

Developing Multimedia Programmes for Out-of-School Girls: The Case of GIRLS Inspire in Tanzania

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Abstract: Learning resources such as audio, video and online content are developed as supplementary learning resources to print-based materials. This study focuses on the development of multimedia learning in adult education programmes for out-of-school girls and young women in Tanzania. It defines multimedia and adult education before showing the relationship between them. The study used a descriptive paradigm and adopted a qualitative case study design. It is informed by 25 in-depth interviews that were conducted with Institute of Adult Education (IAE) facilitators in April, 2018. Participants were purposely selected based on their multimedia experience. The findings revealed that most facilitators have little experience in multimedia resource development. However, 13 self-instructional audio and audio-visual programmes were produced to elaborate and enhance the effectiveness of instructions. It will be argued that IAE should include development and use of multimedia resources in its strategic rolling plan. Learning material development policy should also include multimedia resources and create awareness.

Keywords: multimedia, adult education, out-of-school girls and young women.

Introduction

The invention of technology such as the printing press, radio, photography, television, video tapes, CDs and the Internet has brought a revolution in the growth of recorded knowledge. With technological advancement and convergence of media, people use different forms of media such as text, sound, graphics, animation and video to send or receive information, interpret and understand messages. According to Sconce (2000) media is any means by which messages can be transmitted. Romiszowki (1988) adds that the media is a transporter of messages from the source to the receiver. Although media can take different forms, the sole objective of all media is generally the same: a channel of communication.

Communicating in several ways by mixing different forms of media that use different content forms together create multimedia. Mariki's definition (2016) asserts that multimedia is a mixture of text, images, audio and video with the assistance of technology. Moreover, Wise (2000) explains multimedia as an audio-visual presentation that consists of slide presentations synchronized with sound. Mukherjee (2018) affirms that there are five elements of multimedia: text, images, audio, animation and video. In multimedia, each element has a role to play. Text is used to structure and present information, while images and video present information in visual form and are used to attract interest to the content. Audio supports other media being present and animation simplifies complex ideas and concepts. In addition, Mukherjee (2018) explains that multimedia should allow learners to control elements of the media that are required and obtain information. Also, multimedia



should have features that allow users to explore and move from one page to another as well as be easy to use. When done correctly, multimedia has clear potential to enhance the learning process and facilitate better knowledge retention.

GIRLS Inspire Project

To address illiteracy as a barrier to skills development, the Institute of Adult Education secured funds from the Commonwealth of Learning (COL) in 2015 to implement the GIRLS Inspire project in the Dodoma and Rukwa regions of Tanzania. The GIRLS Inspire project was established to mobilise the power of open and distance learning (ODL) and to provide schooling and skills training for out-of-school girls and young women. The project had the following objectives:

1. To raise awareness of child, early and forced marriage.
2. To address barriers that prevent girls' economic and social participation.
3. To promote girls' empowerment through skills development.
4. To provide a platform for girls to tell their stories to a wider audience, hence, encouraging dialogue that will lead to positive action and inspire positive transformation in families and communities throughout Tanzania.

Out-of-School Girls and Young Women: Who are They?

Out-of-school girls and young women are those who are unable to continue with their formal schooling due to various reasons such as child early and forced marriage (CEFM), pregnancy, a preference for educating boys rather than girls, domestic responsibilities, poverty, and cultural beliefs. The girls and young women are grouped into five different categories, namely, never attended school, dropped out of primary school, stopped after completing primary education, dropped out of lower secondary school, or failed lower secondary school. According to Agape Aids Control Programme (AACP, 2014), in Tanzania, two out of five girls are married before the age of 18. A report by Research on Poverty Alleviation (REPOA, 2017) indicates that CEFM often results in girls being denied access to education and health care, leadership roles and economic opportunities. This implies that girls affected by CEFM are more likely to lack the necessary skills to seek jobs and be competitive in the job market. As a result, they are likely to remain within a cycle of poverty that affects the development of their community. Due to their low socio-economic status, out-of-school girls and young women have multiple responsibilities such as providing for their families, farming, fetching water and other domestic responsibilities. Hence, the GIRLS Inspire project adopted the adult education approach as a way of learning.

How Do Out-of-School Girls and Young Women Learn?

