

Towards Enhancing Quality Physical Education Lessons: The Role of Improvisation

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ABSTRACT

The role of improvisation is crucial in the formation of new ideas, and it is paramount where real objects are difficult to come across. However, there is little literature on the role of improvisation in the classroom teaching and teacher education context and how its practices in teaching could enhance education, as well as students learning in different contexts and domains. Therefore, this study examined the perceptions of student-teachers at colleges of education in Ghana on the role of improvisation in enhancing quality Physical Education lessons. The study adopted a qualitative approach as the research design to collect data from 10 student-teachers. The instrument used to gather the data was semi-structured interviews while purposive and random sampling techniques were employed to select the participants. Thematic analysis was the main tool for the data analysis. The study revealed five themes namely: (1) promote understanding and maximise learners' participation, (2) Reduce cost and expenditure, (3) Assist to achieve learning objectives (4) Promote creativity and innovation and (5) Make the learning experience real. These themes provide evidence of the role of improvisation in enhancing quality physical education lessons among college of education students in the Ashanti Region of Ghana. The study recommends that teachers should be creative and have in-depth knowledge of improvisation to assist in effective teaching and learning to improve learners' experiences.

Keywords: Colleges of Education, Improvisation, Student-teachers.

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I. INTRODUCTION

Of late, the work of teachers has changed from conveying information to facilitating the construction of knowledge (Agarkar, 2019). Contemporary teaching methods demand that pupils need to be motivated, be involved, and be seen, and also want variation and something exciting as they are enquiring. Therefore, what you improvise becomes professional, and even better than something scripted you adhere to, simply because it is modified to the situation (Aadland *et al.*, 2017). Again, research suggests that improvisation is a professional skill for teacher educators implying that other areas within the curriculum demand improvisation (Holdhus *et al.*, 2016). With this, improvisation is a key curricular concept in teaching, and it is something that many teachers agree is done daily. Considering this, teachers and educators can engage in a theoretical discussion about improvisation from a casual and everyday point of view, as well as from a professional point of view with a focus on improvisational practices in professions that enhance the activity in question (Aadland *et al.*, 2017).

Therefore, every day teachers are challenged to act in

accordance with the situational needs and requirements arising in different pedagogical situations (Holdhus *et al.*, 2016). The use of improvisation has been discussed in several studies. For instance, Holdhus *et al.*, (2016) identified four different features of improvisation, which are relevant in any discussion about improvisation being a key concept in education: (1) Communication and dialogues: Communication in reference to improvisation can be defined along a continuum of two positions: From the internal process of communication to the external results. The intent can also differ from highlighting the impact on the audience to underlining the process of exploration. (2) Structure and design: All traditions claim that to be a good professional improviser, you have to be aware of and skilled in planning and structural thinking. (3) Repertoire: Learnable repertoires, shaped by content knowledge and pedagogical content knowledge, are an underlying prerequisite for improvisation in education. (4) Context: Professional improvisational practices are context-dependent and domain-specific to a great extent.

Improvisation is a concept that every teacher should understand and adopt. For example, The COVID-19 pandemic undermined existing practices and changed the

rules in unusual ways (Bryson *et al.*, 2020; Horton, 2020; Žižek, 2020). This resulted in responsive improvisation providing a “buffering effect” in reaction to exogenous shock expected to preserve and attain expected outcomes (Villar & Miralles, 2020). As the pandemic compelled educational institutions to close down, the effect included the transition from classroom-based teaching to online teaching. Although challenging, there was the need to alter the existing methods of teaching. Bryson and Andres (2020) concur that the advent of the covid-19 pandemic led to facilitating and blending extensive and intensive online learning experiences. Many areas were affected including both theory and practical subjects demanding that teachers who are creative and could improvise were able to meet the expected goals. However, improvisation is considered to be most dominant and effective in areas and activities like jazz and performing arts (Barker, 2010). Contrariwise, the concept of improvisational practices in teaching physical education is also a legitimate and much-needed element in teaching (Aadland *et al.*, 2017).

Ugwuanyi (2013) asserted that effective physical education programmes cannot exist without equipment, implying that they are essential to effective teaching and learning. It is also relevant to note that learners who intend to become coaches, teachers, and other sport-related professionals should be familiar with equipment and supplies in the field to enable them to acquire relevant sports science-related skills. The absence or inadequate equipment and supplies result in the skipping of relevant concepts or teachers refusing to teach them. Others try to improvise equipment and supplies to enable them to deliver their lessons. This can be relevant as it assists to attain educational objectives.

