



Pedagogic Content Knowledge of the Cameroon Teacher Education Curriculum on Teacher's Effectiveness in Primary School Classrooms in Cameroon

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Abstract

The study examined the contribution that can be made by pedagogic content knowledge to effective teaching in teacher training contexts in Cameroon Basic Education. The study was based on the didactics of teaching citizenship education in the teacher training curriculum. Data were collected through interviews and classroom observations of teaching across three schools. The findings show that the level of the deployment of teachers' pedagogic content knowledge on both instruments was slightly above average. Consequently, the degree of teacher effectiveness is directly linked to their level of professional development and, in this particular case, teachers need to be continually engaged in the development of their pedagogic content knowledge.

Subject Areas

Educational Technology, Teaching and Learning Technologies

Keywords

Pedagogic Content Knowledge, Teacher Education, Curriculum, Teacher Effectiveness, Didactics, Citizenship Education

1. Introduction

It is now widely accepted in educational theory that teachers need more than content knowledge and general teaching knowledge in order to teach optimally in any given subject area. Shulman [1] defines pedagogical content knowledge as

the knowledge of how to teach within a particular subject area. It enables teachers to ease the learning for students through the use of clear explanations, appropriate analogies, and presenting learning in interesting, motivating and even entertaining ways. It also refers to a wide range of aspects of subject matter knowledge, the teaching of subject matter, and teacher's interpretations and transformations of subject-matter knowledge in the context of facilitating student learning [1].

The imperative in recent years of improving learners' outcomes is also about improving the quality of the teaching workforce, and research has shown, that pedagogic content knowledge is an important factor in determining gains in learners' achievement, even after accounting prior learner learning and family background characteristics [2].

At the national level, the Education Sector Wide Strategy Paper projects quality offerings as a major area of continuous focus in the National Development Strategy 2020 to 2030. The Pedagogic Content Knowledge (PKC) involves knowing how to take advantage of different teaching approaches that makes a learning experience most suitable for the learners. The researcher has observed that pedagogic content knowledge may not have been fully understood by teachers, as observations show that teachers' are not flexible in adjusting instruction to account for the various learning skills. Most of them may not know how best to teach a concept so that learners will receive the best learning experiences. The literature on PCK indicates that further exploration may be needed for teacher trainers' pedagogical thinking, and how their PCK informs teaching performance in the classroom. Given the new curriculum for Teacher Training in Basic Education, which has been in implementation for the past ten years, it may be timely to find out the progress being made in raising the quality of teachers who, in turn, are responsible for quality offerings in primary school classrooms, in increasing access, providing gender equity, preventing attrition, while ensuring increasing graduation rates.

2. Research Question

In what ways does the didactics of citizenship education influence teacher effectiveness in primary school classrooms?

3. Review of Related Literature

3.1. Pedagogical Content Knowledge

Pedagogic content knowledge refers to a wide range of aspects of subject matter knowledge and the teaching of subject matter [1]. Tchombe [3], cited in [4] sees pedagogical knowledge as the presentation of subject matter, the processes of learning, of teaching and assessing. It is also the teacher's interpretations and transformations of subject-matter knowledge in the context of facilitating student learning [1]. The distinctive bodies of knowledge for teaching are identified by pedagogic content knowledge, representing the blending of the content and

