



Application of Participatory Teaching and Learning Approach in Teacher Training Colleges in Tanzania

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Authors' contributions

This work was carried out in collaboration between all authors who read and approved the final manuscript. Author BN designed the study and wrote the first draft of the manuscript. Authors ADO and YSM managed the analyses of the study.

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ABSTRACT

In this study, the use of participatory approach in teaching and learning in teachers colleges was explored with an aim of finding out whether tutors apply participatory approach in the classroom in order to improve teaching and learning among teacher trainees. Two public teachers colleges that are Tarime and Bunda teachers colleges were studied. Qualitative approach supplemented with quantitative data was employed. Stratified sampling, simple random sampling and purposive sampling procedures were used to select 96 respondents for the study. Furthermore, the study used semi-structured interview, Focused Group Discussion, questionnaires, observation and document review to collect data. The quantitative data were manually analysed and presented in frequencies, percentages and tables while qualitative data were subjected to content analysis. The study found that tutors use participatory approach in teaching and learning with the question and answers technique in the classroom. The study found that tutors had the positive attitude towards the use of participatory approach. The study recommends that the government should direct more resources to teacher colleges and schools to render the working environment conducive for effective teaching and learning. Planned in-service training programmes and workshops should be initiated and sustained at school, college, district and national level to update teachers and tutors content knowledge and pedagogical skills.

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1. INTRODUCTION

Authentic learning takes place when there is an active engagement of the learner in producing or reproducing knowledge and understanding [1]. Teaching today requires new approaches that favour generic learning and the ability to develop intellectual skills far beyond memorization of facts, formulas and events [2]. In realising this, Tanzania government through the Ministry of Education and Culture (MOEC) established a new curriculum in 2005 which recommends that teaching and learning methods should be participatory and teachers should act as the facilitators [3]. That is the learner shall be placed at the focus of all the decisions that are made about the curriculum and how it will be delivered. The teacher shall become a facilitator, motivator and a promoter of learning during the classroom interactions. Therefore, learning shall be rooted in the conception of constructivism where the student gets opportunities to interact with environment through well organized tasks, dialogue and reflections on learners' conceptions and eventually arriving at agreed solutions through use of various senses and in built multiple-intelligences [4].

Among the participatory methods recommended by [4] are demonstrations, group discussion, study visits/ tour, role play, case study, film show, debates, group work to co-produce reports and presentations, conducting searches for relevant materials in the library and on line, games, simulation and projects, summarizing readings, classroom based problem solving and enquiry. Others are: practice of technical or laboratory skills, posing problems as well as solving those set by the teacher, and analysing case studies. It should be noted that the highest quality teachers, those most capable of helping their students learn, have deep mastery of both their subject matter and pedagogy [5, 6]. Nevertheless, for many years, in most developing countries in Africa, teaching has been conducted in more traditional ways. Teachers use lecture methods, write on the chalkboard while children copy notes on their note books with little dialogue of what is being written. Most subject teachers view their role as the central figure in the classroom that transmits knowledge in a linear manner with little students' participation. They hold the parental role of knowledge givers and they mostly teach by using lecture and question and answer methods [7]. Thus, most schools' output is poor

because of poor teaching, mostly talk and chalk type [8]. A study by [9] in a biology lesson revealed that interaction in the classroom was dominated by teachers and was affected by teaching methods. Student-student, student-teacher and student- resource interactions were very minimal. Interaction in the classroom and laboratory was quiet different, students participated more in practical lessons by asking questions. Similarly observation was made by [10] on the implementation of learner-centred approach in the new diploma teacher education in Tanzania. He revealed that newly graduated diploma teachers and the in-service teachers who had undergone refresher courses on Learner-Centred Approach hardly applied methods that had higher students involvement and participatory in classroom involvement.