Aadland *et al.* (2017) explored the concept of improvisation as a professional teaching skill using theoretical, conceptual and empirical literature. The intent was to give a map of the terrain of improvisation in education rather than a comprehensive interpretation of different educational theories and curriculum methods regarding improvisational elements (Montuori, 2005). The researchers hypothesised that further research is needed within classroom teaching and teacher education contexts to explore how improvisational practices in teaching could enhance education, as well as student learning in different domains and contexts ((Biesta, 2015; Cochran-Smith *et al.*, 2015; Aadland *et al.*, 2017). To augment these statements, we extend the discussion by examining the topic from the Ghanaian perspective where it is well-established that there are challenges in getting equipment and supplies to teach PE in Ghanaian schools (Domfeh & Odoom, 2018). Therefore, the purpose of this study was to examine the role of improvisation in enhancing quality physical education lessons among student-teachers at colleges of education in the Ashanti Region of Ghana.

In the theoretical realm, the study was drawn on the constructivism theory of learning which is related to a gathering of hypotheses about learning that is a subset of cognitive hypotheses, as they show recommendations about data handling. Jean Piaget is regularly depicted as the establishing scholar of constructivism. He proposed a set of learning, named hereditary epistemology, which reviewed the forms through which learners created their information about the world. He utilized prior thinkers' ideas of schemata,

systems connecting concepts, recollections and perceptions, which empower people to create speculations around the world, as the basis of his demonstration. Piaget (1952) described two forms by which unused data is included in existing schemata: absorption occurs when novel data are reinterpreted to fit with pre-existing information; accommodation includes the modification of existing information to accept unused information. Learning is seen as proceeding through a cycle of absorption, cognitive disequilibrium, settlement, cognitive balance, and a return to accommodation.

This theory was built upon by several researchers including Vygotsky and Cole (1978) who created the construct of the zone of proximal improvement (ZPD), which he portrayed as the set of assignments that are not available to a learner working autonomously but become achievable with bolster from instructors or peers. This thought prefigured the development of scaffolding (Wood *et al.*, 1976), an approach in which an educator expects the troubles a learner may experience with a task and gives suitable data to bridge the gap between the specified learning and the student's current position. A central postulation of Vygotsky's hypothesis was that concepts show up initially in the social realm and later within the psychological domain (Vygotsky, 1931/1981). A learner is likely to come across the scientific concept of coercion at first in social conversation in a classroom before internalizing the idea. An assemblage of constructivist assumptions, named social constructivists, built on Vygotsky's claim to develop models of learning that emphasise the role of interactions between individuals. In this manner, instead of constructing learning as the result of handling an individual's cognitive frameworks, social constructivists portray learning as the selection of the practices and conventions of a specific culture or group. In this conceptualisation, the point of science instruction is for learners to embrace comparative approaches to making sense of the world as experienced researchers. One of the foremost compelling social constructivists learning speculations emerging out of the work of Vygotsky and others is activity theory (Engeström, 1987). Activity theory suggests that a person needs to comprehend their relationship with a wider community and invigorates their understanding of the multiple sensitivities that may be distinctive to individuals of the community.

Based on the above discussions it could be analysed that the presumption that learning is an active process performed by the person, suggests a specific conceptualisation on the part of the educator. Instead of acting solely as a source of information, the instructor is seen as a facilitator of learning, that's they bolster students' acts of meaning-making. Studies on children's understanding of science have driven a common approach to science instruction that encourages teachers to evaluate students' pre-existing thoughts and after that, create or change students' alternative frameworks to encourage the acknowledgment of new material. In the present study, it is noteworthy for teachers to provide a lot of resources for students to interact with them to facilitate learning. By doing this, the work of the teacher will be easier when facilitating. This can enable the students to understand the concepts that are taught. One of the easiest ways to accomplish this task is to know the usefulness of improvisation materials so that they

can acquire and use them in their lessons when necessary.

