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Challenges Faced by Teacher Educators in Integrating Critical Thinking Pedagogies in Initial Primary Teacher Training in Malawi

Abstract

In 2017, Malawi's Ministry of Education revised the Initial Primary Teacher Education curriculum to enhance education quality, emphasizing critical thinking pedagogies. However, no research has been published on how teacher educators implement these pedagogies and the challenges they face. A qualitative study addressed this gap, involving fourteen Social Sciences teacher educators and Curriculum specialists from four teacher education colleges and the Malawi Institute of Education. Guided by Paulo Freire's Critical Pedagogy Theory and Shulman's Pedagogical Content Knowledge (PCK), data was gathered through document reviews, interviews, and observations. Findings revealed many educators lack understanding of critical thinking's aims and significance, facing challenges due to inadequate training. This results in difficulties incorporating critical thinking, especially in lesson development and conclusions. Assessments predominantly rely on recall questions, failing to promote critical thinking. Poor management of the curriculum's introduction led to ineffective implementation. The study recommends careful planning and adequate training for educators to effectively integrate critical thinking pedagogies.

***Keywords**:* Critical thinking pedagogies, pedagogical content knowledge, Critical Pedagogy Theory, teacher education, integration

Introduction

The Malawi Ministry of Education revised the Initial Primary Teacher Education (IPTE) curricula in 2017 to improve the quality of primary and teacher education in Malawi (Susuwele-Banda & Chirwa, 2017). According to Susuwele-Banda and Chirwa (2017), the teacher education curricula review was meant to address the lowering standards of education in Malawi. Susuwele-Banda and Chirwa (2017) contend that Malawian education is not so relevant to the needs of the country. The Malawi education system, according to Banda and Chirwa (2017) has not been equipping students with the needed relevant knowledge, skills, attitudes, and values necessary for self-advancement as well as for the socio-economic development of the nation. This assumption, of improving the lowering standards of education in Malawi, through improving the quality of primary teacher education is not without problems, because such a shift requires teacher educators to possess appropriate knowledge for implementing new classroom practices stipulated in the revised curriculum. To improve the quality of primary teacher education through the revised primary teacher education, the Ministry of Education introduced Critical Thinking Pedagogies as an effective student-centered method of primary teacher education which would improve the quality of primary teacher education. The reviewed IPTE curriculum is a two-year program with a new program structure. It follows the pattern of 2-2-2 or 2-in 2-out and 2-in. The 2-2-2 pattern means that in the two-year training program, the first two semesters' teacher candidates will be in college learning subject content with a special focus on methods for lower and upper classes (grades). The next 2 out means that in term three of year one and term one of year two, students will be out for teaching practice in primary schools, practicing teaching in the lower and upper classes of the primary school system. The next 2 in, means students come back to college for more instruction with special emphasis on reflection on their experiences of teaching practice, further practice on teaching methods, content, and various education policies. This structure was adopted in the revised curriculum because it adopts the reflective model of teacher education which aims to connect practice and theory and integrates content and pedagogy in teaching and learning (Ministry of Education, Science and Technology, 2016).

The revised curriculum has other new features which are different from the previous curriculum. For example, early-grade teaching methodologies, Assessment for

Learning, Information Communication Technology (ICT), Inclusive Education, and Critical Thinking have been designed as major pedagogical approaches for training student teachers.

The purpose of introducing Critical Thinking in the new primary teacher education in Malawi is to produce and continually develop competent and responsive teachers who can in turn help learners to develop critical thinking skills necessary for bringing socio-economic change in their own lives and also in the country (Celik, 2021). Given this, the IPTE curriculum has been revised to ensure that student teachers who graduate from this program are well-trained and prepared for their profession. This new curriculum has innovations which the Ministry of Education Science and Technology (MoEST) expects teacher educators to utilize in the process of instructing the student-teachers.