While the Tanzania's teacher education syllabus put emphasis on Learner- Centred Approach (LCA), the psychology content of the same syllabus does not carry theories to support the learner-centred inclination. Therefore, participatory methods were provided without the theories to explain them. The constructivism viewpoint was indeed, jeopardized by the influence of traditional behaviourist view that is still insisted in the same syllabus [10]. [11] added that even teaching and learning materials are designed to cater for the transmission orientation rather than LCA. Tutors lack skills to the extent of designing teaching and learning resources in their vicinity. The most pressing challenge is the fact that tutors and teachers have a weak knowledge base, lack confidence and lack creativity [5]. [10] argues that living with tradition of backing knowledge, teachers and tutors seemed to have a lot of dependence on texts. Likewise, the examination systems and the school inspectorate systems pose as censorship to the creative teacher. Most of the school teachers' thus worked to satisfy inspectors and drill their students to pass examination.

Despite the numerous emphases from educational authorities for teachers to use participatory approach, recent studies done in primary and secondary schools reveal that participatory method has been inadequately implemented in Tanzania [9,10, 12, 13, 14]. This situation inhibits the country's efforts towards the implementation of competence based curriculum in teaching and learning. This study therefore

explores the extent to which tutors use participatory approach in their classroom teachings. Specifically, the study: examined the form of teacher trainees' participation during classroom lesson; identified the participatory techniques mostly used by tutors in the classroom; and explored the attitudes of tutors and teacher trainees towards participatory approach.

2. METHODOLOGY

Case study design was employed. The study involved 96 respondents (30 tutors, two college principals and 64 teacher trainees) at Tarime and Bunda Teachers Colleges in Mara Region in Tanzania. Data were collected through Semi-structured interview, Focused Group Discussion (FGD), questionnaires, observation and document review. The quantitative data were manually analysed and presented in frequencies, percentages and tables, while qualitative data were subjected to content analysis. Furthermore, ethical and human protection issues were observed during research.

3. FINDINGS AND DISCUSSION

3.1 Forms of Teacher Trainees' Participation in Classroom

The study aimed to ascertain the form at which teacher trainees participate in the classroom lesson. Through the questionnaire data revealed that various forms were used, however, question and answers was the mostly used. For instance, 30 (69.8%) out of 43 teacher trainees reported that they participated in the classroom through questions and answers; 8 (18.6%) out of 43 teacher trainees participated in the classroom lessons through group discussions; while 5 (11.65%) out of 43 teacher trainees participated through various techniques such as think pair share, gallery walk, brain storming and jig-saw techniques. Furthermore, through observation technique, the researcher found that teacher trainees participated in the lessons mostly through questions and answers followed by group discussions and other techniques such as gallery walk; jig-saw and brain storming were the least used techniques. The study findings from both questionnaire and observation can therefore conclude that that teacher trainee participate in the classroom mostly through questions and answers techniques.

These findings differ from a study conducted by [9] who found that interaction in the classroom was dominated by teachers and this was because the teaching method used was mainly lecture method. In the same way, these findings also differ from the study conducted by [13], which revealed that physics teachers preferred the use of lecture methods in teaching. The difference in findings may be due to the fact that the other studies were conducted in secondary schools while this study was conducted in teacher training colleges. In teachers colleges participatory teaching approach is mostly emphasized for teacher trainees to use hence it must be applied there. According to [15], democracy in the classroom requires teachers and students to have equal participation during teaching and learning process. [16] added that the best curriculum is the one that ensures learners the most complete freedom to pursue their own impulses. Participation and involvement of the learner in teaching and learning is essential of any learning process. Generally, this suggests that teaching methods being part of the course offered in teachers colleges therefore, tutors are required to do it practically so that teacher trainees can be able to apply them when teaching after graduation.

3.2 Tutors' Efforts and Teacher Trainees' Life Experiences

The study was interested to know how tutors related the lessons with teacher trainees' life experiences. Table 1 indicates the extent to which tutors related lessons with teacher trainees life experiences.

