USING WHATSAPP MOBILE APPLICATION AS TUTORIAL DELIVERY TOOL FOR ADVANCED LEVEL LEARNERS IN ADULT LITERACY PROGRAMMES: LESSONS LEARNED.

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ABSTRACT

This study examined the use of WhatsApp mobile application as a tutorial delivery tool for advanced learners at the University of Ibadan Model Literacy Centre. An exploratory research design was adopted and the purposive sampling technique used in selecting participants for the study. Specifically, the study comprised 20 learners from the advanced level of a University of Ibadan adult literacy programme. The technology tool employed for the study was WhatsApp mobile application. This application was used as a tutorial delivery tool for the adult learners. Participants in this study were exposed to a learning unit in English Language. Two research questions were raised and analyzed qualitatively. The result of the analysis indicated that WhatsApp mobile application could be used as tutorial delivery tool for adult learners following the prescribed procedures and model designed. In conclusion, four lessons were learned which include spacing of content for learners, quizzes, feedback and learner support. Based on these findings, it was recommended that researchers need to extensively respond to the growing need of a body of research in this area, especially building models that work for the use of social media for the improvement of literacy deliver and facilitators of literacy programmes should be equipped with the skills of using mobile technologies, particularly the social media such as WhatsApp for learning in the adult literacy class.

Keywords: WhatsApp, Mobile Phone, Mobile Learning, Attitude, Adult Learners.

BACKGROUND TO THE STUDY

Once, mobile technologies were restricted to certain areas around the world. The case is a very different one today, as mobile devices can be said to have penetrated every corner of the world, especially with the help of popular mobile applications and the internet (Shanmugapriya and Veerakumar, 2016). This has made the mobile technology today a useful and innovative educational technology which could be used for mobile learning activities (Aicha, 2014). Generally speaking, technology has been found to be capable of motivating both the teacher and learner in a learning environment (Said Fathy, 2015). This is not a surprise, as the rapid advancement in information and telecommunications technologies has affected all fields of life including education (Said Fathy, 2015). Technology is known to have positive effects on both the facilitator and learners particularly in adult literacy programmes (Said Fathy, 2015, Adelore and Itasanmi, 2016, Adelore and Ojedeji, 2016).

Furthermore, the link between ICT and literacy has been established reiteratively (Andrew, 2004; Statistics Canada and OECD, 2005, Adelore and Ojedeji, 2016). ICT and literacy have been said to be connected in that the ability to use ICT affects literacy skills and literacy skills are also essential to the development of ICT literacy in a reciprocal way. This makes the position of UNESCO very true that ICT does have roles to play in promoting literacy. Roles such as learning enhancement, broadened access to literacy education, local content creation, professional development of literacy facilitators and the ability to create a learner-friendly environment (UNESCO, 2006). This means that through the use of ICT for literacy, adult learning can become more practical and interesting, existing barriers associated with geographical location eliminated and even cut down on cost.

For the link between ICT and literacy, researchers have continued to push for an integration of ICT into adult literacy programmes (Yahaya, 2011; Abdulkarim and Ali, 2012). However, in reality, very few studies exist exploring the use of technology and mobile technologies in particular for adult learning. Yet, of all the technology tools that can be used to enhance learning, the mobile phone tops the list for its penetration, accessibility and ubiquity (Wagner and Kozma, 2005). In addition, people have been found to be doing more with their mobile phones than ever; people read and write on their mobile phones nowadays (UNESCO,

2013). The mobile phone has several features such as Voice, SMS, Browsing, Downloading, Gaming and variety of applications. And with the introduction of smart phones, the popularity of mobile applications has increased and its usage has become increasingly prevalent among mobile users. One such application which is very popular among smart phone users these days is WhatsApp messenger (Tulika and Dhananjay, 2014 as cited in Adelore and Ojedeji, 2016).

WhatsApp is an application available on the new generation of smart phones like IPhone, Android, Blackberry and Nokia mobile phones that allows users to send text messages to each other for free. Users are not charged for a text sent through WhatsApp, because WhatsApp sends messages through an internet data connection. Unlike the SMS, WhatsApp supports many different message types, from simple text to pictures to audio files and videos (Hindu, 2011 as cited in Adelore and Ojedeji, 2016). These are important features of WhatsApp that make it a useful tool for teaching and learning.

