The Potential of Professional Learning Communities for Competence-Based Teaching in Tanzanian Secondary Schools

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Abstract

Professional learning communities (PLCs) provide teachers with opportunities to learn from one another and enhance classroom practices. This qualitative study investigated the potential of PLCs in promoting competency-based teaching in Tanzanian secondary schools. The study employed a case study design involving interviews with 69 participants, including teachers, heads of schools, and students. Analysis indicated that teachers had not yet extracted the full potential of PLCs. PLCs reinforce examination-oriented teaching that encourages knowledge memorisation instead of maximising students' active learning in challenging classroom environments. Among other recommendations, teachers should be trained on how to set up effective PLCs and manage them.

Keywords: *competence-based teaching; learner-centred teaching; communities of learning; teacher professional development*

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Introduction

Teachers' competence is one of the most desired criteria for enhancing the quality of education (Posti-Ahokas et al., 2018). As stipulated in Sustainable Development Goal 4, quality teaching is crucial for transforming education practices (Chen & Liu, 2020; Wulff, 2020). Further, it is widely documented that teachers play a critical role in education reforms, and thus, how they build teaching capacity through professional learning opportunities (PLCs) is a cause for concern (Bengtsson et al., 2020). For several years, PLCs have increasingly offered an essential avenue for teachers' professional learning across education systems (Zhang & Pang, 2016). These communities enable teachers to engage in affordable, relevant, and collaborative learn-

ing that can help them develop the required competencies for transforming classroom practices (Zhang & Pang, 2016). With the advancement in technology, some PLCs are conducted virtually, which helps to curb the longtime challenges of time, limited resources and distance that hinder teacher professional development in many places (Macià & García, 2016; Motteram et al., 2020).

In response to quality education reforms, the Tanzanian school curricula require teachers to implement competency-based teaching. Bartlett and Vavrus (2013) highlighted that the 2005 and 2010 competence-based curricula for secondary education "make clear that teachers should strive to develop in their students the abilities, skills, and capabilities necessary to apply knowledge" in a real environment (p. 93). Competence-based teaching employs a learner-centred approach to actively involve students in constructing knowledge and skills that can be used to solve existing problems in society. Competence-based teaching is implemented differently across education systems with different challenges. However, most teachers in Tanzania have not been able to efficiently implement the curriculum that requires competency-based teaching (Kangalawe, Machyo, & Nduku, 2019; Komba & Lupeja, 2021; Msonde & Msonde, 2019). Most of the teaching is directed mainly towards assisting students to obtain better grades in examinations (Komba & Lupeja, 2021; Nkya et al., 2021).

Since the introduction of a competence-based curriculum in secondary education in Tanzania (Kangalawe et al., 2019; Komba & Lupeja, 2021), the traditional in-service training system has not yet provided teachers with adequate and relevant learning (Bermeo et al., 2013; Hardman et al., 2015; Ministry of Education Science and Technology (MoEST), 2017). Most of the programmes are expensive, and rarely focus on teachers' specific learning needs. The recent National Framework for Teacher Professional Development in Tanzania indicates that "school level Communities of Learning (CoL) will be at the core of professional development for teachers… (this is because) collaborating with peers in CoL will ensure the professional needs of teachers are met" (MoEST, 2017, p. 5)''. Indeed, when teachers learn collaboratively in social contexts, they are likely to improve their teaching competence and students' learning (Goodyear et al., 2019).

Various studies have shown that PLCs make an outstanding contribution to building the knowledge, skills, and attitudes of teachers. This means that teaching should be practice-based to allow students to develop the right competencies (Komba, 2015). The study conducted by Seufert et al. (2020) indicated that PLCs helped to improve the digital competencies of teachers, which led to a transformation in pedagogical practices. Similarly, Luyten and Bazo (2019) reported that PLCs built teachers' skills in integrating learner-centred techniques in teaching. The researchers found that when teachers participated in PLCs, they exchanged knowledge and skills and mentored each other. Mentoring practices lead to the development of new knowledge, skills and attitudes directly and indirectly. In a recent study, Beddoes et al. (2023) found that

PLCs improved the social competence of teachers, which is a necessary component in the competence profile of teachers. In the same way, a comparative study between selected Chinese schools revealed that PLCs shape the way teachers execute teaching competencies (Wang et al., 2017).