Table 1. Teacher trainees' responses on tutors' teaching using students' life experiences

Responses	Frequencies	Percentage
All the time	21	48.83
Often	10	23.25
Rarely	10	23.25
Never	2	4.65
Total	43	100

The data in Table 1 reveals that 21 (48.83%) of teacher trainees responded through the questionnaire that their tutors related lesson to their daily life experiences all the time, 10 (23.25%) reported that they often related lessons to their life experiences, while 10 (23.25%) said that tutors rarely related lessons to teacher trainees' life experiences. Two (4.65%) teacher

trainees indicated that tutors never related lessons to their daily life experiences.

This suggests that before the beginning of a new topic, active or participative learning require the teachers to check what each learner knew about the topic and students life experiences. They also need to know the common pre-conceptions and possible misconceptions about the topic. The current study revealed that in most cases, tutors related the lesson with teacher trainees' life experiences.

This finding is in line with the competence based curriculum that requires tutors and teachers to relate lessons taught in the classroom to the daily life experience of the student [3]. Normally, this is done at the reflection stage of the lesson and it is deliberately done so that students can apply what is taught in classrooms in their daily life. [17] point out that student do not come to school as blank slates; they rather have complex views, some are valid and some are not. Thus, the teacher's task is to elicit these views and seek to help them change those views that are not valid. Moreover, [18] found that learning is not a spectator sport; meaning that students do not learn just by sitting in class listening to teachers, memorizing packed assignments, and spitting out answers. Students must talk about what they are learning, write about it, relate it to past experiences, and apply it to their daily lives. Generally, literature suggests that meaningful learning should consider students past experiences in learning. The tutors and teachers should make students participate in lessons by giving out their experiences concerning the lesson under study. This is useful because it helps them apply those experiences to their daily lives.

3.3 Tutors'- Teacher Trainees' Participatory Approach

The data revealed that 36 (83.72%) of the teacher trainees are motivated through participatory approach including brainstorming, group discussion and question and answers techniques, while 7 (16.28%) of the teacher trainees are not motivated through participatory approach.

Similarly, tutors motivate teacher trainees in various ways including, appreciating every teacher trainees' contribution during teaching and learning, clapping hands for those who do well and also through respecting every learner's

opinions in order to make the approach more effective, meaningful and productive. One of the responses given was as follows:

I motivate my students by praising them wherever they participate well. I also make sure that I change methods or techniques of teaching frequently; because sticking to one technique of teaching and learning may create boredom and tiredness among students. Hence, they can hate the subject. That is why I normally try my best to make sure that my students like my lesson by motivating them to learn through various strategies in which they become the main actors and I only facilitate.

These findings concur with what other researchers on participatory teaching and learning approach have affirmed that authentic learning takes place when there is active engagement of the learner in producing or reproducing knowledge and understanding [1]. Additionally, [13] found that physics teachers were motivating students through praising them when they participated well during teaching and learning process, also by asking fellow students to clap hands for students who answered questions asked right. [19] pointed out that students can be reinforced positively to learn things which are out of their interest and also be reinforced negatively to stop learning those areas they are interested.

3.4 Tutors- Teacher Trainees' Interaction and Use of Teaching and Learning Aids in the Classroom

The study was interested to know whether tutors make use of the teaching and learning aids in the classroom and give teacher trainee an opportunity to use those teaching and learning aids in the classroom. 39 (90.7%) out of 43 teacher trainees agreed that their tutors made use of the teaching and learning aids and also gave them an opportunity to use them. Only 4 (9.3%) teacher trainees responded that their tutors did not use teaching aids. Moreover, data from observation showed that tutors were using teaching aids and teacher trainees were given an opportunity to use them, though they were not effectively used since most of them were of little help in the subject matter and some teaching/learning aids were inappropriate.

Likewise, when asked to what extent tutors used teaching and learning aids, 21 (48.84%) out of

43 teacher trainees said that their tutors used teaching and learning materials frequently, 16 (37.21%) responded that their tutors used teaching and learning materials rarely, while six (13.95%) responded that their tutors used teaching and learning materials all the time. This implies that teaching and learning materials are not well used in teachers colleges.