the pedagogy, which leads to an understanding of how particular topics, problems or issues are organized, represented and adapted to the diverse interests and abilities of learners, and presented for instruction. Pedagogical content knowledge is the category most likely to distinguish the understanding of the content specialist from that of the pedagogue [5]. Successful teachers wrestle simultaneously with issues of pedagogical content or knowledge, as well as general pedagogy [6]). A good teacher completes several activities of pedagogic reasoning; comprehension, transformation, instruction, evaluation, reflection and new comprehension [6]. Pedagogical content knowledge (PCK) identifies the distinctive bodies of knowledge for teaching. It represents the blending of content and pedagogy into an understanding of how particular topics, problems or issues are organized, represented, and adapted to the diverse interests and abilities of learners, and presented for instruction. Shulman [5], Alexander [7], Macnamara [6], Brown and MacIntyre [8], agree that pedagogic knowledge (PK), the knowledge of how to teach, is intrinsically linked to content knowledge. There is, however, much debate as to what these links are, and how PCK is formed. Duggen-Hass *et al.* [9] argue that the ability to teach science requires more than just an understanding of content knowledge (CK), and PK. It also requires an understanding of what happens at their intersection. McNamara [10] similarly suggests that it is not the case that CK is simply added to PK, but that a teacher reflecting on classroom practice may create his or her own PCK.

The potential of teachers themselves to create their own PCK raises further debate on the relationship between the experiential knowledge and the theoretical knowledge of teachers. Stinnett [11] suggests that while education has developed a great body of PCK, too little has resulted from careful, and thorough research. Too great a proportion of the literature on education is based on opinion, beliefs and slogans. Schon [12] suggests that in much of the Spontaneous behaviour of skilled practice, we reveal a kind of knowing, which does not stem from a prior intellectual operation (p. 51). Carlgren [12], points out that this “kind of knowing” or tacit knowledge alone is not necessarily a good thing, since tacit stupidity exists, as well as tacit wisdom. There is need for other ways of perceiving theory and practice, while theory is about saying, practice is about doing, and theory and practice represent two different ways of knowing. Bromme [13] states that it is important for teachers to differentiate in their own minds between “wisdom of practice” [5], and the wider body of knowledge which exists. Goodson and Hargreaves [14] suggest that teachers derive their skills from mediation between experience and theory. So, the issue of solely theoretical knowledge requirements to define teachers’ PCK is disputed, with a consensus view supported by Schon [15], Goodson and Hargreaves [14], Watkins and Mortimer [16], and Brown and MacIntyre [8], that a mix of theory and practice provides greater professionalism.

3.2. Citizenship Education

The concept of citizenship education is a field that includes a wide range of phil-

osophical, political, ideological perspectives, different pedagogical approaches, objectives, and practices. Schugurensky & Myers [17] present a traditional/elitist/minimalist orientation, which conceives of citizenship education as a process of social initiation. From this perspective, citizenship education is a tool for reproduction of the socio-economic order, and of democracy as its political complement. Traditional citizenship education teachers are very close to the traditional civics education. Consequently, they strive to install national loyalty and obedience to authority through national narratives, knowledge of geographical and historical facts, and of the operation of government institutions. Their goal is to create good citizens, good consumers, and good patriots. In this view of minimal citizenship, content is predominant with a transmissive methodological approach, with no concern for attitudes as a central objective McCowan [18]. Another orientation, defined as progressive/activist/maximalist Kerr [19], is based on an inclusive practice, and on curricular and pedagogical elements which are based on values that are difficult to measure in practice. It considers citizenship education as a tool for social reform and transformation, trying to encourage critical analysis, political commitment, transcultural respect and understanding, and active participation in public life. As presented by Schugurensky & Myers [17], this orientation involves the following challenges related to:

1. The transition from a passive to an active citizenship in order to foster informed, responsible, and committed citizens with critical thinking skills.
2. The transition from a national to a global and ecological citizenship on a planet with finite resources.
3. The recognition of cultural diversity to promote an intercultural society beyond mere tolerance, based on solidarity, interaction, openness, and recognition of power relations.
4. Participation in the public sphere, as well as recognition of the feminist perspective and of the importance of inequalities.
5. The transition from a citizenship-based school to one of learning communities, from a model of the school of the XIX century at the service of industrial production, to one of active democracy and of citizens for the XXI century.
6. Changing from a formal citizenship to genuine democratic citizenship through the study of controversial issues such as the unequal distribution of wealth, or the influence of power in the media and the political system, in order to favor the reduction of the distance between the real world and an ideal world.