As Mushi (2010) describes, adult education is a means of learning whereby men and women seek to improve themselves or their community by increasing their knowledge and skills. This means that undertaking any type of learning activity to gain knowledge, skills and competence can be regarded as adult education. Moreover, adult education programmes can last for a short period of time or over several years. Additionally, Mushi defines adult education as any organised educational activity outside the established formal education system. These adult education programmes are designed to target and meet the needs of specific people such as workers, women, youth and the aged. The GIRLS Inspire project is one such project. It enables girls and young women to acquire knowledge in basic

literacy, life skills and pre-vocational skills, such as food processing, soap production and batik making.

According to Mushi (2010), the modes of adult education are divided into three categories: 1) education which does not lead to any formal qualification. This includes literacy training and workshops on HIV/AIDS, agriculture, and health. 2) Education which leads to a qualification, with the goal of attaining results equivalent to the formal education system. For example, evening classes and correspondence education. And 3) education offered purposely to adults within the formal education system that consists of adult education programmes organised by institutions.

Nyerere (1965) notes that adult education is a tool for liberation and development. This makes it a major approach to resolving challenges relating to political, socio-economic and cultural factors such as child early and forced marriages, illiteracy, poverty, health care, nutrition and skills development. Knowles (1980) affirms that adult education's main goal is to improve the quality of life of an individual, for example, by teaching skills that allow learners to participate in income generating activities and improve their livelihoods. Consequently, this justifies adult education's major role, which is to bring social change in a society.

The most appropriate method of imparting knowledge and skills among adults is known as andragogy. Knowles (1980) defines andragogy as the art and science of helping adult learning. It worth briefly considering that theory of andragogy is used to refer to characteristics of adult learners in relation to their learning needs. Furthermore, it explains how adults measure their learning needs, set goals, work collaboratively and assess the value of their learning.

As Beqiri (2018) explains, when facilitating adults in their learning process, facilitators need to know the characteristics that affect their learning. These include life experience, self-directedness, goal orientation, motivation for learning and the expectations of respect and equal treatment while learning. Because of this, facilitators should explain to adult learners reasons for learning specific skills. This allows out-of-school girls and young women's performance to be tracked daily instead of having a standardised assessment, such as taking examinations, because their learning is focused on basic knowledge and skills. Furthermore, it provides an opportunity for adult learners to share and relate their prior knowledge to what they learn. Considering this, their learning activities should also be connected to their day-to-day needs.

Adults often learn by doing, therefore, the mode of instruction centres on tasks learners can perform instead of on rote memorisation. Because the learning on the project is more participatory, the facilitator can monitor the learning process and take the role of guiding, motivating, and creating a learning environment, which encourages positive interaction among adult learners. Another key feature of adult education programmes are open admission and flexible learning. These features aim to eliminate barriers to access education among marginalised individuals such as women. Therefore, well designed multimedia can be a valuable source of learning for out-of-school girls and young women. Further, they can take responsibility of their own learning because they learn with or without supervision of their facilitators.

Why Multimedia?

To reach out-of-school girls and young women, and to enhance the quality of instruction during learning sessions, the IAE adopted the use of CD-ROM-based radio and video programmes as part of the teaching and learning materials for the project. To enable this, IAE conducted an educational multimedia content development workshop to equip its facilitators with skills in multimedia script writing and content development. In the project, the use of multimedia resources allows the out-of-school girls and young women to learn through technology with or without supervision from their facilitators. This shows the ability of the out-of-school girls and young women in using technology to access education.

The use of graphics, text, and sound effects enriches learning content and makes it interactive. As explained by Hede (2002), in the theory of integrated model of multimedia effects on learning, the correct use of images and sound inputs can attract a learner's attention and increase retention of information. According to Kim and Bonk (2006), the use of multimedia technology to transmit information in learning has proved helpful and fruitful in education. This is because of its interactivity, flexibility and the combination of other media that can support learning. Thus, through multimedia, learners are able to learn skills relevant to their daily activities, when they want and how they want it at their own pace. By using technology in accessing learning materials, the out-of-school girls and young women have enough learning time before moving forward.

As Willingham (2009) states, visual media help learners to retain ideas and concepts more easily. By listening or watching video programmes, learners can easily recall the content, encouraging high retention of information among learners in the process. Furthermore, Mansbach (2015) explains that technology has eased the way complex ideas are presented within a short period of time, hence, playing an important role in popularising learning through technology. Additionally, Yowell and Rhoten (2009) note that using multimedia resources can promote active learning. This is because it provides a platform for the learner to interact with the learning material. As a result, it encourages interest in knowledge of the material being taught and assists learners in achieving expected learning outcomes.