Furthermore, the study found that the both real and improvised type of teaching and learning materials were used by tutors. The responses from questionnaire were recorded as follows, 23 (53.5%) of 43 teacher trainees reported that tutors used both real and improvised materials, 13 (30.2%), said that tutors used improvised materials and seven (16.3%) said that tutors used real materials. This data is consistent with the data from researchers' observation, whereby most of the materials observed during the lesson were charts, maps, drawings flip charts as summarized in Fig. 1. On the other side, the improvised materials were used more when compared to real materials. The experience showed that real materials were very expensive and difficult to get, which made tutors opt for the improvised materials.

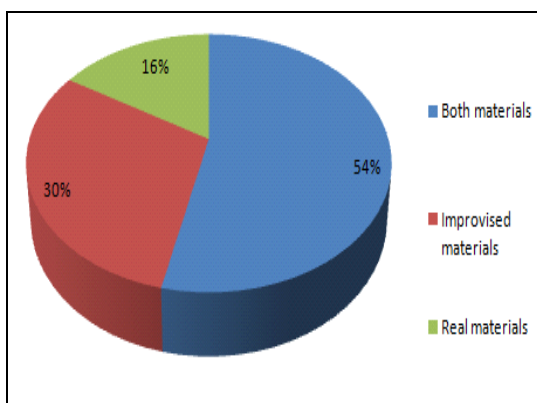


Fig. 1. Responses of teacher trainees on the type of teaching and learning materials mostly used in their classroom

The findings of the study are in contrast with [20] who conducted a study on classroom teaching in secondary schools. She found that in almost half of the lessons observed, there were no teaching aids used by the teachers. The teachers only used blackboards and chalk to write some notes for the students to copy. [13] also found that physics teachers did not give students chances to interact with materials or discuss among themselves. She added that most students' participation was only through chorus answers.

Similarly, a study by [9] in advanced biology lessons revealed that interaction in the classroom was dominated by teachers and was affected by teaching and learning methods. In addition, the student-resource interaction was very minimal.

Theoretically, information on the availability of Teaching and Learning materials is very significant because Teaching and Learning materials facilitate student involvement and participation in the learning process better [11,21]. As a matter of fact, a student learns effectively when he/she utilizes many of his/her sensory organs. When students touch, see, hear, taste and or smell, they increase deep understanding of lessons learnt. Teaching and learning materials for that matter, are essential in fulfilling students participation, fostering deep understanding and student-centred learning. Therefore, the quality of teaching and learning process depends among other things, the quality and quantity of teaching and learning resources available. It is through the use of teaching and learning resources that learners can conceptualize the abstract ideas.

3.5 Teaching and Learning Approach Mostly Used by Tutors in the Classroom

The study revealed that 20 (66.7%) tutors used participatory approach in teaching and learning, and 9 (30%) used both participatory and non participatory methods in teaching and learning. One tutor (3.3%) used only non participatory approach, (and in this case the lecture technique was used more than any other technique) as indicated in Fig. 2.

Reviewed documents namely lesson plans and schemes of work indicated that two third (four out of six) of tutors planned to use participatory approach while one third (two out of six) of tutors did not indicate if they had planned to use participatory approaches in their lessons. Furthermore, data from observation also revealed that tutors were using participatory approach in the classroom. On the other hand, the study investigated whether tutors understood the meaning of participatory teaching and learning. And most of the tutors were able to define the concept as follows:

Participatory is the method that place students at the centre of learning. Learners play an active role in the process of teaching

and learning while, teachers/tutors act as the facilitators.

Is the approach that involves interaction between teachers and students during teaching and learning process.

Is that approach where by the learner is fully engaged in the teaching and learning process and the role of the tutor or teacher is to facilitate.

Participatory teaching and learning approach is that approach which involves learners much in doing activities. A teacher is a facilitator and expert to assist students when they stuck.

In addition, tutors were asked to explain if they appreciated the use of participatory approach when teaching. The responses were as follows:

Participatory approach is the best method for teaching and learning, because it makes learners more active in the whole process of teaching and learning. Also on my side as a tutor, I learn so many things from my students, and I think this is how learning is supposed to be. We have to learn from each other, we do not have to rely on traditional methods of teaching any more since they mislead that teachers know everything and students know nothing.