Surprisingly, despite the fact that educationists recognize that WhatsApp mobile application is widely used by different categories of learners (adults inclusive) (Alsaleem, 2014), its use for learning activities has yet to be widely explored. This is the justification for this study; to explore the use of WhatsApp mobile application for tutorial delivery among adult learners in a literacy programme.

The general objective of this study is to investigate the lessons learned from using WhatsApp mobile application as tutorial delivery tool in an adult literacy programmes.
The specific objectives of the study include the following:

i. To investigate how WhatsApp mobile application can be used for tutorial delivery in adult literacy programmes.
ii. To design a workable model for using WhatsApp mobile application as tutorial delivery tool for adult learners in Nigeria.

Research Questions

i. How can WhatsApp mobile application be used as tutorial delivery tool in adult literacy programmes?
ii. What does a workable model of using WhatsApp mobile application for adult learning entail?

METHODOLOGY

The study adopted an exploratory research design. This was done because the use of WhatsApp mobile application for adult learning is an innovation and an area where little or nothing has been done. Tutorials on WhatsApp mobile application were administered to the adult learners that participated in the study. These participants were adult learners at the advanced level of the University of Ibadan Model Literacy Programme. The experiment comprised of 20 adult learners.

Since ownership of a WhatsApp enabled mobile phone was needed to be part of this experiment, the purposive sampling technique was used in selecting participants for the study.

PROCEDURE

This study was carried out following certain procedures which began by the addition of participants in the experiment to the online instructor's phonebook. This was immediately followed by creating a WhatsApp group and adding all participants. Afterwards, the online instructor created a broadcast list for the delivery of individualized modules and other WhatsApp mobile learning activities, after which the online instructor sent the modules to each learner.

Appropriate time spacing was given between modules. This was seen as an essential factor in achieving success in the use of WhatsApp mobile application for tutorial delivery. The instructor also ensured that the modules which were broken into linear frames were neither overloaded nor bulky, that is, giving consideration to the memory capability of adult learners. A maximum of two frames per day was sent to the learners so as not to over load

them since they are usually busy as adults. Another essential factor in the use of WhatsApp mobile application as tutorial delivery tool is moving at each learner's pace. For instance, the instructor sent the next frame only when the previous one had been studied by the learner. The modules were therefore highly personalized.

The online instructor concluded each module with quiz questions to determine how much each learner had mastered what was taught. This was to serve as a form of evaluation at the end of each module. When a learner performed well enough such a leaner was asked to proceed to the next module, but if not, the learner was asked to repeat the module until such a learner mastered the content of that particular module. Another set of quiz questions were sent to test whether the learner had mastered the content of that module. And when a learner had mastered the content of a module confirmed by a good performance in the quiz questions that followed, the learner was asked to proceed to the next module and the process continued until such a learner finished all the modules in the lesson.

Learners were scored immediately they sent in their responses and corrections immediately made to their wrong answers. This immediacy and promptness is one of the advantages of the use of WhatsApp mobile application for tutorial delivery.

RESULTS

Research Question 1: How can WhatsApp mobile application be used as a tutorial delivery tool in adult literacy programmes?

Figures 1, 2 and 3: Interfaces of the WhatsApp Group Created.

This experiment involved tutorial delivery to learners in a literacy programme using the WhatsApp instant messaging system. Prior to the commencement of the experiment, the online instructor added all participants in the experiment to his phonebook. This was immediately followed by creating a WhatsApp group and adding all participants.