A recent small-scale study in Tanzania indicated that several "challenges have been hindering effective competence-based teaching across subjects, particularly science and Mathematics" (Kyaruzi et al., 2021, p. 20). While teachers can extract teaching competencies from PLCs, the potential of PLCs in promoting teachers' competence profile has not been adequately illuminated to suggest areas for improvement. These teachers are not yet compelled to create PLCs regardless of the presence of the national framework. The teachers tend to construct new competencies as they interact in the social environment (Wang et al., 2017). In the context where teaching is for examinations, the existence of PLCs can hardly reinforce competence-based teaching. Against this background, this study aimed at exploring the potential of PLCs in enhancing competence-based teaching. The following questions guided the study:

1. What are teachers' challenges of implementing competence-based teaching in secondary schools?
2. What is the potential of professional learning communities in promoting competency-based teaching?

Literature review

Conceptualising competence-based teaching

When students develop learning competencies, they reduce the risks of unemployment and raise standards of living. To yield great learning outcomes, competence-based teaching should embrace 21st-century skills of critical thinking, problem-solving, decision-making, collaboration, communication, and creativity (Telli, 2021). These skills align with the general competencies for students in ordinary secondary education in Tanzania (MoEST, 2019). MoEST (2019) has also outlined general competencies for a diploma in teacher education that include: "guiding teachers in the creation and construction of knowledge; designing and using varied teaching and learning resources; implementing curriculum for students with different learning needs; using media and appropriate instructional technologies; communicating effectively; as well as conducting action research" (p. 37). Hence, teachers are anticipated to empower students to achieve tasks beyond their previous capabilities, encourage them to take responsibility for their learning, engage them in hands-on activities, offer personalised assistance, and allow them to progress at their pace (Kitta & Tilya, 2018; Schweisfurth, 2011). In this way, it is expected that teachers' learning in their PLCs should align with

the identified key competencies.

Competence-based teaching entails shifting from traditional strategies of feeding students with lesson notes to be reproduced in examinations to learners' mastery of knowledge and skills (Akala, 2021; Bergsmann et al., 2018). When planning competence-based lessons, teachers should integrate learning activities that build students' critical thinking and ability to perform tasks (Ruys et al., 2012). With inclusive classes, teachers ought to apply alternative approaches that embrace diverse students' learning needs (Navarro et al., 2016). There are also lists of assessment activities that need to be designed to facilitate the assessment of students' competencies (Galán-Mañas & Albir, 2015; Kitta & Tilya, 2018). Advancements in technology and the impact of pandemic diseases like COVID-19 have added to the complexity of teaching work, and thus, teachers need to be more competent. Therefore, teachers need to engage in PLCs that promote competence-based teaching.

Theorising professional learning communities

The idea of learning communities is grounded in sociocultural perspectives (Liem et al., 2011), such as situated and experiential learning theories. Sociocultural theories are of the view that knowledge is constructed within the social environment. For instance, situated learning theory, which was advocated by Lave and Wenger in 1991, postulates that learning occurs when an individual is connected to a social environmental condition referred to as a community. Similarly, according to the experiential learning theory by David Kolb in the 1980s, teachers have opportunities to bring their background experiences to learn their professional skills (Kolb & Kolb, 2005). In the sociocultural environment, less experienced people working together with more experienced ones in a particular context tend to interact and construct knowledge. Social perspectives suggest that communities of learners offer a relevant platform for teachers to learn new knowledge and skills and change their attitudes (Domingo-Segovia et al., 2020). When teachers interact in a social environment like school, they learn different competencies by exchanging experience and expertise. Since experiences alone cannot bring effective learning, it is crucial that deliberate experiential learning is organised.