The study also used grounded in the social learning which recognizes that, individuals learn modern behaviours through observation of others and first-hand experiences. Such individuals after watching, mimic others through support. It is subsequently common for youthful people to mimic the conduct of people they appreciate (Monaghan & Derevensky, 2008; Shin & Montalto, 2013). Displaying conduct illustrated by well-known celebrities, movie characters or part models making advertisements on online wagering destinations would conceivably encourage this action among the youth. In the current study, learners through interaction with learning materials can understand concepts better. Although improvised materials for teaching and learning do not provide learners with the opportunity to mimic the conduct of people, it provides them with first-hand experience. Therefore, teachers should make arrangements for improvised materials when real objects are not available to facilitate the understanding of the learners.

II. METHOD

A. Research Design

The study adopted a qualitative phenomenological approach to examine the perception of 10 student-teachers at colleges of education in the Ashanti Region of Ghana. The researchers' philosophical assumptions are based on interpretivism which posits that reality is perceived through intersubjectivity and consideration of meanings as well as understandings of social and experiential aspects in research (Saunders *et al.*, 2012). The researchers are, therefore, sensitive toward individual meanings and contributions rather than being compromised through the positivist research philosophy (Alharahsheh & Pius, 2020). In this study, the researchers were interested in examining the direct experience of the student-teachers on the research topic.

B. Participants

The targeted population for this study was all college of education students in the Ashanti Region of Ghana. Notwithstanding, the accessible population comprises students from only the two colleges of education that offer primary education and are affiliated with the Kwame Nkrumah University of Science and Technology (KNUST). These two colleges were strategically selected because; the student-teachers from these two institutions offer primary education and therefore, study Physical Education-related courses. Also, two of the researchers are tutors in the selected colleges and are aware that the students were asked to improvised some materials for teaching Physical Education and Music and Dance. In a study of this nature, the purpose was to obtain thorough information on the topic and therefore, require participants with detailed knowledge (Buchanan, 2012). Again, based on Patton's (1990) assertion that in qualitative studies' sample size is achieved in agreement with the aim, what will be appreciated and reliable; what can be done with the time and resources available to the researcher(s); the investigators supported the idea that there is no method for sample size in qualitative inquiry. Therefore, ten students comprising five males and five females were purposively selected to participate in the

research. Again, since the study cannot involve all the students, the researchers randomly selected only a few students for the study. However, the selection was based on only students who were willing and ready to participate. All the participants were in level 300 with ages ranging from 20-28 years. To promote confidentiality, each participant was allowed to mention how he or she wanted to be referred to in the analysis.

C. Instrumentation

A semi-structured interview designed by the researchers was the main tool for collecting the data. Before the main interview, one of the researchers conducted a pilot test with one of the student-teachers. This provided the opportunity to reword and review some of the questions where necessary. The interview questions were structured to allow the participants to express their views. The central question was "what is the role of improvisation in enhancing quality physical education lessons among student-teachers at colleges of education in the Ashanti Region of Ghana?" Where appropriate the interviewers allowed the participants to further explain relevant and stimulating responses. Questions such as the level of students, the area of specialisation, courses studied so far, courses that required the use of teaching and learning materials, etc. were asked to usher the participants into the interview and to prepare them for the main questions.

D. Data Collection Procedure

During the second semester of 2021, students offering primary education at level 300 were given a project which required them to present improvised Physical Education and Music and Dance materials at a low cost. Therefore, the students have an idea about PE's improvised teaching and learning materials. Once they were able to come out with these materials, they became aware of how improvisation materials can be acquired within the environment. The interviews lasted for 10-15 minutes and were audio-recorded. Two of the researchers who are tutors at colleges of education in the Ashanti Region interviewed five participants each. Ethical approval was obtained from the colleges of the researchers. Before the start of the main questions, a preamble explaining the purpose of the study was explained to each of the participants to get their consent first. It was made known to the participants that the interviews will be recorded. Afterwards, they were made to sign consent forms and were provided with the opportunity to use any nickname of their choice to hide their identity in writing the results.

E. Validity and Reliability

Member checking was used to ensure the trustworthiness of the data. During this part, the participants were allowed to review the transcribed data and confirm if they represent what they wanted to say during the interview and provide additional views or information (Lincoln & Guba, 1985). Seven of the participants representing 70% confirmed that the results were a true reflection of whatever they wanted to say. They made a few additions and subtractions.