The designers of the IPTE curriculum provided training workshops to prepare teacher educators for the implementation of the new curriculum, including Critical Thinking pedagogies. The training workshops were done through the cascade model. The Cascade model involves training of trainers (ToTs). These were Ministry of Education Methods Advisors and Inspectors and Malawi Institute of Education Curriculum Specialists. However, a study conducted by Rembe (2006) in Zimbabwe, reveals that the cascade model of training has been ineffective in empowering educators to teach a new curriculum efficiently. Rembe (2006) further argues that the cascade training strategy is substandard in the sense that the majority of educators depend on the competence and skills of those few who were chosen and receive training to train others, and this results in poor transmission of information and the inability to equip teachers with the required skills. He continued to say that the cascade model of training dilutes information in its dissemination process and it is difficult to determine its effectiveness (Rembe, 2006).

It is against this background of the introduction of Critical Thinking pedagogies in IPTE that this study framed. The purpose of this study is to investigate the integration of Critical Thinking pedagogies in teacher education college classrooms, early in the implementation of the IPTE curriculum to unearth the possible challenges which teacher educators may be encountering in implementing the Critical Thinking pedagogies to find ways of addressing the possible challenges facing the implementation of the pedagogies.

A fundamental purpose of education is to prepare young people for life in society. Since societies throughout the world are constantly changing and developing, education, especially primary teacher education, which is the basis of quality basic education, is also expected to change to respond to the changing society (Fullan & Hargreaves, 1992). It is for this reason that the Ministry of Education in Malawi revised the IPTE curriculum in 2017. One of the key innovations in the revised IPTE curriculum is the inclusion of Critical Thinking pedagogies in the curriculum. So far, no research has been done on the classroom practices of teacher educators in their integration of Critical Thinking pedagogies in the lessons and the possible challenges they are facing in their attempts to integrate Critical Thinking pedagogies in their lessons. It is against this background that this study was conceived, to investigate how the teacher educators are implementing the Critical Thinking pedagogies in the new curriculum to address the information gap on the implementation of the teaching methodology. This study is therefore aimed at, exploring how teacher educators for Social Sciences are integrating critical thinking pedagogies in their lessons. In addition, the study also examines the challenges that teacher educators are facing in integrating Critical Thinking pedagogies. and to assess, how the implementation of Critical Thinking pedagogies can be improved in the IPTE.

Literature review

The Malawi Ministry of Education (2013) has suggested numerous methods as effective Critical Thinking pedagogies for training student teachers in teaching Social Sciences. However, the following methods are the major ones. First, the “Know-Want to Know-Learned (K-W-L)” method. Paired brainstorming”. The “Know-Want to Know-Learned”, is a method that is particularly useful for guiding students in reading and understanding a text. This method is best utilized in teaching Social Science topics about which students have limited knowledge. The method is particularly useful in situations where teacher educators want to iron out misconceptions, stereotypes, and misrepresentations of information.

The second Critical Thinking method is the "Instructional Note-Taking System for Enhanced Reading and Thinking (INSERT)." This method uses simple symbols for students to annotate texts, aiding in constructing meaning and developing investigative and

interpretation skills, especially for historical topics like the 'Independence of Malawi.' Students read a passage and use four marks: a checkmark confirms their prior knowledge, a minus sign indicates contradiction, a plus sign denotes new information, and a question mark highlights confusion or a desire for more information.

The third method is the “Academic Controversy” method. Engaging in academic controversy is the act of arguing from both positive and negative perspectives of a topic. Teacher educators can apply academic controversy as a method to lead students to argue an issue from different angles before passing judgment. The “Academic Controversy” is a valuable method because of its ability to make students argue based on facts and also because it considers all sides of an argument before a person makes a decision. In the “Academic Controversy” method, the teacher educator prepares a ‘yes’ or a ‘no’ question. The teacher educator then assigns students to home groups of four. The group is supposed to be well balanced in terms of gender and abilities of members. The teacher then asks students to discuss the ‘yes’ or the ‘no’ question. In the method, the teacher educator then counts off the students in the groups as one, two, three, and four and makes the ones and the twos argue for a ‘yes’ and the threes and the fours argue for a ‘no’. The teacher educator then tells the students to return to their home groups and present their strongest points about their position to the other members of their home group. The teacher educator then tells the students to drop their positions and argue for a position they truly believe in. The teacher educator then finally calls on each group to state the group’s conclusion from the discussion.