The term professional learning communities in teacher education is global, and it has acquired different names, such as communities of learning, community of practice, and professional learning groups, to mention a few. One thing in common across terms and practices is that individual teachers with shared interests engage in collaborative learning at the workplace, school or home to form what is regarded as communities, groups, or networks (Dufour, 2004; Hord, 2008; Robinson et al., 2020; Lave & Wenger, 1991). In this study, communities or networks of learners are referred to as PLCs in which teachers learn from one another through formal or informal sharing of knowledge and skills about teaching and learning. Teachers are expected to transact

knowledge and skills in the PLC for significant learning impact (Admiraal et al., 2021). As they develop sustained membership in PLCs, the behaviour of individuals is moulded, and roles are changed (Lave & Wenger, 1991). Therefore, PLCs are not just ordinary teacher meetings; instead, they focus on teachers learning together to improve teaching practices and students' learning (DuFour, 2004). While some of the PLCs are explicitly organised, teachers "spend several hours per week informally learning with peers about work-related topics" (Marcia and Garcia, 2018, p. 2).

Professional learning communities and their potentiality in teaching competence

Like in other nations, Tanzania realises that school-based learning communities will give teachers an opportunity to engage in relevant, cost-effective, and continuous professional learning for improved teaching. The potentiality looked at here is the possibility of the PLCs to develop teachers' competencies in teaching in the present or future. Given the popularity of the use of social media, it is evident that teachers can discuss professional and other teaching-related issues through social media (Gregory & Oliver, 2018). While the increasing use of social media has further enhanced teacher participation in PLCs, there is limited research on how it impacts teachers' learning and practice (Goodyear et al., 2019). With the use of smartphones in Tanzania, it is evident that the majority of teachers possess phones and network through WhatsApp, Facebook, Twitter, and Instagram. These teachers might be using the media intentionally or unintentionally to learn about matters related to the subjects they are teaching. Some teachers can improve their competence through engaging in subject-based departments (Vanblaere & Devos, 2018).

Professional learning communities (PLCs) increase teachers' mobility and access to a variety of learning resources during teacher learning (Andedo et al., 2021). More significantly, the PLCs enable teachers to continue learning and service their students during this challenging time of the COVID-19 pandemic. Macià and García (2016) reviewed a number of online communities and found that once online communities are well organised, they greatly influence teacher professional development. Similarly, Motteram et al. (2020) highlighted in their study that "there is good potential for the use of social media tools such as WhatsApp for teacher development in challenging contexts, despite the contextual constraints" (p. 5731).

Methodology

This study used a case study research design to investigate the potential use of PLCs in enhancing competence-based teaching in secondary schools. Case study design employs a variety of research tools to make a detailed investigation of a phenomenon in context (Baxter & Jack, 2008). The study involved case studies of Dodoma and Dar es Salaam cities in Tanzania. These cities were chosen due to their proximity and the

expectation that relevant findings would be collected from them. In fact, by working in the city, teachers are exposed to vast professional development opportunities and are likely to participate in different sorts of PLCs. In the context of African countries, Tanzania included, urban areas offer easy access and opportunities for professional development compared to their counterpart peripheral places (Mulkeen, 2008). Since this study intended to explore the potential of PLCs, it was imperative to be done in a place where teachers would be exposed to some sort of professional learning opportunities. The data obtained from selected schools in the cities can provide insights to stakeholders and other schools in similar contexts on the potential of PLCs.

The study involved eight schools. Participants included in this study were thirty-one teachers, eight heads of schools and thirty students. Purposive sampling was used to select teachers teaching science, mathematics, business studies and language. Teachers participated in focus group discussions (FGDs) of three to four participants. Teachers, as central participants in the study, reported about their competence levels and possibilities of the PLCs' uses in promoting teaching knowledge, skills, and attitude. They were asked to explain specific learning activities they performed in their PLCs and their reflection on developing teaching competence. Students were also purposefully included in the study to supplement and confirm teachers' claims regarding classroom practices. Heads of schools were included in the study and engaged in one-on-one semi-structured interviews. The heads of schools provided information about the use of existing PLCs and recommended best practices for improvement. All FGDs and individual interviews lasted between 40 and 60 minutes, and they took place in respective schools.

Research ethics were considered throughout the study. The research permit was sought from the University of Dar es Salaam. All participants were informed about the study and obtained their consent prior to engagement. Data were analysed using the MAXQDA 2022 (Release 22.0.0) software. Related ideas were coded on the MAXQDA depending on how data were making sense to research questions.

Findings

The findings are presented in accordance with the research questions of this study.