Citizenship beyond state borders would have to be built, basing our actions on the awareness of human dignity and the belonging to a local and global community involved in building a sustainable world, Galiero [20].

3.3. Teachers' Effectiveness

Teaching is an art, and the quality of teaching depends on the love, dedication and devotion of the teacher towards the subject of knowledge. The most single critical element in the education process is the teacher who plans, organizes, de-

signs, directs, motivates, and inspires others to learn using standard teaching techniques to impart knowledge (Okolocha and Onyeneke [21]). Teaching is a purpose profession engaged in human resource development for individual and economic growth, Oyekan [22]. It is done systematically by professionals who have acquired some skills and knowledge either by training, or experience or both. To make a desirable impact, teaching must aim at the total development of an individual, by enhancing intellectual capabilities, developmental and cognitive intellectuality, psycho-social skills, and drawing out neuro-physical aptitudes of the learners, Akinmusire [23]. All education institutions emphasize that teaching be important and give high priority to developing effective teaching and solving teaching challenges. Effective teaching may include high levels of creativity in analyzing, synthesizing and presenting knowledge in new and effective ways. It should instill in the learners the ability to be analytical, intellectually curious, culturally aware, employable and capable of leadership, Okolie [24]. According to Omoifo & Urevbu [25], effective teaching implies the use of clearly formulated objectives by the teacher, illustrated instruction that will enable students to acquire desired knowledge content, apply the knowledge to classroom and other related problems, think and take independent decisions, and the use of effective evaluation technique. Akomolefe [26] identified the characteristics of effective teaching to include: attention on students achievement, quality teaching responsive to students learning processes, effective and efficient learning opportunities, pedagogical practices that create cohesive learning communities, effective links between school and cultural context of the school, multiple tasks to support learning cycles, aligned curriculum goal effectively, pedagogy scaffolds feedback on students' and task engagement among others. The objectives of effective teaching as stated by Adegbile [27] would include assisting learners to: conceptualize ideas, process thoughts and develop their potentials; contribute to thinking and creativity in the subject; nurture and sustain students' interest; suit the circumstance of teaching and learning; and suit the individual teacher ability and interest.

Teacher Training in Cameroon provides initial and in-service training at all the levels in compliance with the Presidential Decree of 19th June 1980, structuring training institutions and courses, Tchombe [28]. This was the first policy stipulating the duration of basic teacher training. The Education Sector Wide Strategy Paper [29] and the sector wide approach paper [30] has as one of its priority areas the achievement of universal quality primary education. This objective aligned with the National Growth and Employment Strategic Goals [31] and currently the National Development Strategy [32] of providing the production system with human capital capable of supporting economic growth.

These documents identify the major challenges facing education in Cameroon as of poor quality, weak governance and accountability across the system leading to the inequitable and insufficient distribution of resources, and persistent dis-

parities related to gender, region of residence, and income.

The country's 2035 vision [33] of development calls for a major redefinition of the tasks assigned to schools, as well as the adoption of fundamental principles of governance. Schools remain responsible for developing citizens, fostering: individuality, economic understanding, collective responsibility, moral values, intellectual ability, political and civic understanding.

3.4. Theoretical Review

The theories of pedagogical reasoning (Lee Shulman [5], and cognitive apprenticeship of Collins, Brown and Newman [34] underpin this study.

Shulman's model [5] of pedagogical reasoning and action was developed as a foundation for teaching reform. It was designed to identify the professional practice of teaching that was specific to teachers, building on an earlier article [1], which proposed pedagogical content knowledge. The model comprises actions that a teacher undergoes during the teaching process, including; comprehension of subject knowledge, transformation of subject knowledge into teachable representations, instruction, evaluation of students' learning and teacher's performance, reflection, and new comprehensions. Thus, it was an attempt to illustrate reflective practice during the teaching process, a model that was useful for initial teacher education, and influential in subsequent writing about teacher education (Grimmett [35], Loughran [36], Hammond [37]).