Finally, the “What, So-what and Now-what” method is also used to train student teachers in teaching Social Sciences. The “What, So-what, and Now-what” is a reflective method that allows learners to relate classroom knowledge to real-life issues. The method, according to the Ministry of Education (2013) is comprised of three components; the first part, “What”, involves asking students to summarize important ideas they have covered in a discussion. The “So-what” consists of asking students the importance of what they have learnt and the “Now-what” involves asking students the course of action they will take about a problem.

Studies that have been conducted on the investigation of Critical Thinking pedagogical practices internationally have revealed that there is poor use of critical thinking pedagogies by educators in the classroom (Ministry of Education, 2013). This study was conceived out of the assumption that teacher educators of Social Studies may or may not be using Critical thinking pedagogies in their training of student teachers which, as has been argued earlier in this study enhances high-quality primary teacher education. Ahmad et al., (2012) explored the classroom practices of Malaysian secondary school Geography teachers and revealed that the practice of critical thinking among the teachers was very low. The teachers were observed to have been using more traditional teacher-centered methods in which there were very limited interactions between the teachers and the students. In another study, Ishak and Jamil (2020) investigated critical thinking pedagogical classroom practices of Malaysian secondary school Science teachers. The findings of the study indicated that the practice of Critical Thinking was very low among teachers.

Theoretical Framework

This study was informed by two theoretical frameworks (i.e., theory of Critical Pedagogy by Paulo Freire and Pedagogical Content Knowledge (PCK) by Shulman (1991). In his theory of Critical Pedagogy, Freire (2000) argues that pedagogy is how the most oppressed students can be taught to reflect critically on their oppression and actively participate in liberation from it. Critical thinking has borrowed from the Critical Pedagogy the idea of learner-centered problem-solving-based teaching. The theory of Pedagogical Content Knowledge on the other hand, which was developed by Shulman in 1991, is a combination of two concepts; content knowledge and pedagogical knowledge. Pedagogical Content Knowledge refers to the teacher's knowledge of the subject matter he/she is teaching and his/her knowledge of the suitable and effective teaching methods for teaching that subject matter. Shulman (1991) argued that teachers gain the Pedagogical Content Knowledge through their college preparation, but this improves as they gain experience in their classrooms.

Methodology

Design

This study used a qualitative approach which employed a case study design. A case study design has the potential to enable the study of things in detail and explain why certain things happen (Creswell, 2009). With case studies, it is possible to gain the unique perspective of a single individual or group (Denscombe, 2003).

Study site and participants

The study was conducted in four teacher training colleges. The colleges involved in the study are located in the Southern region (Blantyre and Phalombe districts) and Central Region (Lilongwe and Kasungu) of the country. The participants in the study were purposively selected. The study involved a total of fourteen teacher educators. Of the fourteen participants, 10 were male whilst 4 were female. The teacher educators' academic qualifications ranged from Bachelor's degree as their minimum academic qualification to Master's degree as their highest academic qualification. For example, out of fourteen teacher educators that were involved in the study, twelve teacher educators have Bachelor's degrees and 2 have Master's degrees. The participant's years of experience ranged from 5 years to 14 years of teaching experience in TTCs.