Teachers' challenges of implementing competence-based teaching

Findings have shown that despite some improvements in implementing a competence-based curriculum, teachers revealed limited understanding and skills in teaching some content areas. Weaknesses in classroom management skills and teachers' negative attitudes towards teaching and learning were also revealed.

The use of non-interactive approaches

While interactive approaches are critical to competence -based teaching, about three-quarters of teacher participants claimed that they could not apply them in large classes

with students' low learning abilities. For example, 16 out of 31 teachers in this study indicated that they had medium to large classes with 46 to 90 students. Some of these large classes were created by teachers themselves when they combined two classes for the sake of reducing the heavy teaching load. The teachers maintained a claim that conducting an extensive classroom discussion while actively engaging students in learning could not be possible, as commented by the following teachers:

> I can teach, although it becomes hard to practise competence-based teaching due to the total number of students that we have (Wls/FGD/ Teacher 02).
>
> We say that competence in the class depends on the class that you enter to teach and the students that you are going to meet (Yen/FGD/ Teacher 04).

These remarks imply that teachers did not always engage students in practice-based learning tasks. Other teachers also complained that competence-based teaching with students who could not understand or express themselves in English was hard to implement. Taken together, the teachers meant that they lacked knowledge on how to teach students in large classes and design learning tasks that could accommodate diverse students' learning abilities.

Many participants further indicated that their teaching style was primarily driven by examination grades. Active learning strategies could not be employed when teachers realised that they had little time to cover topics before their students sat for examinations. Some teachers claimed that if they had applied participatory methods as recommended in the syllabus, they could not cover all the topics in time. They found that the recommended teaching and learning methods activities were too demanding and thus wasted teaching time. This practice was supported by students, who revealed that some teachers rushed to finish topics to prepare them for exams. The students said:

> If it is an exam, he (Civics teacher) comes to the class and teaches everything without leaving a topic untouched' (Wls/FGD/ Student 05).
>
> Sometimes he comes just for group discussion only, and the other day he comes just for teaching only'. (Dmt/FGD/Student 01).
> He also teaches very important topics and the ones that regularly appear in examinations (Chn/FGD/Student 04).

The quotes above suggest that teachers were interested in teaching topics that are mainly examined to help students score high marks. Obviously, this kind of teaching encourages rote learning. Students can hardly develop mastery of knowledge and skills and develop appropriate attitudes if teaching will continue to focus on passing examinations rather than systematic learning procedures.

A difficulty in integrating ICT into teaching

Teachers, school leaders, and students highlighted the challenges of integrating Information and Communications Technology (ICT) in teaching. Mastery of technolo-

gy is an essential competence in facilitating teaching. Eight teachers plainly stated that they had little or no competence in ICT. Quotations from three of them in different FGDs are presented below:

> On my side, I am not that competent to apply technology in teaching or integrate ICT in teaching because I do not use technology regularly despite the fact that somehow, I was taught about it. (Dmt/FGD/ Teacher 21).

> I am not that good at integrating ICT into teaching (Kngw/FGD/ Teacher 01).

> I have little skills, but I have never applied technology in teaching (Bgr/FGD/Teacher 41).

When talking about ICT integration, most teachers refer to the use of computers and PowerPoint presentations. It was revealed that some teachers lacked adequate competence in ICT use, and others simply did not integrate it into their teaching. All the heads of schools supported the idea that most teachers did not apply ICT tools and strategies in teaching. In addition, they indicated that the problem was exacerbated by a shortage or lack of reliable ICT infrastructure in schools. A head of Bgr school explained that apart from the use of smartphones, ICT tools were limited. It was easier for teachers to use their phones to access online resources or teach some topics. However, they needed facilitation to access reliable internet.

Limited content knowledge

Another area of competence that teachers reported to be challenging relates to teaching complex topics. Almost every teacher mentioned the complexity of teaching some topics or subject aspects. Other teachers, like those from Dom and Kngw schools, admitted that some topics were complex to teach. Even though they believed that there was no master of all, they mentioned specific topics that appeared very challenging to teach. For instance, one teacher mentioned "word formation" as an example of a content area in the Kiswahili language considered to be challenging to teach and be comprehended by students. Another teacher further articulated that:

> In Book-Keeping for Form Three, there is a difficult topic known as Correction of errors. As a result, most teachers avoid teaching it. But I have sacrificed myself teaching the topic. I came here in July this year, and this topic was not taught… it is a Form Two topic. It means that teachers did not teach this topic when both the current Form Three and Form Four were in Form Two (Bpt/FGD/Teacher 01).

