Original Article

Teacher Education in Sub-Saharan Africa (TESSA) Open Educational Resources (OER) in the Teaching and Learning of Art

Sedudji Kwesi Tayviah[1], Ernest Okae-Anti[2]

[1]Komenda College of Education, Komenda, Ghana.
[2]University of Education, Winneba, Ghana.

Abstract - Interviewing pre-service and in-service Art teachers within the Effutu and Komenda municipalities indicated that the majority of Art teachers did not have knowledge of the existence of TESSA OER, and those who had heard of the existence of TESSA OER did not receive training on the use of TESSA OER during pre-service teaching and in-service teaching. So they are unable to use the TESSA resources. Art teachers lamented how expensive it is to produce or purchase teaching and learning materials for active teaching and the numerous inconveniences that come with transporting and sharing teaching and learning materials when needed. Art teachers suggested they could have done better in achieving better teaching and learning outcomes if they had knowledge and training in the use of TESSA OER, especially within the period of COVID-19-related restrictions. The study gathered that using TESSA OER in Art lessons would greatly enhance the teaching and learning process, improve students' performance, and enhance teaching and learning outcomes.

Keywords - TESSA, OER, Active learning, Teaching and learning outcomes.

1. Introduction

Education is associated with socio-economic growth, and as such, quality education amounts to problem-solving skills and the ability to design tailor-made solutions to the nation's growing problems.

Creative Arts education serves as an instrument to raise problem-solving individuals equipped with creative and innovative skills. In achieving the above, Teacher Education in Sub-Saharan African (TESSA) resources can be efficiently used in planning lessons. This research sought to explore TESSA Open Education Resources (OER), throwing more light on the need for its adoption in the teaching and learning of art. Readings from Ngman-Wara and Acquah (2015) support the idea that TESSA resources provide innovative ways of presenting science lessons to their pupils. Similarly, in the area of art, the same can be achieved.

Surfing the TESSA menu on the Open Learn Create website provides available subject resources in various subject areas, including Arts, with the objective of supporting school-based education and the training of teachers. TESSA Ghana provides a curriculum framework in science, and further readings indicate that its implementation has received study progress in the area of science in some selected Teacher Training Colleges in Ghana and the University of Education, Winneba. However, the same cannot be said of it in the study area of art.

In 2015, Ngman-Wara and Acquah, in a publication, recommended that copies of TESSA Secondary Science modules be made available in all schools for effective implementation by teachers. In this light, repeating the same in the area of art in as much as STEAM (Science, Technology, Engineering, Arts, and Mathematics) has been introduced in the Ghanaian school curriculum would support effective teaching of art at the various academic levels of Art education. Briefing Art teachers on TESSA OER and guiding them through the TESSA Ghana website by introducing them to the available electronic discussion features on the Future Learn website --an OER with online tools to support learning-- birthed a positive response from Art teachers. Art teachers suggested they could have done better if they had knowledge and training in using TESSA OER. Art teachers anticipated that lessons could have been taught more easily and students' performance would have been enhanced by adopting TESSA OER. In view of this, it is important to establish the relevance of the use of TESSA OER in the active teaching and learning of art and examine how TESSA OER can be adopted in training pre-service Art teachers and in-service Art teachers.

According to DPWD (2014), Teacher Education in Sub-Saharan Africa (TESSA) is a program that, in collaboration with the Open University of the UK and with over 100 African educators, has produced free study units that improve classroom practices across thirteen different countries. DPWD (2014) further states that an estimated half a million teachers and their pupils are benefiting from their engagement with TESSA.

Hardman et al. (2011), as cited by Stutchbury et al. (2013), indicate that the TESSA programme (2005- present) is based on the premise that improving the quality of teaching is key to changes in education across Africa. It aims to support teacher educators and teachers in improving teaching practices through a focus on promoting effective pedagogy.