Procedure

Three methods of collecting data were used. These were document reviews, face-to-face semi-structured interviews, and classroom lesson observations (Creswell, 2009). The three methods also complemented each other to provide methodological triangulation in the study (Creswell, 2009). Methodological triangulation helped to cross-check the credibility of the data in this study. The study of official documents was the primary means of investigating the 'intended' way in which the Critical Thinking pedagogies are expected to be implemented by the teacher educators in the teacher training colleges as prescribed by the Ministry of Education. The main official documents reviewed in the study included the 'Syllabi' and the Teacher Educators' and Students Modules. Apart from official documents, 'documentary sources' were also studied to investigate the 'intended' way in which the Critical Thinking pedagogies are expected to be implemented in the Teacher Training Colleges. The 'documentary sources' reviewed in this study included schemes of

work, notes and in some cases lesson plans where they were available. These are the documents used by teacher educators in planning for the teaching of Social Sciences.

The greater part of the research was confined to classrooms, to learn how teacher educators are integrating critical thinking at classroom level and the challenges they are facing in enacting the methods. Following a qualitative research design, in addition to data being collected through document review, the data was also collected through face-to-face interviews with the teacher educators and classroom lesson observations of the teacher educators to provide methodological triangulation of the data.

With respect to research ethics, permission to conduct the study was sought from the Department of Teacher Education and Development. In addition, the researchers also got permission from the administrators of the Teacher Training Colleges where the participants worked. All names of participants and those of their Teacher Training Colleges were represented with pseudonyms throughout this study following the standard research ethics requirements of the Department of Teacher Education and Development in Malawi. For example, the four colleges studied were given pseudonyms “A”, “B”, “C” and “F”. The fourteen teacher educators in the colleges were given letters of the alphabet as pseudonyms. The teacher educators were given pseudonyms 1 to 14. The consent of the participants interviewed and observed teaching lessons was also sought.

Data analysis

The results of the study were analyzed using thematic content analysis. With this model of data analysis, the interview and class observation data were first coded. Coding involved dividing or segmenting data into topics or categories. The different codes represented different themes that emerged from the data on the teacher educators’ practices as well as challenges in their implementation of Critical Thinking pedagogies.

Results

The main objective of this study was to investigate how teacher educators are implementing critical thinking pedagogies in their training of student teachers in Social Sciences and the challenges the teacher educators are facing in enacting the Critical Thinking pedagogies. Data analysis led to the following key themes: teacher educators’

insufficient capability city to integrate Critical Thinking pedagogies**,** inadequate teacher educators' knowledge of the meaning and importance of critical thinking methods, use of unsuitable critical thinking pedagogies in lesson phases and lack of use of assessment tasks which promote critical thinking. The other key themes including those related to material resources included inadequate teaching and learning resources for using critical thinking methods, some critical thinking pedagogies being time-consuming, critical thinking pedagogies requiring spacious classrooms and some critical thinking methods posing inherent challenges for special needs student teachers. These findings are presented in detail in the sub-sections below:

Teacher educators' insufficient capability to integrate critical thinking pedagogies

The study set out to investigate how teacher educators are implementing critical thinking pedagogies in the classroom. To find out their capability to implement critical thinking, the study investigated the nature of the status of teacher educators' training in critical thinking, their knowledge of the origin, meaning and importance of critical thinking, and suitable critical thinking pedagogies for different lesson phases.

Data revealed that the teacher educators involved in this study have low capability in using Critical Thinking pedagogies effectively in their Social Sciences lessons in training student teachers. Data indicated ineffective orientation training of teacher educators to critical thinking pedagogies as the main cause of their superficial knowledge and skills of using Critical Thinking pedagogies effectively in their lessons. The study found that the orientation training was ineffectively done because of the use of the cascade model. In the cascade model of training, a core team of trainers is first oriented to the curriculum. The core team of trainers, also known as Trainer of Trainers (ToTs) in turn orient the principals of the primary teacher education institutions and some teacher educators representing their institutions to the curriculum. The teacher educators representing their institutions in turn orient fellow teacher educators at their institutions. The cascade model of training made teacher educators to be ineffectively oriented because only few teacher educators were oriented by the Ministry of Education and the rest were oriented by fellow teacher educators at college level who were ineffectively oriented because cascade model of training has the challenge of diluting and misrepresenting