Fig. 1: Group Created

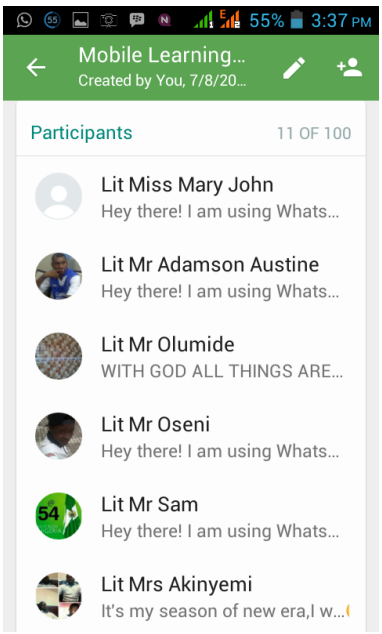


Fig. 2: Names of Participants

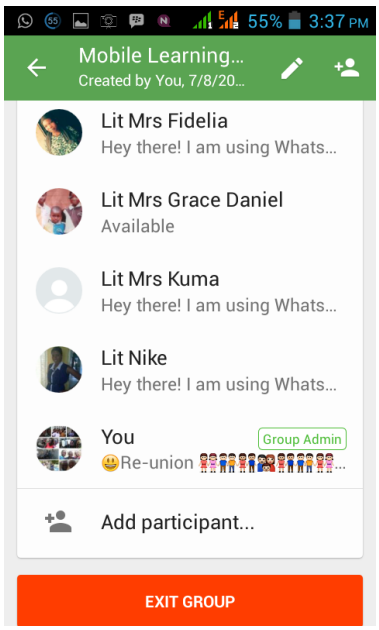
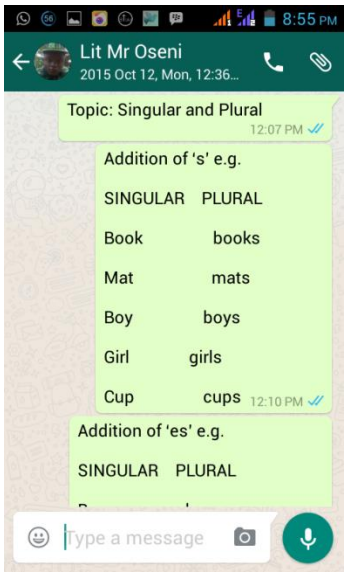
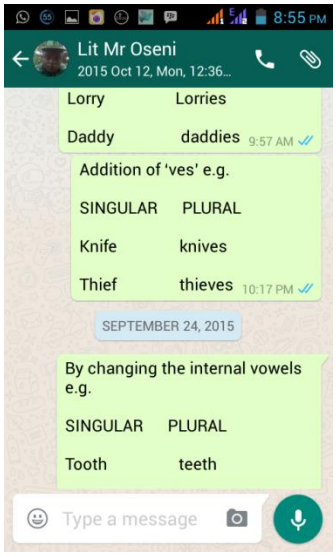


Fig. 3: Names of Participants (Cont.)

Figures 4, 5 and 6: Lesson in Frames

On the first day of the experiment, the online instructor created a broadcast list for delivery of individualized lessons and other WhatsApp mobile learning activities. This was immediately followed by the first learning activity which involved sending of the first module to each participant as shown below.





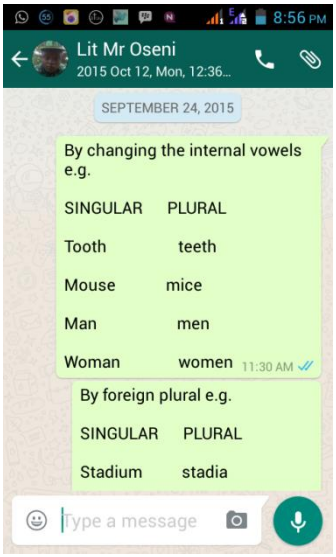
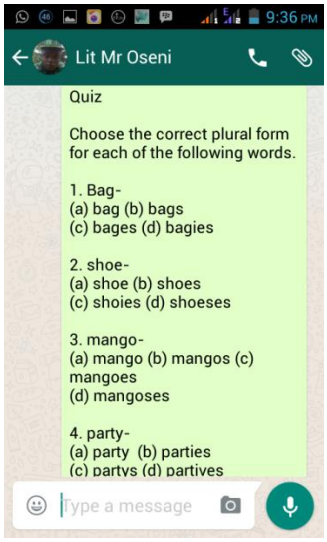


Fig. 4: Module One (Frame 1) **Fig. 5: Module One (Frame 2)** **Fig. 6: Module One (Frame3)**

Figures 7, 8 and 9: Quiz, Answers, Remarks and Correction

The date and time spacing should however be carefully noted as seen in the figures above. A maximum of two frames par day was sent to the learners so as not to over load them since they are usually busy. Also the online instructor was careful to go at each learner's pace. The instructor sends the next frame only when the previous one had been studied by the learner (this is always indicated by the double blue lines as shown in the figures above). The lessons therefore are highly personalized.

The online instructor concludes each module with quiz questions to determine how much each learner has mastered what was taught. An example of this is shown below.