As Mariki (2016) observes, more learners can be reached through technology due to the possibility for wider coverage. Therefore, learners, such as out-of-school girls and young women who would have been denied educational opportunities, can access classes, courses or training. Hegarty (2006) argues that multimedia resources assist learners to learn at their own pace, anytime, anywhere and independently as it is easy to access teaching and learning materials. This tends to increase opportunities for learners. Furthermore, Mariki (2016) adds that the materials are self-explanatory and require fewer facilitators, hence, it is considered as a cost-effective teaching method.

Methods

The study used a qualitative approach to find out the views, opinions and experiences of participants. Purposive sampling was used in identifying participants. The participants were selected due to their knowledge about content development, understanding of the audience, and ability to critique audio and audio-visual programmes. The participants consisted of 25 Institute of Adult Education (IAE) facilitators and studio personnel. Data was collected through interviews and 25 in-depth interviews were conducted with facilitators, and a programme producer and editor at IAE headquarters, Dar es

Salaam in April, 2018. Data collected was analysed using a thematic content analysis method. Similar information was then grouped into categories that reflected the several themes related to the participants' views, experience, and challenges in multimedia development.

Results and Discussion

Facilitators' Experiences

In relation to developing educational multimedia content, two groups of participants emerged. The study observed that the first group, who were the 17 out of the 25 participants, had no experience in multimedia content development, while the second group had previously participated in several educational multimedia content development workshops conducted at IAE and funded by COL. The study noted that all the 25 participants had used multimedia such as the Internet to search for information and PowerPoint presentations during their teaching. However, it observed that eight participants in the workshop had limited skills in multimedia content development such as writing scripts and presentation skills. The study showed that skills limitations in multimedia hindered its use during teaching sessions. Additionally, it indicated that using multimedia at an individual level is expensive due to ever changing trends in technology. This implies that users are left out and can fall behind if they do not keep up and adopt new trends.

As COL (2004) states, ANFE programmes' learning materials, such as ODL, are mainly acquired through buying, making or adapting. It is evident from the study that the GIRLS Inspire project learning materials were adapted from other alternative learning programmes such as Integrated Post Primary Education. The adapted materials were produced into audio and audio-visual material and included mathematical operations, communicating in English and Swahili, sexual and reproductive health, HIV/AIDS, gender, entrepreneurship and financial management skills, environmental and civic and human rights education. It was observed that the programmes cater for learners with different educational backgrounds such as primary school dropouts, adults and learners with special education needs. It is important to note that adult education teaching and learning materials need to be different from other types of learning materials due to the diverse characteristics of adult learners. Hence, more training should be directed to preparing materials. This implies that planning and writing of adult education learning materials is a serious challenge, which requires technical competency and good management.

Development Process of Multimedia Learning Materials

Writing Scripts

The findings of the study revealed that, to enable academic and studio staff to develop multimedia resources, the IAE conducted a workshop on multimedia. During the workshop, participants were taught about the context of adult learners, how to understand multimedia and basic principles of programme production such as researching, types of scripts, the purpose of scripts, script flow, writing scripts, content selection, language, recording and editing. The study shows that participants were also taught how to write radio and television scripts. It indicated that writing scripts for radio and television was a serious challenge, yet noteworthy because participants found it interesting because they had to master the skills to write for the "ear" (radio) and "ear and eye" (television).

The study highlights that a script is an important tool because it guides the entire programme production such as information flow, recording, location and time. Furthermore, the study noted that the script helps the presenter to present precise and clear information. This makes the programmes short and unfold in a logical way that is easy for the learners to follow. As the Associated Press (2012) explains, it is important to know the characteristics of your audience. This allows content developers to know what type of information their audience wants. The study observed that participants did research on programme content to understand the nature of adult learners to enable them to write scripts, which ensured all essential information such as who, what, why, where, when and how is answered in the programme.

The study noted that participants were taught the importance of having a powerful introduction popularly referred to as the “Big Bang” to attract the attention of learners. As a result, participants had to be creative in writing their scripts, for example, by starting the scripts with a short, interesting drama related to the content of the programme. COL (2004) explains that learning materials replace facilitators and classrooms, therefore, they need to do much more than a textbook or handout. The study showed that written scripts provided learning content and divided it into learning sessions. Moreover, the scripts had learning activities for learners to learn and apply. They created a learning environment for learners to develop their problem solving and critical thinking skills by connecting the drama to the rest of the programme content.