information as the first recipients of the information, the Trainer of Trainers (ToTs) pass the information to others. For example, when interviewed about the quality of their training in preparing them to integrate critical thinking methods effectively, the majority of the participants indicated that the training did not equip them adequately with the knowledge that can help them to teach using critical thinking methods with confidence. For example, Teacher Educator 13 of College D indicated that "*I have not benefitted anything from the training because I did not understand the methods clearly."* Similarly, teacher educator 14 of College D argued that "*the training did not prepare me effectively to integrate critical thinking in teaching Social Sciences subjects such as Social Studies, and Life Skills because there was a lot of work to be covered within three (3) days scheduled for the training."* These comments signify that the training in critical thinking did not adequately equip the teacher educators with the required knowledge and skills to enable them to integrate Critical Thinking pedagogies effectively in their lessons.

Inadequate teacher educators' knowledge of the meaning and importance of critical thinking methods.

The study sought to find out teacher educators' knowledge of the meaning and importance of critical thinking. The data revealed that half (7 out of 14) participants had inadequate knowledge of the meaning and importance of critical thinking methods which resulted in them not using the methods. For example, most teacher educators viewed critical thinking as synonymous with the traditional teacher-centered methods interspaced with question-and-answer method directed at individual student teachers during the teaching and learning process. For example, teacher educator 2 of College A provided this definition of critical thinking, *"They are the usual methods that were used in traditional approach, and nothing has changed".* This teacher educators' definition of critical thinking means that some teacher educators have a wrong definition of the meaning of critical thinking. This wrong understanding of the meaning of critical thinking also influenced the nature of the implementation of critical thinking methods. For example, the wrong understanding of the meaning of critical thinking resulted in the teacher educators using the traditional teacher-centred methods and just interspacing them with question-and-answer methods directed at individual student teachers.

However, the study found that seven (7) teacher educators had correct understanding of the meaning of critical thinking. These few teacher educators gave the following as meaning of critical thinking: Firstly, they defined critical thinking methods as the methods that make learners own learning, analyze information, form their ideas and being active rather than passive recipients. Secondly, they defined critical thinking methods as the methods that give learners chance to participate and contribute to their learning. Thirdly, they defined critical thinking methods as methods that allow learners to analyze situations and ideas before making a decision. Fourthly, teacher educators defined critical thinking as the methods that actively involve learners so that they create meaning of what they are learning on their own. Similarly, another teacher educator explained that critical thinking methods are the methods that engage learners in active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it. Likewise, another teacher educator stated that critical thinking pedagogies are the methods that allow learners to take charge of the learning process through active participation and that they are active learning pedagogies that provoke thinking and interaction in and among learners.

On the part on the origin of Critical Thinking, only one teacher educator, teacher educator 5 of college B demonstrated knowledge of the genesis of critical thinking, and had this to say, *"It originates from the Constructivism Theory".* Thus, some teacher educators' lack of knowledge of the origin and aims of critical thinking methods may have contributed to their being unable to use critical thinking methods in their lessons as established by the data of this study as they may not have sufficient knowledge of what critical thinking pedagogies entail.

The study found out that teacher educator 5 whose explanation in the interview when asked about his knowledge of the origins and aims of critical thinking and demonstrated knowledge of the origin and aims of critical thinking was the only teacher educator who was observed in the lesson observations to have integrated Critical Thinking pedagogies effectively in his teaching student teachers. Below, we examine an episode reconstructed from the field notes of teacher educator's integration of critical thinking pedagogies in his lesson. The lesson was conducted by teacher educator 5 of college B on

the 28th of May, 2019. The lesson began at 14:30 p.m. There were 25 student teachers present that day. As part of the introduction of the day's Life Skills lesson, the teacher educator formally greeted the student teachers and progressed with the lesson as follows:

Teacher Educator 5: *"Find one member in a group who will take his or her notebook and a Ballpoint pen. This member should start by writing down examples of the essential Life Skills he or she knows. Thereafter, he or she should give the notebook to a friend next to him or her. The next member of the group should also put down his or her answer but different from what has been written down by a colleague up until the last member of the group. Then, the last one to write down his or her answer should get prepared to report the findings of the entire group".* [Student teachers made five groups with mixed-sex in each group. We listened to the discussions of these groups. There was active participation of student teachers during the discussions. The teacher educator then called group members to present what they had discussed in their groups].