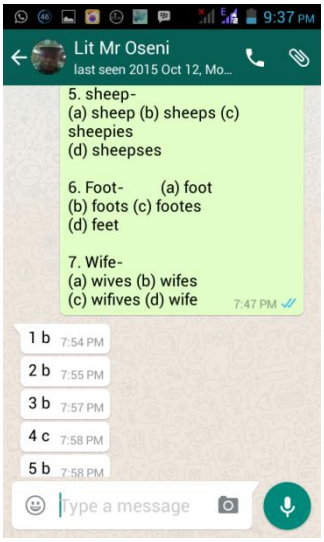


Fig. 7: Quiz **Fig. 8: Answers** **Fig. 9 Remark and Correction**

Figures 10, 11 and 12: Additional Frames

If a learner performs well enough such a leaner is asked to proceeds to the next module, and if not, the learner is asked to repeat the module until such a learner masters the content of that particular module and another set of questions would be sent to test if the learner has mastered the content of the module. This is shown in the figures below.

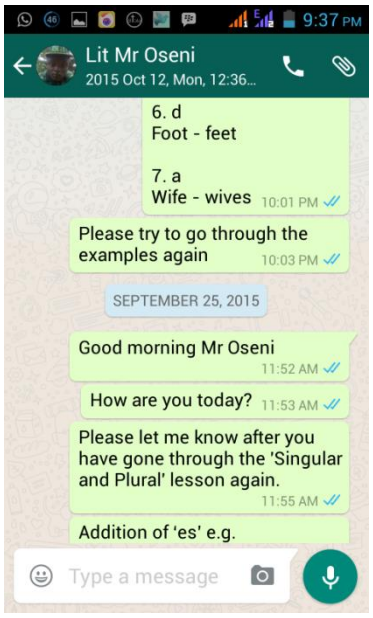


Fig. 10: Call to Repeat a Module

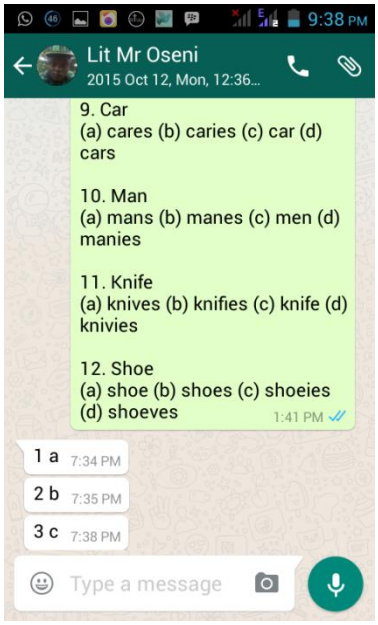


Fig. 11: A Part of New Q & A

Fig. 12: Instructor's Remark

Figures 13, 14 and 15: Additional Modules

When a learner has mastered the content of a module accompanied by a good performance in the quiz questions that follow, the learner is asked to proceed to the next module and the process continues until such a learner finishes all the modules in the lesson. Examples of other modules and of responses of other learners are also shown below.