Shulman [5] concentrates on the types of knowledge that are required in teacher training and the processes trainees need to go through to becoming a teacher, which he calls the "processes of pedagogical reasoning and action," with six stages, namely: comprehension, transformation, instruction, evaluation, reflection, and new comprehension.

The concept of cognitive apprenticeship. Collins, Brown and Newman [34] succinctly define cognitive apprenticeship as "learning-through-guided-experience on cognitive and meta cognitive, rather than physical skills and processes". Learning in cognitive apprenticeship occurs through legitimate peripheral participation, a process in which newcomers enter on the periphery, and gradually move toward full participation. In the same light, Vygotsky [35] argues that much important learning by the child occurs through social interaction with a skillful tutor. The tutor may model behaviors and/or provide verbal instructions for the child. Vygotsky refers to this as cooperative or collaborative dialogue. The child seeks to understand the actions or instructions provided by the tutor (often the parent or teacher), then internalizes the information, using it to guide or regulate their own performance. According to Brown [36], "The central issue in learning is becoming a practitioner, not learning about practice". Collins, Holum and Brown [37], identify four important aspects of traditional apprenticeship: modeling, scaffolding, fading, and coaching.

Modeling, a form of demonstration followed by imitation, is frequently used as a way of helping the learner to progress through the Zone of Proximal Devel-

opment, Tharp and Gallimore [38]. The work of Bandura [39] showed that modeling is a more efficient way of learning than trial and error. In modeling, the apprentice observes the master demonstrating how to do different parts of the task. The master makes the target processes visible, often by explicitly showing the apprentice what to do. With time, the students take increasing responsibility of their teaching, Collins *et al.* [37]. Coaching and mentoring are, sometimes, used synonymously. A mentor, by its most basic definition, is one who mediates expert knowledge for novices, helping that which is tacit become more explicit. The two most common uses of the word “mentoring” are to describe: a) a professional development relationship in which a more experienced participant assists a less experienced one in developing a career and b) a guiding relationship between an adult and a youth focused on helping the youth realize his or her potentials, and perhaps, overcome some barriers or challenges. The master coaches the apprentice through a wide range of activities: choosing tasks, providing hints and scaffolding, evaluating the activities of apprentices, and diagnosing the kinds of problems they are having. They also challenge them and offer encouragement, give feedback, structure the ways to do things, and work on particular weaknesses. In short, coaching is the process of overseeing the student’s learning. Some refer to mentoring and/or coaching as a form of scaffolding, McLoughlin [40]; Collins *et al.* refer to scaffolding as an aspect of coaching and others maintain that they are separate strategies under the larger classification of cognitive apprenticeship. Whatever the case, the common thread in all these strategies is to help novices become experts in various fields through real world experiences.

4. Methodology

This collective case study involving three cases was used to obtain data that provided greater insight into the research topic of this study. The collective case study also called the “multiple-case design” Yin [41] allows for several cases to be used in a single study. This design allowed the researcher to obtain data from students and teachers of three teacher training institutions involving interactions in three disciplines, in order to answer the research questions of the study. This qualitative approach was suitable because teaching and learning are a dynamic process, and it was important to give room to teachers to fully express their mind concerning how the accumulated knowledge and experiences they have acquired influenced their professional growth.

The population of the study was constituted of all the teachers of the Teacher Training Colleges and classroom teachers of primary schools in Fako Division. The sample size consisted of eleven (6) teacher trainers from three (3) teacher training colleges, and nine (9) primary school teachers from 3 case schools in Fako Division. Purposive sampling technique was employed to select the sample of teacher training school, teacher trainers, primary schools and primary school teachers.