F. Data Analysis

The study used thematic analysis propounded by Clarke *et al* (2015). This required the transcription of the recorded

interviews followed by coding. At the initial stage, the researchers examined and re-read the transcripts to identify potential themes. The second stage of the analysis involved the researchers reviewing the codes identified at the initial stage. Afterwards, the researchers considered specifically how to hold the diversity of the initial codes, whereas creating overarching elements, and higher-level sub-themes. This process was informed by the research question, the role of improvisation in enhancing quality physical education lessons. In the third stage, analysis conducted by the researchers recognized cites that were consistent with the overarching themes. In the subsequent stage, the researchers reviewed the themes before characterizing and naming them. Lastly, once the researchers finalized themes, the write-up of the report started.

III. RESULTS

The analysis produced five themes.

1) *Promote understanding and maximise learners' participation*

Almost all the participants asserted that improvisation could assist to promote learners' understanding which makes them be actively involved in lessons. Below are some of the illustrative examples from the text:

Hephzibah: *It gets learners involved in the lesson since they are the ones who made the materials to be used in teaching. It makes learners understand whatever is being taught. Teaching is also made easier with the use of improvised materials.*

Participants further stressed the maximisation of learners' participation by concluding that it makes them happy.

HEAVY JOE: *once learners understand the concepts being taught, they become actively involved in the lessons which makes them very happy and also contributes to the discussion.*

2) *Reduce cost and expenditure*

To the participants, improvisation is making use of available materials when there are challenges with getting money to buy real objects. The following were some of the statements made to support this finding:

PADDY: *It makes teaching and learning less expensive since physical education involves the use of a lot of materials in teaching and all cannot be bought.*

BERKY: *It also makes things economical. They are cost-effective. Sometimes, when you improvise the cost you are going to bear is brought down so financially when you are not stable the improvised material will help you so that you will not spend much money on the object.*

3) *Assist to achieve learning objectives*

In their account, most of the participants highlighted that improvised materials assist to achieve learning objectives.

SPARKLES: *It helps to achieve learning objectives and saves time spent in teaching which helps students to get a deeper understanding of what is taught.* The same theme brought the idea that teachers should learn how to improvise to enable them to cover most of the topics.

GIDEON: *If I cannot get all the materials for a lesson that I want to teach for the term to move on, I believe I cannot*

complete all but I always have to make sure I cover most of the important ones. So, improvisation can help me to achieve my objectives in the long run in a term.

4) *Promote creativity and innovation*

The fourth theme is the perception that improvisation enhances creativity and innovation since it is much concerned with the use of available resources.

MARVELOUS: *so, one other benefit of improvisation is that it helps lessons to be practical, it helps them to be creative by improvising, I have improvised to teach them something so they also thought of designing the same thing and it makes them innovative, so instead of me improvising teaching and learning materials I am also teaching the learners to develop something, I am opening their minds.*

Other participants argued that improvisation makes them think outside the classroom.

SAN: *it makes you think beyond your environment, you are always thinking of getting something to represent something and that makes teachers think creatively. Creativity is therefore enhanced because of improvisation.*

To the other participants, improvisation is much concerned about the use of readily available resources in the environment.

MASH: *when one wants to improvise the focus is on using the already available materials in the environment therefore, the whole thing is about being creative.*

5) *Make learning experience real*

Participants perceived that once a teacher can improvise, it means that learning is no longer abstract. Therefore, the experience of the learner is more enhanced if they interact with real objects. In this theme, the participants contended that improvisation eliminates teaching in abstracts.

HEAVY JOE: *it makes things a bit more real than teaching them abstract. When you teach it abstract may be, sometimes you think about it so how, so they think about it, but when you improvised maybe you have a ball and you can buy a ball and you have any round object that represents a ball, they are going to know that this is how a ball looks, we use the legs to play, we do this and that so it is a bit better than teaching it abstract.*

Other participants explain how improvisation can make teaching and learning lively thereby improving learners' experience.

HAJIA ONE: *My understanding of improvisation is using something rather than the original to replace something. For instance, when you have a PE practical and you are to play a ball but you don't have the ball, the teacher can use available materials to create a ball. This makes it somehow real because the size can be the same.*

Some of the participants argued that improvisation can assist teachers in research which can assist to improve learners' experiences.