While the low competence in some subject areas may sound common in the teaching field, the important thing is for teachers to find ways through which they can improve their facilitation skills for students' learning. When teachers do not have mastery of the subject content, students may not be taught well, and some topics may be skipped.

Limited classroom management skills

The low competence of teachers was also evident in classroom management. Some teachers admitted that they were not able to teach effectively due to students' disruptive behaviours. A teacher from Bpt school said that they could manage lower classes like Form Ones and not upper classes (Bpt/FGD/Teacher 01). Another teacher from Dmt School clarified that having a large number of students rendered teachers incompetent to manage students well. Indicating how it was difficult to handle students during teaching, other teachers explained:

> I have been trying to use several ways to bring back their attention and concentration, such as changing my voice and banging the table because they are very stubborn (Bpt/FGD/Teacher 04).
>
> For the students who are very stubborn/troublesome, I usually give them punishment on the spot. (Chm/FGD/Teacher 01).
>
> Students are aware of me when I am in class teaching them, and if they make jokes, they know how I react (Chm/FGD/Teacher 03).
> I can tell them to keep quiet, speak English or stay over there, and they have been responding to my orders (Bpt/FGD/Teacher 03).

The easiest way used by teachers to instil some manners into students was through spanking them. Students hated being spanked and disclosed that poor management affected teacher-student relationships and, hence, learning and inattentiveness to their needs. Two students from Wls and Dmt schools saw that their teachers were becoming harsh and unfriendly. Generally, the findings suggest that teachers need to strengthen not only their ability to use interactive strategies and ICT but also effective classroom management skills.

Potential of PLCs in promoting competency-based teaching

Types of PLCs were highlighted before exploring their potential in improving competency-based teaching, as presented next.

Teachers' engagement with existing PLCs in secondary schools

This study has shown that teachers have been engaging with various PLCs in the search for knowledge and skills to address various teaching challenges. Teachers themselves created many groups. In some cases, some schools and institutions created subject groups for teachers to share experiences. In these groups, teachers were meeting in person to discuss issues related to their teaching and student learning. In the same groups, groups were created on WhatsApp social media to allow members to continue sharing information and resources when they were not able to meet in person. A few teachers were meeting through other social media like Facebook for the same

purpose of learning. The most common teacher PLGs included subject departmental groups, district subject panels and *ad hoc* learning groups, as presented in the subsequent section.

Subject departmental PLCs

The standard type of PLC that at least every teacher reported to be engaged with is the subject department. Almost all teachers said they conducted a kind of professional learning through their subject departments. Professional learning in most departments depended on an agreed set of learning priorities. Some teachers claimed that learning in their departments was formal, while others helped each other informally as they taught in the same area. Teacher 01 from Bgr said:

> If there is something we cannot do, we consult our colleagues for help. And if our colleagues fail to sort it out, we seek support from fellow teachers in other schools. We do all these, but we have not created a group for exchanging ideas in our subjects. So, communication in this group is informal.

The findings showed that through departments, teachers were able to obtain technical support from even outside their departments and schools. Teacher 01 from Chm School added that as a department, they tended to cooperate formally and informally. More importantly, teachers were able to collaborate by exchanging experiences in departments, not like with everyone working independently. All eight heads of schools agreed that they observed their teachers engaging in professional learning in their departments, although they were not sure of their learning effectiveness. Depending on a particular department, professional learning could be a one-time thing or something performed regularly.

District subject panels PLCs

Some secondary schools liaised with district education leaders to help teachers meet and share their teaching experiences through subject panels. In most cases, these subject panels were created by the Tanzania Heads of Secondary Schools Association (TAHOSA) or district education officers. One from Ymn school said that occasionally, they attended teachers' learning groups in the Physics department in Temeke Municipality. In contrast, another teacher from Chm explained that they collaborated with schools like X and Y. Some teachers reported that national subject associations, such as the Mathematics Association of Tanzania, organised other subject panels.