In November 2017, Teacher Education in Sub-Saharan Africa (TESSA), Future Learn, and The Open University partnered to run a Massive Open Online Course, 'Making Teacher Education Relevant for 21st Century Africa', on Future Learn. The TESSA course aimed to support teacher education in developing the teaching approaches they are trying to promote. The course was undertaken within a four-week period in which one of the researchers for this study -- *an Art teacher*-- was a participant. The course focused on the following: modeling active teaching and learning and learner-centered education, using Information and Communication Technology (ICT) to support active teaching and learning, accompanied by an introduction to the UNESCO ICT Competency Framework for Teachers. Participants of this course were also encouraged to think and use accessible technology to enhance teaching. The last week of the course focused on Open Educational Resources (OER) – free, accessible, adaptable resources- where participants learned how OER can be used. The cumulative experiences of the participating researcher being the only art teacher among mathematics and science teachers during the MOOC brought to light the need to promote the use of TESSA OER in pre-service and in-service Art teachers.

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focused on the following: modeling active teaching and learning and learner-centered education; the use of information and communication technology (ICT) to support active teaching and learning; and an introduction to the UNESCO ICT Competency Framework for Teachers. Participants in this course were also encouraged to think about and use accessible technology to enhance teaching. The last week of the course focused on Open Educational Resources (OER)—free, accessible, adaptable resources—where participants learned how OER can be used. The cumulative experiences of the participating researcher being the only art teacher among mathematics and science teachers during the MOOC brought to light the need to promote the use of TESSA OER among pre-service and in-service Art teachers.

2. Research Questions

The following questions served as guides in this study:
- What is the relevance of using TESSA OER in actively teaching art?
- What mediums can be adopted in training pre-service Art teachers and in-service Art teachers in the use of TESSA OER?

3. Materials and Methods

This study blended qualitative and quantitative approaches to address the research questions. Interviews were conducted with pre-service and in-service teachers to produce data for analysis.

3.1. Research Instruments

Data collection for this study focused on establishing the importance of adopting the use of TESSA OER in active art teaching. In this light, the researchers employed direct observations, interviews, and review documents. Interviews were split into two phases. The first inquired from respondents whether they received TESSA OER training during their tertiary training. Respondents were later introduced to the TESSA OER website. They were allowed a period of four weeks to explore the use of the TESSA OER website on their own. They were encouraged to practice its use in their lesson preparation as well as their teaching and learning activities for the purpose of this study. The second phase of the interviews gathered respondents' feedback after exploring the use of the TESSA OER website for lesson preparation and its use in their teaching and learning activities.

3.2. Data Analysis Plan

The data gathered from interviews was transcribed and analyzed over a period of six weeks after collection. The data collected from the field was analyzed and presented thematically based on qualitative accounts of respondents' responses. This was strategic in interpreting the various aspects of the research questions.

The research questions of this study served as a guide in the classification of themes for the data analysis. Themes were counted and drawn based on the consistency of responses from respondents. The data was analyzed both manually and digitally.

3.3. Population, Sample and Technique

This research focused primarily on pre-service and in-service Art teachers in the Department of Art Education at the University of Education, Winneba, and Komenda College of Education, Komenda. The total accessible population for this study was recorded as 40. This study adopted the purposive sampling technique presented in the table below.

Table 1. Statistics of Respondents

Entry Number	Description	Number of Respondents
1	Pre-service Art teachers on teaching practice	17
2	In-service Art teachers (Pre-Tertiary Level)	17
3	In-service Art teachers (Tertiary Level)	6
4	Total	40

Source: Field Study, 2018

4. Results and Discussion

Discussions from the findings of this study were organized into categories that directly sought to answer the main areas of the research questions that guided the study. Data from the study indicated that respondents did not receive training in using TESSA OER during their training at the tertiary level. As a part of the purpose of this study was to introduce respondents to TESSA OER to facilitate data collection that focused on their experiences gathered from exploring the use of TESSA OER as Art teachers, which was successfully done.

The following is a table that presents data gathered from respondents on the relevance of using TESSA OER in the active teaching of art.

4.1. What is the Relevance of Using TESSA OER in Active Teaching of Art?

Feedback from respondents indicated that it was useful to carry out training in the use of TESSA OER in the teaching of art. This assertion is based on the evidence gathered from 38 respondents, representing 95%, who indicated that TESSA OER helped improve their lesson preparation. Respondents compared this blended method with the conventional method of lesson preparation, and the majority agreed that TESSA OER provided unique learner-based creative strategies in teaching Arts. Respondents indicated that lessons were livelier, and as Art teachers, they had the opportunity to share ideas with other Art teachers across the continent, thereby exposing them to new and innovative methods of delivering Art lessons.