At 14:45: p.m. Teacher Educator 5 proceeded with the lesson as follows**:** *"Anyone from each group, can you come upfront and tell the class what you have discussed in your groups".*

In the extract above, the teacher educator effectively integrated critical thinking methods in his lesson. The teacher educator integrated three critical thinking methods in one task. The first one being '*Group Discussion'* in which he put student teachers into groups and assigned them tasks to discuss. Secondly, by making the notebooks revolve around the group members, the teacher educator used '*Revolution'* critical thinking method. Finally, when presenters went to present their findings, the teacher educator used *'Author's Chair'* as the other critical thinking method. The ability of the teacher educator to integrate critical thinking pedagogies effectively in his lessons may have arisen from his sound knowledge of the aims and importance of critical thinking as stipulated in the revised Initial Primary Teacher Education Syllabus by the Ministry of Education.

Use of unsuitable lesson introduction, development and conclusion critical thinking pedagogies in lesson phases.

This study found that the majority of teacher educators have theoretical knowledge of the suitable critical thinking methods to be employed during the introductory stage of the lesson and the development phase of the lesson. The study also found that the teacher educators were able to translate their theoretical knowledge successfully to their practical teaching in the classroom in the introduction and development phases of the lessons but not necessarily at the conclusion of their lessons.

The following lesson extract constructed from the field notes illustrates teacher educators' inclusion of unsuitable critical thinking pedagogies in the introduction phase of their lessons. The lesson was conducted by teacher educator 11 of college D on Wednesday, the 29th of May, 2019.

At 14:32 hours Teacher Educator 11 of College D in Life Skills progressed with his lesson as follows; - *"This time can you get your pens and exercise books quickly." One of the essential Life Skills is Entrepreneurship, so, what is Entrepreneurship?"*

At 14:33 hours, a Student responded: These are income-generating activities.

At 14:35 hours, Teacher Educator 11 of College D: *"Thank You! Can you quickly write any five income-generating activities that are done in your communities? I am giving you 2 minutes".*

In this lesson extract, the teacher educator used '*quick write'* as one of the critical thinking methods during the introductory phase of the lesson. Although this teacher educator used quick write as one of the critical thinking methods, the method was used inappropriately. This is so because according to the Ministry of Education's revised Initial Primary Teacher Education curriculum, this method is supposed to be used during the consolidation or development phase of a lesson. According to the revised Initial Primary Teacher Education curriculum, 'quick write' enables student teachers to reflect on their learning and document important ideas. The method keeps student teachers active as they jot down ideas on paper (Ministry of Education, 2013, p. 22). That is, lack of knowledge on the suitable critical thinking methods to be used when introducing a lesson is being manifested in teacher educators' inability to effectively use critical thinking methods. It can therefore be argued that, although some teacher educators included critical thinking

pedagogies in their lesson plans, the majority of the teacher educators did not use them appropriately in some lesson phases such as lesson development and conclusions.

Lack of use of assessment tasks which promote critical thinking.

The study found that the majority of teacher educators were unable to use assessment tasks that promote critical thinking. The study found that Teacher educators mainly used assessment tasks that required simple recall of information and facts. For example, teacher educator 14 at College D on the 3rd of June, 2019, in the course of teaching on the topic *'Location'* in Social Studies, the teacher educator asked his student teachers to define the following terms; "Longitudes", "Latitudes", "Prime Meridian", and "the Greenwich Meridian". This exercise shows that teacher educators used simple recall questions as assessment tasks for student teachers. This type of assessment task characterized most of the lessons observed in this study, and they did not promote critical thinking in student teachers.