The creation of the PLCs was driven by the desire to help teachers share experiences on how they could make their students pass national examinations. Explaining teachers' PLCs at the district level, the head of school from Dmt said that they had a district-level interaction in which various subject groups came together to discuss their subjects. This head of school was impressed by the fact that although they organised

teachers for this platform for professional learning, teachers were interested in learning together and took control, as commented further:

> Last time, they managed to get CDs (compact discs) and discussed how to carry out practicals in Science subjects… this ultimately involves teachers in the process and gives them time to think critically about how to help students.

Teachers also indicated that they had a chance to meet other teachers teaching the same subject across the district. The district panels extended the horizon of teachers' expertise in their subject areas because teachers were coming from different schools. All in all, teachers saw these panels as an opportunity for them to learn from one another and solve their challenges in teaching.

Ad-hoc PLCs

Many teachers in this study admitted they did not have specific learning groups, and whenever they encountered challenges, they looked around for support from their fellow teachers. Those teachers who did not belong to a specific group tended to seek existing groups or create their groups when they found they needed to do so during challenging situations. These groups were formed based on the challenges experienced at a particular time. Two teachers clarified how they did it:

> When we are at school, we meet and help each other, or when we cannot meet due to distance, we communicate through the phone. We contact our fellow teachers from a particular school through a phone call. I am not in any WhatsApp or Instagram group (Bgr/FGD/Teacher 02).

> We have not set/formed a group for exchanging ideas for our subject. The way to meet is through making calls to each other (Bgr/FGD/ Teacher 01).

The first quote above implies that teachers believed that by sharing expertise, they were able to construct the knowledge they needed. Even without social media groups, teachers were able to organise themselves to ensure that they supported each other, as commented by the second teacher. The teachers believed that if they think together and share solutions to their challenges, then they would develop the competencies they need. Therefore, teachers need more help to retrieve the educational treasures embedded in collaborative learning.

Potentials of PLCs in competence-based teaching

Teachers were able to list the benefits obtained from engaging in various PLCs. The PLCs gave teachers an opportunity to share teaching experiences and resources. From just a few gains experienced by teachers in their PLCs, teachers felt that their learning groups contributed to enhancing a competence-based teaching in some ways:

PLCs enabled teachers to develop positive attitudes towards teaching

One of the most exciting findings is that some teachers felt that PLCs enabled them to develop positive attitudes towards competence-based teaching. Like Mathematics teachers who seemed to have a negative attitude towards students' learning ability, they discussed how to help their students to like the subject so that they could perform better. For example, one teacher commented:

> Most of the mathematics teachers have been perceived as harsh. When they enter classes, they make students panic and worry. But in these teacher groups, teachers share fun cartoons through social media portraying mathematics teachers with their harsh behaviours. These cartoons help to shape many mathematics teachers to the extent that they turn out to be friends with their students (Wls/FGD/Teacher 01).

The quote above shows that teachers not only have low competence levels in content and pedagogy but also their attitudes towards students learning and teaching. As commented by another teacher, when teachers attend their PLCs they raise their levels of encouragement and understanding of how to support students. Developing a positive attitude is crucial for competence-based teaching.

PLCs provide techniques for improving students' performance

The main thing that almost every teacher and their leaders mentioned as the potential use of PLCs in teaching is the opportunity to share experiences in the areas of examination composition, solving past papers, and assessment procedures. One teacher said that in their group, they learned how to prepare students for national exams:

> Sometimes, the question is complex, but we solve it. Also, some exams are being set by the city there, so they post them on social media after they have been administered and the answers are given (Dom/FGD/ Teacher 01).

Most of these teachers were meeting on *WhatsApp* and some through *Telegram* to exchange solved examinations or methods for solving them. The heads of schools supported the idea that PLCs were useful in preparing students for their final national examinations. The Head of Dmt school clarified how valuable the panels were to teachers by saying that in the panels attended by their teachers, they discussed the previous year's National Examination papers, which helped some teachers to learn some of the things they did not understand before. The main factor that encouraged teachers to create or attend PLCs was to learn how to raise students' grades in examinations. To ensure that their students perform well in examinations, teachers also shared different resources such as lesson notes. Teachers improved their lesson notes by comparing them with other teachers' notes to help their students pass.