I appreciate the use of participatory approach because my work becomes easier. Students become competent based in relation to their training.

I appreciate the use of participatory approach since it helps me to know the active and in active students in the class.

I do because it allows me to find the experiences of the students and allow interaction between teacher and students and among students themselves.

The study further revealed that tutors used questions and answers as a dominant technique of teaching. The findings obtained from the interview with the teacher trainees on commonly used strategy of the participatory approach showed that 10 (71.43%) of the teacher trainees agreed that their tutors mostly used questions and answers strategy, while only four (28.57%) responded that their tutors used various

techniques of teaching such as group discussion, and questions and answers strategy. They also pointed out that they normally used questions and answers strategy because of the nature of their classrooms. They added that most of the classrooms were overcrowded; with more than 90 students per stream. Moreover, the findings from classroom observation revealed that in seven classes observed, tutors were using questions and answers technique than any other technique. Group discussion method was used in classes with not more than 60 students.

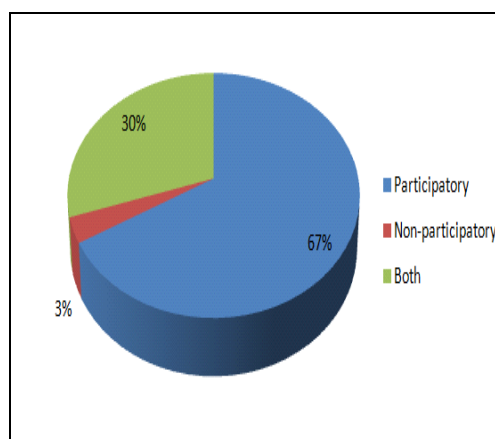


Fig. 1. Responses of the tutors on the use of participatory approach

The findings of this study differ from the study conducted by [22] who sought to investigate the acceptability and the use of learner-centred teaching approach among primary school teachers in Tanzania. He found that most primary school teachers in Tanzania were still holding the parental role of the knowledge givers and they taught by using lecture methods. These imply that participatory approaches are mostly applied in teachers colleges and rarely in primary and secondary schools. According to [23], a good teacher should apply varieties of teaching and learning methods during teaching and learning process to make learners active. On the other hand, college principals were also interviewed in order to capture the methods and techniques they emphasize and encouraged in their colleges in order to improve teaching and learning.

The findings indicate that college principals highly encouraged their tutors to use variety of techniques in their daily lessons as shown in Table 2. On the contrary, during classroom

observation, the researcher observed that tutors mostly used questions and answers methods and group discussion throughout their lessons.

Table 2. College principals' responses on the teaching methods

College	Methods and techniques that they encourage
A	Group discussion, Questions and answers, Demonstration ,Project, Brain storm, Experiments, Jig-saw, Gallery walk
B	Role play, Group discussion method, Demonstration, Questions and answers, Jig-saw, Gallery walk, Think pair share

Through FGD, teacher trainees were asked to discuss, which of the following they liked most when learning: listening to the tutor's lectures, doing different activities, asking questions to tutors and discussing with other students. The results were, four (40%) out of 10 teacher trainees said they liked discussing with other students when learning, three (30%) teacher trainees said they liked doing different activities when learning, two (20%) teacher trainees said they liked asking questions to the tutors when leaning and one (10%) teacher trainee said he liked listening to the tutors lectures when learning. One of the teacher trainees during the FGD had the following comment:

You know we are many and each one of us is coming from different geographical set up, from different socio economic status, so these make our thinking capacity and understanding different as well. Therefore, when we discuss, we are now able to get different challenges from different people.

Thus, the findings showed that teacher trainees like group discussion method and doing different activities when learning than questions and answers technique which is mostly used by their tutors. Hence according to [24], when teaching strategies confront with students learning strategies, the result is often limited learning or no learning at all. Thus, for meaningful learning, effective teaching should correspond to students learning strategies; whereby discussing with other students and doing different activities are the preferable strategies to most of the teacher trainees.