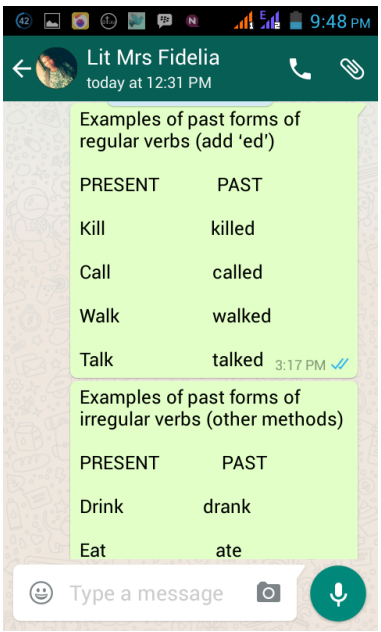


Fig. 13: Module Five

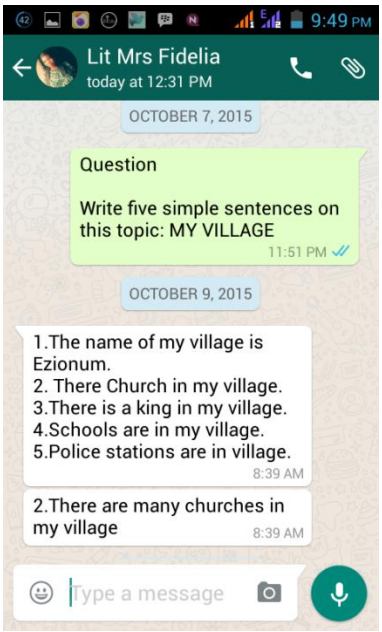


Fig. 14: Module Six

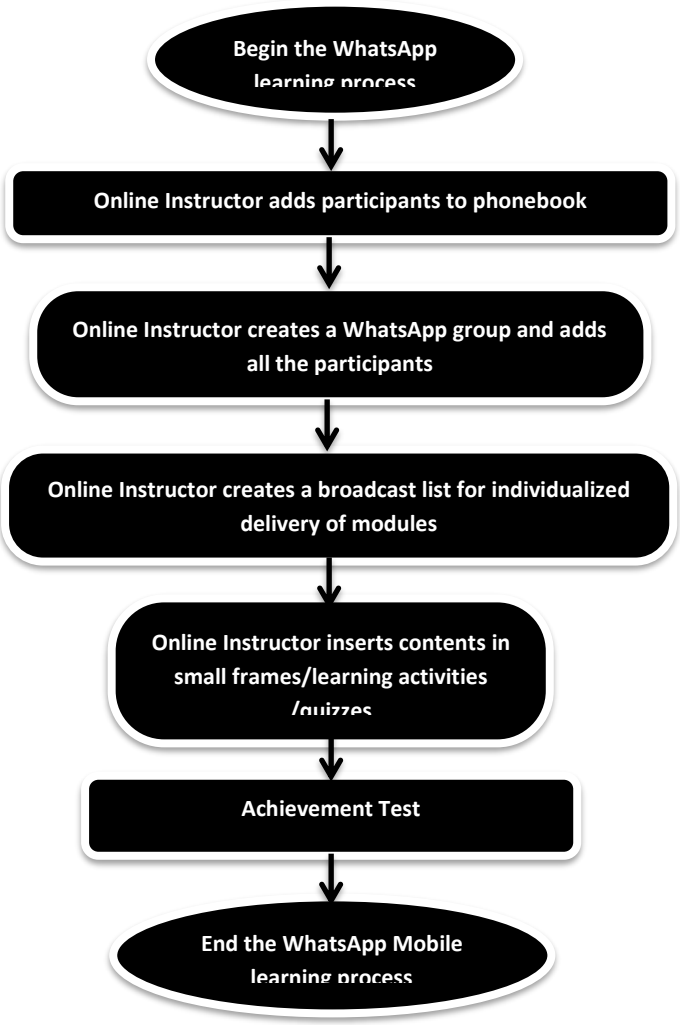
Fig. 15: Another Learner

Finally, it should be noted that learners were scored immediately they sent their responses and online instructor reverted with their scores and corrections. This immediacy and promptness is one of the advantages of WhatsApp mobile learning.

Research Question 2: What does a workable model of using WhatsApp mobile application for adult learning entail?

Fig. 16: A Model for WhatsApp Mobile Learning

An exploratory research was carried out in this study on how to use WhatsApp mobile application as teaching and learning tool. Figure 16 below shows the model used by the online instructor for this experiment.



Source: Field Work

Fig. 16: Model for WhatsApp Mobile Learning

This exploratory study aimed at investigating how WhatsApp mobile application can be used as teaching and learning tool. A product of this research is the design of a model for

using WhatsApp mobile application for tutorial delivery. A highlight of the model includes; adding all participants of the experiment by the online instructor to his phonebook, immediately followed by creating a WhatsApp group and adding all the participants, creating a broadcast list for the delivery of individualized lessons and other WhatsApp mobile learning activities and lastly followed by sending the various modules to each learner.

LESSONS LEARNED

Lesson 1: Spacing of Content for Learners

Appropriate time spacing was discovered to be an essential element in the use of WhatsApp mobile application for adult learning if it would be successful. The instructor should ensure the modules are not over loaded and the frames should not be too bulky. A maximum of two frames par day could be sent to the adult learners so as not to over load them since they are usually busy set of people. Another essential element of the WhatsApp mobile learning process is moving at each learner's pace. For instance, the instructor sends the next frame only after the previous one has been studied by the learner. This can be observed from the blue mark on each screen, which indicates a screen has been open. The mark on the screen is usually white in colour before the screen is open. After opening the message, it automatically turns blue. Lessons should therefore be highly personalized.