These findings are consistent with the studies conducted in Namibian primary Teacher training colleges where the instruction was found to be done in a teacher-centred approach, which was unproductive and frustrating for most of the student teachers in colleges (Namibia Ministry of Education and Culture, 1993, p.10). These assessment tasks were not able to promote critical thinking amongst student teachers.

Inadequate teaching and learning resources for using critical thinking methods.

The study has revealed that there are inadequate teaching and learning materials in all the four Teacher Training Colleges that were involved in this study. For instance, the Principal of College D complained that the college has critical shortage of teaching and learning materials despite its proximity to the Ministry of Education's national offices which supply teaching and learning materials thereby leading to challenges for teacher educators to use critical thinking. This finding is consistent with Cheplogoi (2014) who argues that teaching and learning materials are part of the factors that affect the effective implementation of an education innovation. Similarly, Mgomezulu and Wamba concur with Cheplogoi who observed that the scarcity of textbooks means that student teachers

may not be able to practice reading and writing to increase their knowledge beyond the classroom (Mgomezulu & Wamba, 2014).

Some critical thinking pedagogies are time-consuming.

The study found that the majority of Teacher educators complained that some critical thinking methods consume a lot of lesson time if used and hence they do not often use them. For example, the Teacher educators cited the 'Instructional System for Enhanced Reding and Thinking (INSERT', 'Jigsaw', 'Role Play', and 'Value Line' as consuming a lot of time in using them in the actual teaching and learning process.

Critical thinking pedagogies require spacious classrooms

The study also found that the effective use of critical thinking methods by teacher educators is negatively affected by lack of classroom space. For example, the majority of the Teacher educators in the study cited the 'Mix, Freeze, Pair and Share' and 'Walk Around and Talk Around' methods as some of the Critical Thinking methods that require spacious classrooms for them to be used.

Some critical thinking pedagogies not being user friendly for special needs students

The study finds that some critical thinking methods pose inherent challenges for special needs student teachers to actively participate in the teaching and learning activities in which they are employed. The teacher educators cited 'Mix, Freeze, Pair and Share' and 'Walk Around and Talk Around' as some Critical thinking methods that are not user-friendly to student teachers with mobility challenges. Thus, some of the Critical thinking methods by their nature exclude some students with special needs, making the classroom non-inclusive classroom.

Discussion

This study found that the orientation training was ineffectively done because of the use of the cascade model. The cascade model of training made teacher educators to be ineffectively oriented because only few teacher educators were oriented by the Ministry of Education and the rest were oriented by fellow teacher educators at college level who were ineffectively oriented because cascade model of training has the challenge of diluting and

misrepresenting information as the first recipients of the information, the Trainer of Trainers (ToTs) pass the information to others. This finding concurs with Rembe (2006) who argued that the cascade model of training has been faulted for dilution of information and is ineffective in empowering teacher educators to teach new education innovations. Rembe (2006) further observes that the cascade training strategy of teacher educators is sub-standard in the sense that the majority of teacher educators depend on the competence and skills of teacher educators who are themselves second-hand recipients of information.

Rembe's (2006) study also agrees with Passe (2006) and Thornton (2005) who argued that the effective implementation of critical thinking is affected by poor preparation of teacher educators. Passe (2006) also argued that teacher educators are not comfortable handling content that was not effectively addressed during their orientation. Indeed, the implementation of education innovations requires great skills and effective preparation of teachers in both content and pedagogical knowledge (Thorntorn, 2005).