PLCs enabled teachers to learn about the use and interpretation of syllabus

Teachers also used the opportunity to work with other group members to discuss

syllabus issues and resolve associated challenges. For example, the following teachers commented that:

> What is done in a subject group is to discuss, let's say, the syllabus changes from content to competence based' (Kmg/FGD/Teachers 01).

> The syllabus change results in changes even the way questions are structured. These are the things that we also learn, but apart from that, even the teaching methodologies, we discuss them' (Kmg/FGD/ Teacher 04).

This study revealed that teachers wanted to share experiences on effective implementation of the competence-based curriculum. They also shared expertise on the preparation of a competence-based lesson plan and how to conduct a competency-based assessment.

Since the significant purpose of PLCs was to improve student performance, teachers helped each other with how to teach complex topics in the syllabus. Explaining how teachers help to share experiences in problematic content areas and find solutions, one teacher from Wls school articulated that it was done through associations whereby they taught each other, led by a chairperson, and they seated in groups for discussions and presentations while fellow teachers observed. Teachers discussed what to learn and how to find solutions. Teacher 03 from Bpt school also commented that the PLCs were helpful in learning to teach complex topics. The teacher was supported by colleagues to teach a topic in Literature and was told to use real examples, as stated:

> They told me that students could understand better when you show them something. Therefore, I took the sample bottle… the example was a result of a WhatsApp group, and students put it in their memory up to now.

The teachers' experiences suggest that PLCs provided opportunities for teachers' mentorship. These groups are relevant and were significant platforms for regular professional development.

Teachers' engagement in PLCs did not happen without challenges. Common challenges of PLCs that were mentioned by all teachers and school leaders in this study were lack of awareness of PLGs, lack of funds, heavy workload, poor management, limited ICT uses and lack of school support. Teachers claimed that they did not know how to establish effective PLCs, and if they did, they could not maximise their use. The lack of a budget to support teacher PLCs in schools was another major problem because teachers needed funds to finance some of their learning activities. Managing the PLCs in terms of when to meet, what to learn, and how to learn was a critical challenge. Even though teachers benefited from learning from each other, they did not see that they were obliged to maintain their membership in groups or abide by the agreed rules like commitment, timekeeping, individual search for knowledge and so forth. The use of ICT in PLGs to ensure mobility in learning was not well established.

Discussion

In large-class schools with diverse students' learning needs, competence-based teaching poses a significant challenge to teachers. In the study of Nkya et al. (2021) in Tanzania, teachers also claimed that "large class size and unavailability of resources like books and laboratory equipment lowers the capacity to implement competency-based curriculum" (p. 39). Other studies in Tanzania, Kenya, Botswana and Eritrea have similarly reported teachers' inability to use learner-centred approaches in large classes (Msonde & Msonde, 2019; Posti-Ahokas et al., 2018; Schweisfurth, 2011). In this case, PLCs should be designed to promote learner- centred strategies in larger classroom settings (Schweisfurth, 2011). Teaching large classes is increasingly a global challenge that requires teachers to continually learn how to strategize students' engagement in the lesson.

The major potential of PLCs in this study was to provide teachers with opportunities to improve their teaching skills within their school environment. Subject departments were the largest platform for teacher PLCs. However, teachers' learning in departmental PLCs was limited to promoting performance in examinations. There is a need to build departments' capacity for effective PLCs by diversifying learning areas and participation. As urged by Admiraal et al. (2021), there are several areas of learning through which teachers can discuss in their PLCs. These areas are related to learning about leadership, school collaborative activities, and how to create and sustain communities of learners within or between departments. As commented by sociocultural theorists, teachers are already engaging in PLCs; all they need is guidance to make learning more practical. As commented by sociocultural theorists, since departments are the primary focus of PLCs in schools, there should be coordinators or coaches to groom a leading department to influence others. Cross-departmental PLCs are powerful as well when strengthening PLCs.

