really appreciate and thank to Ms. Rashmi Kathuria and Dr. Manas Ranjan for their effort and encouragement. Also for the guidance and support by the head of School of Teacher Development Ms. Shuhudha Rizwan. I would also like to thank to my colleagues and administrative staff for their interest and support to organize and coordinate the training.



Appendix A – Participant List

PARTICIPANTS LIST
Android Mobile Application Training
31st January – 4th FEBRUARY

#	NAME	DESIGNATION
1	Abdul Rasheed Saeed	Hd.TRC Teacher Educator
2	Aishath Shibana	S.TRC Teacher Educator
3	Ibrahim Rasheed	R TRC Teacher Educator
4	Mohamed Arif	B TRC Teacher Educator
5	Aminath Abdulla	Lh TRC Teacher Educator
6	Mohamed Abdulla	Lh Naifaru Teacher Educator
7	Jaadulla Rasheed	V TRC Teacher Educator
8	Ahmed Nizam	M TRC Teacher Educator
9	Ismail Naseer	F TRC Teacher Educator
10	Aadhila Rushdhee	Ga TRC Teacher Educator
11	Ahmed Anwar	Aa TRC Teacher Educator
12	Ali Jawad	Gn TRC Teacher Educator
13	Fathimath Shifaza	Teacher Educator
14	Hawwa Abduraheem	Teacher Educator
15	Asiyath Sama	Education Development Officer
16	Ziuna Hussein	Education Development Officer
17	Thohira Abdulla	Teacher Educator
18	Niumath Shafeeq	Teacher Educator Coordinator
19	Aishath Azeefa	Teacher Educator
20	Aishath Zaeema	Teacher Educator
21	Ahmed Haleem	Teacher Educator
22	Soodha	Teacher Educator
23	Mohamed Adly	Education Development Officer
24	Mohamed Abdulla	Assist. Computer Technician
25	Mohamed Shihab	Lecturer (Maldives National University)



**Capacity Building Programme for Teacher
Educators of NIE Maldives
to Develop Mobile Applications Relevant to the
National Curriculum**



NATIONAL
INSTITUTE OF
EDUCATION

31st January – 4th February 2016

**Commonwealth Educational Media Centre for Asia (CEMCA), New Delhi
In collaboration with
National Institute of Education (NIE), Maldives**

Venue: Seminar Room NIE, Ghazee Building 2nd Floor

PROGRAMME SCHEDULE

Date	Time	Activities
Day 1	0830-0900	Opening Ceremony
Sunday 31-01-2016	0830-0835	* Recitation of Holy Quran
	0835-0850	* Welcome Address
	0850-0900	* Overview of the training by Dr. Manas Ranjan Panigrahi, CEMCA
	0930-1130	<ul style="list-style-type: none"> • Introduction of Participants • Icebreaking • Introduction to Visual Programming and MIT App Inventor Creating an App Inventor account • Android Device (Mobile/Tab) setup for App development and debugging
	1130-1145	Tea
	1145-1330	<ul style="list-style-type: none"> • Introduction to the development environment (designer and blocks editor) • Introduction to available modules for App development • Using basic components • Activity 1 [Text to Speech App: Loud Mouth] Demonstration + Hands on
	1330-1430	Lunch
	1430-1600	<ul style="list-style-type: none"> • Activity 2 [AccelormeterSensor App] Demo + Hands on • Activity 3 [SpeechRecognizer App: Speak to Me] Demonstration+ Hands On

Day 2 Monday 01-02-2016	0930-1130	<ul style="list-style-type: none"> Recap Day 1 Activity 4 [Canvas App: Scribble] Demo + Hands on Activity 5 [Ball App: Ball Bounces] Demo + Hands on
	1130-1145	Tea
	1145-1330	<ul style="list-style-type: none"> Activity 6 [Orientation Sensor and Clock App: Move the Ball] Demo + Hands on
	1330-1430	Lunch
	1430-1600	Understanding of OER (Dr. Manas Ranjan)
Day 3 Tuesday 02-02-2016	0930-1130	<ul style="list-style-type: none"> Recap Day 2 Activity 7 [Camera App: Say Cheese!] Demo Activity8 [Camcoder and VideoPlayer App: Action Capture] Demo Tutorial 1: Pet the Kitty
	1130-1145	Tea
	1145-1330	Open Licensing and Creative Common Licensing (Dr. Manas Ranjan)
	1330-1430	Lunch
	1430-1600	<ul style="list-style-type: none"> Tutorial 2: Crystal Ball Tutorial 3: Swat the Mosquito Q and A
Day 4 Wednesday 03-02-2016	0930-1130	Searching of OER and Development of OER using OER-Common Platform (Dr. Manas Ranjan)
	1130-1145	Tea
	1145-1330	<ul style="list-style-type: none"> Recap Day 3 Using advanced concepts: <ol style="list-style-type: none"> Built-in Blocks, 2. Functions, 3. Variables Using advanced concepts: <ol style="list-style-type: none"> Arithmetic and Boolean Algebra, 5. Control Structures Using advanced concepts: <ol style="list-style-type: none"> Exception Handling Using advanced concepts: <ol style="list-style-type: none"> Starting Activities, 8. Databases and Storage Using advanced concepts: <ol style="list-style-type: none"> Connectivity, 10. Block Management
	1330-1430	Lunch
	1430-1600	<ul style="list-style-type: none"> Recap Day 4 Tutorial 5: Tweet my Homework Packaging and distribution Storyboards and prototypes

Day 5 Thursday 04-02-2016	0930-1130	<ul style="list-style-type: none"> • Recap Day 4 • Tutorial 4: Virtual Chemistry Experiments • Tutorial 5: Tweet my Homework
	1130-1145	Tea
	1145-1330	<ul style="list-style-type: none"> • Publishing Apps on Google Play • Tutorial 6: Voice Note • Q & A
	1330-1430	Lunch
	1430-1530	Plan of Action with Participants (Dr. Manas Ranjan and Ms. Rashmi Kathuria)
	1530-1600	Closing Ceremony
		Way Forward Certificate Awarding Vote of Thanks