This study also found that teacher educators involved in this study had inadequate knowledge of the meaning and importance of critical thinking methods which resulted in them not using the methods. This finding is consistent with Klieme (2004) who argues that lack of a comprehensive knowledge base may make it difficult for pedagogical knowledge to have a worthwhile and extensive impact on practice in the classroom. Practically, it is difficult for teacher educators who do not have adequate knowledge about the meaning and importance of critical thinking to use critical thinking methods effectively in the classroom.

This study further found that the majority of teacher educators involved in the study have low pedagogical knowledge. The study found that the teacher educators involved in the study were using unsuitable methods in different phases of their lessons. The study found that the teacher educators were able to use suitable Critical Thinking methods in the classroom in the introduction phase of the lessons but not necessarily in the conclusion of their lessons. This study therefore argues that, although some teacher educators included critical thinking pedagogies in their lesson plans, the majority of the teacher educators did not use them appropriately in some lesson phases such as lesson development and conclusions.

The study has also revealed that teacher educators' use of Critical Thinking methods is being negatively affected by the shortage of teaching and learning materials. Teacher educators fail to use Critical Thinking methods effectively because of inadequate teaching and learning materials. This finding is consistent with Cheplogoi (2014) who argues that, teaching and learning materials are part of the factors that affect the effective implementation of an education innovation.

This study further found that the majority of Teacher educators fail to use critical thinking methods because they consider them to consume a lot of lesson time if used and hence, they do not often use them. This finding concurs with a study by Mizrachi et al. (2010) who found that teachers rush through their teaching because they want to prepare their students for high-stakes national examinations. Mizrachi et al. (2010) further argued that the examination system in Malawi is high stakes, and promotions to the next level of schooling are based on the performance of students during the examinations.

This study also found that the effective use of critical thinking methods by teacher educators is negatively affected by lack of classroom space. This finding is in line with Biddle and Berlinder (2023) who argue that most participatory learner-centered methods require spacious classrooms and small class sizes for them to be effectively used.

This study also found that some critical thinking methods pose inherent challenges for special needs student teachers to actively participate in the teaching and learning activities in which they are employed. This finding is consistent with Kirk and Gallagher (2000) who observed that providing an effective education for all is arguably the biggest challenge facing Teacher Training Colleges worldwide, particularly in Africa. Favazza, et al. (2000) stipulate that students with special needs are not truly included in their classroom in the true sense of inclusion which requires use of teaching methods that will promote their learning but instead, there is more integration rather than inclusion in the African classroom which does not promote learning of students with special needs.

Limitations

Although this study provides valuable insights into Teacher educators' practices and challenges in the implementation of Critical thinking pedagogies, some limitations are

realized. For example, there are eight public Teacher Training colleges in Malawi. This study, however, was conducted in four Teacher Training Colleges only. The study's findings can therefore not be generalized to all other Teacher Training Colleges in Malawi. However, the study has provided important insights into the challenges facing the implementation of Critical thinking pedagogies in the Teacher Training Colleges in Malawi. In addition, classroom observations did not include Religious Studies as one of the subjects in Social Sciences. At the time of data collection, Religious Studies was not being offered in that semester of the colleges calendar due to the modular approach followed by teacher education colleges. As a result, lessons were only observed in Social Studies and Life Skills.

Conclusion

This study in its small-scale nature has attempted to bring an understanding of the Teacher educators' integration of critical thinking in the classrooms. The findings of the study have revealed that teacher educators are facing challenges in integrating Critical thinking pedagogies in teaching their students. However, the study has also revealed that the majority of Teacher educators are trying their best to integrate Critical thinking methods in their lessons despite the numerous challenges they are facing, such as lack of adequate Critical thinking related teaching and learning resources and lack of college-based Continuing Professional Development to supplement the knowledge obtained from the initial orientation. This study has proposed some recommendations to the Ministry of Education for the effective teacher educators' integration of critical thinking, the most salient one being the need for the Ministry of Education to provide in-service training of Teacher educators to equip them with in-depth necessary skills on how to implement Critical thinking methods effectively and how to use assessment that promotes critical thinking.

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