Therefore, the findings signify that the use of participatory approach in the two teachers colleges was not effective despite that tutors tried their best to use it. It is expected that for participatory approach to be more effective, there should be the employment of at least five different techniques in different classes being used by different tutors rather than the use of the common questions and answers and group discussion by every tutor to every class. The use of questions and answers strategy denies the teacher trainees' opportunity to see the practical use of other strategies. Therefore this has an impact to the graduating teacher trainee when employed, because they will not be able to use techniques that they could not see their practical uses. Instead they will prefer the use of questions and answers and group discussion that were mostly used by their tutors.

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3.5.1 Tutors and teacher trainees attitudes towards the use of participatory approach

The data of the study indicated that 27 (90 %) of tutors had positive attitudes towards the use of participatory approach and only 3 (10 %) of tutors had negative attitude towards the use of participatory approach. For instance, a tutor had the following comment concerning

the use of participatory approach in the classroom:

In fact, participatory is a very good method for teaching and learning, but overloaded syllabi, large classes and time limitation reduce the possibility of using the method in teaching and learning process.

On the other hand, 29 out of 43 of the teacher trainees had opinions that participatory approach is a good method for teaching and learning because it created good memory among learners especially when they are given questions to find answers for themselves. In addition to that, it makes learners less dependent to their tutors' materials, while at the same time it builds up the mind and knowledge of the learner. One of the teacher trainee' responded:

Participatory method is very important in the process of teaching and learning in this era because, it helps in discovering different talents of students and enables them to be more creative and confident. Currently, we need teaching methods that insist on the competence of the student and not that which insists on the preparation of the students to pass examinations.

Moreover, teacher trainees' also suggested that participatory approach is a good method, but it should be selective according to the level of the learners. It should be more useful in higher levels of learning, preferably secondary schools, but not in primary schools. This is because class size in primary schools in Tanzania is so big, there are few infrastructures such as desks, and hence it is difficult to engage pupils fully through participatory approaches. The findings are in line with [25] who revealed that large class size forced teachers to squeeze themselves in front of the classroom near the blackboard to use preaching style, a teaching method that hindered full participation of students in teaching and learning process. Generally the findings from tutors denoted that tutors had positive attitudes towards participatory approach in teaching and learning. These findings are consistent to an idea that low teacher student ratio is important for the success of the competence based education. In Tanzania, the recommended teacher student ratio is 1:45. Nevertheless, in the classrooms observed by the researcher, the ratio was ranging from 50-89 teacher trainees per tutor. This situation hinders the success of participatory approach in teachers' colleges.

4. CONCLUSIONS AND RECOMMENDATIONS

The efficacy of integrating participatory approach in teaching and learning remains essential to optimize effective learning on the side of students, However in practice application of the approaches are subject to contextual factors that pose challenges to tutors while engaging teacher trainees during learning process. In that regard, tutors mostly find themselves constrained to use only questions and answers approach because of such challenges. The challenges are large classes, heavy teaching loads and pressure posed by examinations. Yet, use of participatory approach in teaching and learning continues to be predominant among tutors and acknowledged by principals, and widely suitable for effective learning among teacher trainees.

In the backdrop of the findings established in this study, the study recommends that the government through the Ministry of Education and Vocational Training, in collaboration with other stakeholders of education, should direct more resources to teacher colleges and schools to render conducive working environment for effective teaching and learning. Planned in-service training programmes and workshops should be initiated and sustained at school, college, district and national level to update teachers' and tutors' content knowledge and pedagogical skills. Moreover, heads of schools and principals should be sensitized through mechanisms to be initiated by the government to ensure they provide proper incentives and recognition through short courses and seminars pertaining to teaching methods in order to raise their confidence. Furthermore, the study also suggests that research be conducted to see the extent to which tutors or teachers get in-service training pertaining to current teaching and learning methods to update their pedagogical skills.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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