One of the affordances of mobile phones for learning is the opportunity it gives to learners to learn anywhere and at any time (Crescente and Lee, 2011). It also makes it possible for learning to be personalized; going at each learner's own pace (Kukulska-Hulme and Traxler, 2007), which is very important for adult learners.

Lesson 2: Quizzes

The online instructor is expected to conclude each module with quiz questions to determine how much each learner has mastered what was taught. This is to serve as a form of evaluation at the end of each lesson. If a learner performs well enough such a leaner is asked to proceeds to the next module, and if not, the learner is asked to repeat the module until such a learner masters the content of that particular module and another set of quiz questions are sent to test whether the learner has mastered the content of the module. When a learner has mastered the content of a module confirmed by a good performance in the quiz questions that follow, the learner is asked to proceed to the next module and the process continues until such a learner finishes all the modules in the lesson.

Mobile phones are relevant to teaching and learning in that they allow learners learn autonomously (Callums, 2006). WhatsApp mobile learning provides for such autonomy as learners go through learning contents delivered on their mobile platform and attempt the quiz on their own.

Lesson 3: Feedback

Learners should be scored immediately they send their responses and corrections immediately sent to them. This immediacy and promptness is one of the advantages of WhatsApp mobile learning.

Some of the advantages of using mobile and wireless technologies in education were advanced to include use of relatively inexpensive everyday technology, better opportunity to acquire skills at one's own pace with a degree of privacy that may be missing when using shared computer facilities or when learners have to rely on equipment belonging to somebody else, possibility for flexibility in learning and learning on the move, access to additional content, opportunities for learners to give immediate feedbacks on learning, better assessment and diagnosis of learning problems as they occur and psychological support for those at risk of dropping out through social networks or personal guidance from the online instructor (IITE, 2010).

Lesson 4: Learner Support

Providing feedbacks and responding to students' requests and problems while interacting with content and other learning activities in this study was both heavy and marginal. Marginal because requests for support with navigating the interface while interacting with content was few and infrequent. This could be due to the linear programming (please see interface) adopted for the study. The principles guiding linear programming include: self-pacing, student testing, active responding and small steps, (Tripath and Sasikala, 2016).This usually eliminates complications while interacting with content. The linear programming presented was particularly useful for this category of learners; it made learning simple and straightforward. Heavy, when learners were presented with quizzes and when they responded to the same. The online instructor was saddled with presenting each learner with their scores individually. This was tedious. A better way of doing this would be to improvise the application with a component which can push out quizzes and also score them as on other e-learning platforms.

Conclusion

This study established how WhatsApp mobile application can be used as a teaching and learning tool and a model designed to that effect. A highlight of the model includes; adding all participants of the experiment by the online instructor to his phonebook, followed by creating a WhatsApp group and adding all the participants, creating a broadcast list for the delivery of individualized lessons and other WhatsApp mobile learning activities which is followed by sending the learning contents in frames to each learner. Appropriate time spacing was discovered to be an essential element in the use of WhatsApp mobile learning process if it will be successful. There is need to ensure that modules are not over loaded and the frames not too bulky. A maximum of two frames per day could be sent to the learners since they are usually busy. The online instructor should move at each learner's pace. The next frame is sent only when the previous one has been studied by the learner. The lessons should be highly personalized. The online instructor is also expected to conclude each module with quiz questions to determine how much each learner has mastered what was taught. This is to serve as a form of evaluation at the each lesson. If a learner performs well enough such a leaner is asked to proceed to the next module, and if not, the learner is asked to repeat the module until such a learner masters it. A set of quiz questions are thereafter sent to test whether the learner has mastered the content of the module. This study has provided a model which can be improved upon by others for literacy delivery.

Recommendations

Based on the gleanings from this exploratory study, it is recommended:

Researchers need to extensively respond to the growing need of a body of research in this area, especially building models that work for the use of social media for the improvement of literacy delivery.

Facilitators of literacy programmes should be equipped with the skills of using mobile technologies for learners in adult literacy programmes, particularly the social media such as WhatsApp for learning in the adult literacy centres.

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