The majority (85%) of respondents gave the indication that topics on the TESSA OER website were clearly explained to them, while 15% were of the view that topics on the TESSA OER platform were not clearly explained. It appeared that even though TESSA OER provided elaborate guidelines for teaching Art lessons, some topics were absent when some respondents accessed the website. All respondents agreed that TESSA OER simplified their lesson preparation and delivery processes and exposed them to 21st-century approaches to teaching selected Art topics.

Table 2. The relevance of using TESSA OER in active teaching of art

Entry Number	Description	Number of Respondents		Percentage %	
		Yes	No	Yes	No
1	*(In-service teachers only)* Did you receive training on using TESSA OER during your tertiary training?	0	23	0	100
2	*(Pre-service teachers on teaching practice only)* Have you received training on using TESSA OER at your current tertiary institution?	0	17	0	100
3	Have you explored the use of TESSA OER on your own?	40	0	100	0
4	TESSA OER helped improve lesson preparation.	38	2	95	5
5	Topics on the TESSA OER website are clearly explained.	34	6	85	15
6	Modules on the TESSA OER website support teaching, learning and teacher education and develop specific approaches.	40	0	100	0

Source: Field Study, 2018

This study found that, compared with conventional lesson preparation and delivery methodologies, the use of TESSA OER greatly improved lesson preparation and delivery. Respondents affirmed that using the TESSA OER resources promoted active teaching as it presented them with various hands-on activities for learners studying art.

TESSA OER is inarguably focused on equipping Art teachers with teaching strategies that focus on promoting effective teaching methods that overall positively influence learners even outside of regular contact hours.

All respondents accessed, representing 100%, agreed that the modules on the TESSA OER website supported teaching, learning, and teacher education and developed specific approaches teachers sought to improve.

4.2. What Mediums Can Be Adopted in Training Pre-Service Art Teachers and In-Service Art Teachers in Using TESSA OER?

TESSA OERs are generally provided via electronic mediums. TESSA OER is hosted on an online website. Teachers are required to access resources electronically using electronic devices. With the pervasive influence of mobile devices like tablets and smartphones, TESSA OER can be accessed with the click of a button. This brings TESSA OER to the fingertips of teachers.

On the subject of mediums by which pre-service and in-service Art teacher's awareness can be drawn to the use of TESSA OER to enhance the preparation and delivery of lessons, respondents generally suggested that curriculum reforms in tertiary institutions, professional development sessions, and in-service training workshops are suitable mediums for introducing pre-service and in-service Art teachers, respectively, to TESSA OER. All respondents suggested that the tertiary curriculum for the teaching of Arts should include the introduction of TESSA OER to student-teachers.

Respondents were of the view that if they had knowledge of TESSA OER at the time of their training during the foundational stages, they would have employed the resources provided on the TESSA OER platform, and this would have greatly improved their teaching and learning outcomes in their past teaching and learning experiences.

After having accessed and explored the TESSA OER website during the study, 40 respondents, representing 100% of the sample, maintained that the absence of TESSA OER in their past during lesson planning and delivery negatively influenced teaching and learning outcomes compared with lesson plans that involved the use of TESSA OER. In this regard, the respondents agreed that teacher training institutions like the University of Education Winneba and Komenda College of Education would do their students a great service if they introduced pre-service Art teachers to TESSA OER and encouraged its use during microteaching sessions and supported teaching in schools. All respondents agreed to the call for organizing in-service training for in-service Art teachers on the use of TESSA OER.

5. Conclusion

In teaching Art education, it is inarguable that technology in teaching and learning greatly influences teaching and learning outcomes. In view of this, the relevance of TESSA OER cannot be overestimated since it encourages students' participation because it dwells on active teaching, which promotes a learner-centered approach. The level of learner participation was considered satisfactory, and this blended technique indicates a great advantage for the professional development of teachers. This helps teachers broaden their scope and exposes them to innovative teaching pedagogies. TESSA OER contains motivational resources that may help learners develop a positive attitude towards learning. Hence, employing the use of TESSA OER in the active teaching of art will benefit teaching and learning and improve the quality of Art education in Ghana.

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