At the same time, social media like *WhatsApp* appears to be a popular platform for teachers' professional learning within and outside school departments. In this study, teachers reported that through *WhatsApp* or *Telegram* PLCs, they were able to share teaching resources and expertise on how to compose exams, solve past papers and network with others for social and academic development. In their PLC study, Goodyear et al. (2019) found that "practices that were co-constructed between teachers during *Twitter- based* discussions transferred into a teacher's lessons, demonstrating that social media has the potential to be a compelling form of professional development" (p. 430). Studies support that *Twitter* is a social media that allows educators to create a broader and more convenient platform for collaboration and sharing learning practices (Robinson et al., 2020; Schaap & de Bruijn, 2018).

Compared to *WhatsApp*, other social media like *Twitter* or *Instagram* can be more professional with several functions that can facilitate strong PLCs. Teachers in Tanzanian secondary education, therefore, need support to incorporate appropriate social media technology in their PLCs. Affordances of social media not only help to connect teachers in an environment where they cannot meet physically but also facilitate tapping of online resources needed for learning (Gregory & Oliver, 2018).

Teachers and their leaders felt that participation in PLCs significantly contributed to the improvement of students' performance in regional and national examinations. This success comes with contradicting views, as teaching styles and PLCs are driven by examinations. National examinations are one of the barriers to competency-based teaching in Tanzania secondary education (Bartlett & Vavrus, 2013; Schweisfurth, 2011). PLCs will continue to reinforce the teacher-centred traditional approach because teaching for examinations attracts rote learning and recalling, contrary to what is required for competence-based teaching and learning. In contrast, the revised curriculum requires students' development of knowledge, skills and attitudes so that they can use them to bring about sustainable change in socio-economic and political development (MoEST, 2005). However, the Certificate of Secondary Education examination is a high-stakes exam that lays a foundation for one to continue to advance levels of education. However, reforms in curriculum should be reflected in teaching pedagogy and examinations (Bermeo et al., 2013). Even though teachers have teaching tension in such an examination -oriented environment, engaging in comprehensive PLCs can help them improve skills for engaging students in learning.

A significant challenge posed in this study is that teachers have not properly extracted the potential for PLCs. The operation of PLCs is reduced to platforms where teachers focus on solving examination questions and feed students with much information. Competence -based teaching is said to result in meaningful learning, which "does not occur simply by receiving information from someone else, but rather it is what the learner does" (Kitta & Tilya, 2018, p.1). To gain full potential, school leaders need to ensure that PLCs give teachers a wide range of learning opportunities. The large-scale study conducted with 14 Dutch secondary schools indicated that schools and other educational authorities need to organise favourable conditions for PLG to promote meaningful teacher learning (Admiraal et al., 2021). Similarly, a recent study done in Kenya on PLCs found a significant relationship between principals' education in the community and the development of the groups in schools (Andedo et al., 2021).

Conclusion and recommendations

While the idea of PLCs is not typical for secondary school teachers in Tanzania, most of them are participating in this form of learning, whether intentionally or unintentionally. Some teachers form or join existing PLCs within their subject departments to share experiences in teaching and learning. Even though teachers benefit from PLCs, they cannot reach their full potential. Most of the PLCs tend to

bolster a traditional teacher-centred approach. As teaching has been examination-oriented, discussions in PLCs are directed towards promoting students' grades. Contrary to the teacher-centred approach, in competence-based teaching, teachers facilitate students' learning to develop a master of knowledge and skills by engaging them actively in learning. However, the nature of examination as the focus has always impeded teaching, and hence, PLCs do not support competency-based teaching. There is a need to rethink how students' competencies are assessed in examinations to support competence-based teaching and learning. Knowledge of PLCs is also needed if schools are to promote effective teacher learning for competence-based teaching through teachers' PLCs.

This study recommends that teachers and schools in Tanzania should be educated on how to set up solid PLCs and manage them for effective continuing professional development. The government, through its education agencies, needs to provide some funds to help teachers participate in a wide range of PLCs. Setting aside time for PLCs will enable teachers to engage in systematic learning and take PLCs more seriously. It is also recommended that Tanzania should ensure that PLCs are created and maintained in schools as indicated in the national framework for teacher professional development. School leaders also need to be empowered to facilitate the performance of PLCs in schools. Finally, further research should be done to investigate how PLCs in social media can expand teacher participation in professional learning.

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