As indicated in the study, participants formed working groups and were instrumental in identifying relevant teaching and learning content for production before writing a script for each subject. This participatory approach was used to ensure every need of learners is well captured, as per the goals of the project. A total of 13 scripts were written and presented during the workshop. Seven video scripts were developed on gender; environment; basic arithmetic; HIV/AIDS; batik, bar and liquid soap making. Similarly, six radio scripts were written on civic education, society and ethics, entrepreneurship, introduction and greeting in English, making fruit juice and producing nutritious flour. To evaluate the content, the findings show that each group presented their script before the participants during the workshop. This allowed participants to critique the scripts and suggest necessary valuable changes to improve the scripts to ensure they meet the required needs of learners. Thereafter, a team comprising facilitators and studio staff were assigned the role of proofreading the scripts before submission for recording. This enables the producer to produce clear, concise and error-free multimedia content.

Production of Phases

The study established that production was divided into three phases, namely pre-production, production and post-production.

Pre-Production

The pre-production phase is where all jobs are done before cameras start recording and include research, budget preparation, scripting, rehearsal and preparation of equipment. The findings highlighted that a budget was prepared, production was financed with funds secured from the Commonwealth of Learning through the GIRLS Inspire project, and research was done to identify learners’ needs before the writing of scripts. Also, the studio crew prepared equipment for recording and acquired permission from the local authority council before recording at the various selected

locations. The findings show further that each member of the production crew was assigned a specific role, and the date and time for recording was set before the preparation of props and materials that complement programme content. This implies that the production team was well organised and understood the needs of learners to be able to produce effective programmes.

Production

Cameras come to life in the production stage. From the study, it is evident that shooting was done on location and scenes that required the same settings were all done together. Most of the on-location scenes were shot in Kibaha, a small town in the outskirts of Dar es Salaam, while some were recorded at IAE studio. The findings show that 12 of the actors involved in casting were from the IAE and had little or no experience in acting and presentation skills. The study observed that memorising and presenting the scripts during the recording sessions proved to be a major challenge. Actors developed microphone or camera fright, resulting in them making errors. Therefore, recording sessions would be stopped frequently. However, the programme producer would give the actors time to practice and master the script. The producer also directed them on how to speak and act in front of the microphone or camera. This enabled the actors to recompose themselves and regain their confidence. Hence, the recording sessions went on without any hitches.

Post-Production

Post-production is the final stage after shooting is complete. In this stage, the audio or audio-visual programmes come into being. The study established that the editor's main tasks included cutting and arranging recorded footage, editing and mixing of graphics, sound effects, music, adding titles and subtitles as well as credits, before coming up with the first draft of the programme. The findings show that persuasive language was used in production of the multimedia resources to appeal to learners. Additionally, Swahili was used as a means of communication as it is a common spoken language among learners. The study established that duration for audio programmes ranged between 7 to 10 minutes long, while audio-visual programmes were 15 to 20 minutes long, depending on the content of the programme. Furthermore, images and sound effects were used in the programmes to enliven the learning experience and portray reality to learners. This helps create a forum of dialogue between different levels of interest and encourages interactive learning.

The study noted that a team of facilitators, learners and media experts were invited to listen and watch recorded programmes and give their comments on whether the programmes met the needs of learners and would be understood with ease. It was established that valuable comments were suggested and incorporated before producing the final content onto a master file. Finally, the study noted that the availability of radio and video programmes produced enabled the out-of-school girls and young women to have access to education through technology in the GIRLS Inspire project.

Conclusion

In general, multimedia is key to increasing access to education. People learn and understand better when ideas are expressed in words and pictures rather than words alone, as explained by Hede's theory of integrated model of multimedia effects on learning. Producing multimedia learning resources can be time consuming and costly in terms of content research and selection, script writing, acting, recording, editing and having the right equipment. Although some IAE facilitators have the

capability to develop multimedia learning resources, the majority of them still need more knowledge and skills concerning multimedia, content selection, script writing and presenting skills. Production of multimedia teaching and learning materials can be successful if the necessary support such as training, financial support and equipment is provided. Therefore, the study recommends the development of multimedia learning materials; that the use of multimedia resources be part of the Institute of Adult Education's rolling strategic plan; and that the IAE's learning material development policy should include multimedia learning resources and creation of awareness among staff on the types of multimedia developed and their importance. Without including educational designers and facilitators, the use of multimedia in learning sessions will remain incomplete.

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