HEAVY JOE: *all teachers should learn, we should research improvisation, sometimes when you don't have the money to buy a real material to teach in the classroom we can improvise our material so that the lesson can be a bit attractive and interesting because teaching in the abstract in some way, it is a kind of a thing that is not helpful to students so if you don't have the real material you can improvise some make the lesson interesting and interactive.*

IV. DISCUSSION OF RESULTS

The study revealed that improvisation; promotes understanding and maximises learners' participation, reduces cost and expenditure, assists to achieve learning objectives, promotes creativity and innovation, and makes the learning experience real. Therefore, new teachers need to understand the concept of improvisation as a skill and as they become exposed to daily challenges within the classroom, they will become experienced. This was supported by Sawyer (2011) who reported that experienced teachers appear to be more improvisatory in their daily work than new teachers. Knight *et al.* (2015) describe recent trends in research on practice-based teacher education and maintained that "novices must learn to deal with uncertainty as teaching in this manner is somewhat improvisational" (p. 106). This suggests that new teachers have a lot to learn concerning how to improvise as professional teachers.

Emergent from this study identifies that improvisation promotes understanding and maximises learners' participation in lessons. The social learning theory posits that individuals learn modern behaviours through observation of others and first-hand experiences. Although improvised materials for teaching and learning do not provide learners with the opportunity to mimic the conduct of people, it provides learners with first-hand experience of learning materials or similar objects which can facilitate understanding. The findings also support the Constructivism theory of teaching which believes that knowledge is created through one's personal experiences and relations with the outside world. Thus, the learners take up an active role in the construction of knowledge, and teachers facilitate this endeavour (Agarkar, 2019). The role of a teacher is to create situations and provide facilities to assist learners in an attempt to gain knowledge.

Another key finding of this study is that improvisation assists teachers to achieve learning objectives. It is a major challenge when teachers are unable to get resources that can aid them in effectively teaching a particular topic. Teachers are likely to leave some aspects of the lesson, and this cannot assist them to complete the required workload. Ugwuanyi (2013) reported that improvisation is relevant in the delivery of physical education lessons and the absence of inadequate equipment, and supplies result in the skipping of relevant concepts or teachers refusing to teach them.

The cost involves in acquiring teaching and learning materials is a challenge to many educational institutions, especially in the field of physical education. In most of the studies, this has been reported as resources and finance. Hardman and Marshall (2000) and Mandigo *et al.* (2004) summarised that one of the prominent problems hindering the teaching of primary school PE was poor financial and material support. Rainer *et al.* (2012) confirmed that resource and finance was the major challenge faced by headteachers within primary schools in providing high-quality physical education and school sport. The present study concurs that improvisation can assist to reduce cost and expenditure in acquiring teaching and learning materials. Therefore, teachers acquiring knowledge on improvisation and subsequent use of improvised materials to teach in schools

can partly reduce the resources and financial challenges in teaching PE.

The participants mentioned creativity and innovation as the role of improvisation in promoting quality physical education lessons. Through improvisation, learners try to improvise the materials that the teacher used to teach them. This will not make them only creative but also innovative. This finding supports the constructivism approach which sees learning as a process in which learners effectively build or construct new thoughts and ideas based upon earlier knowledge and new ideas (Agarkar, 2019). The constructivist teacher is seen as a facilitator who encourages students to find standards and develop information inside a given system or structure. Learning occurs well when people are involved in constructing a product. Therefore, teachers should further assist learners to equally improvise some of the materials used in teaching.

V. CONCLUSION AND SUGGESTIONS

Improvisation is key to facilitating teaching and learning in educational institutions. Improvisation assists teaching and learning to be done effectively. Therefore, educators should be creative and have an in-depth knowledge of how to improvise appropriate materials to teach relevant topics and courses in academia and discard the teaching in abstracts. The study, therefore, makes the following suggestions:

1. There is a need for future studies to explore the experiences of teachers who are currently in the field of the research topic. Again, such a study should involve large participants selected from different levels of education. As it stands, the current results cannot be extrapolated as the views of 10 student-teachers at colleges of education in a certain region of a country cannot provide a true reflection of teachers' perceptions of the role of improvisation.

2. Besides, since improvisation is identified to be key in facilitating teaching and learning, there should be studies to determine whether it should be an important part of teacher education. This can assist novice teachers to have knowledge and skills on how to come out with improvisation when the need arises.

3. The current study focused on improvised materials in teaching PE courses only. While there is evidence of using improvisation to teach in areas and activities like jazz and performing arts (Barker, 2010), little is known about other courses. Therefore, studies are required to ascertain how improvisation will be relevant in enhancing quality teaching and learning in other courses.

CONFLICT OF INTEREST

Authors declare that they do not have any conflict of interest.

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