An interview schedule was used to collect data from the 6 teacher trainers, 3 males teaching “educational technology”, 2 females and 1 male teaching “citizenship education”, An observation checklist was used to collect observation data from 8 observation cases of teaching in class 3 in each teacher training college, making a total of 24 observation cases over a 3-week period. Each lesson observed lasted 40 minutes. Teaching was also observed in 3 primary schools; 4 lessons were observed in school A, 4 in school B, and 3 in school C. All observations were carried out in Class 6.

The study used a concurrent nested qualitative approach whereby, beside observation of teaching, interviews were conducted to capture other perceptions from participants. These textual data were analyzed using the process of thematic analysis where concepts or ideas were grouped under key words. However, pre-established standardized terminology was used to enrich the umbrella terms that emerged from the study, to make the findings more comparable. The primary documents of textual data were coded for every independent idea, as it emerged from the data and for frequency of concepts following the positivism principle, but the interpretation of findings was dominantly qualitative. A conceptual diagram concluded the analytical stage, which consisted in relating concepts or ideas in a meaningful and logical manner, what is termed concept-building in qualitative analysis.

5. Findings

Thematic analysis depicting teachers’ perception of the pedagogic content knowledge of the teacher training curriculum in terms of citizenship education was good. The teachers gave the following reasons why they perceive the pedagogic content knowledge to be good (See **Tables 1-4**).

“It helps to solve all professional problem situations, using resources of citizenship education”.

“The pedagogic content knowledge of citizenship helps give knowledge and skills to understand and engage with a democratic society” and “Contribute in nation building”.

“It helps in promoting moral development in the society”.

Thematic analysis depicting teachers’ perceptions on factors that have helped them develop their career and improve on their teaching since they left the training school, apart from knowledge, skills and attitudes developed from pedagogic training in teacher training college, with respect to citizenship education, was generally good as they gave the following reasons.

“Internal and external supervision has helped in developing my career and improving on my teaching”.

“In-service training has helped me greatly in developing my career and improving on my teaching”.

“Technology has helped greatly in developing and improving my career”.

“It increases awareness on the importance and practice of democracy”.

“Increase ability to portray good conducts in the society in terms of morality and ethic”.

“Increase sense of love and belonging for the country” and “Increases problem-solving ability”.

Some external factors, which played an important role in developing teacher’s effectiveness in the pedagogic content knowledge in citizenship included were “internal and external supervision”, “in-service training” and “technological development”.

Table 1. Characterization of teachers’ effectiveness based on classroom observation.

Preparing Students for New Learning	Stretched				Collapsed	
	Partially good	Good	Very good	Excellent	Partially good & good	Very good and Excellent
Essential Question: How does the teacher						
1) Establish Purpose,						
2) Activate Students’ Prior Knowledge, and						
3) Prepare Students for learning						
Selecting relevant standards that are appropriate to the content and grade level	0.0% (0)	16.7% (6)	66.7% (24)	16.7% (6)	16.7% (6)	83.3% (30)
“Unpacking” standards and turning them into clear and measurable learning goals and targets	0.0% (0)	19.4% (7)	80.6% (29)	0.0% (0)	19.4% (7)	80.6% (29)
4) Essential knowledge						
5) Essential skills						
Posing essential questions to guide learning and promote deep thinking	0.0% (0)	25.0% (9)	61.1% (22)	13.9% (5)	25.0% (9)	75.0% (27)
6) Planning your questions						
7) Building a classroom culture that encourages questioning						
Beginning lessons and units with engaging “hooks” thought-provoking activities or questions that captivate student interest and activate their prior knowledge	0.0% (0)	19.4% (7)	61.1% (22)	19.4% (7)	19.44% (7)	80.6% (29)
8) Use a quotation						
9) Provide unusual detail						
10) Tell a story						
Introducing students to the key vocabulary terms they will need to know and understand to successfully learn the content	0.0% (0)	30.6% (11)	63.9% (23)	5.6% (2)	30.6% (11)	69.4% (25)
Assessing students’ background knowledge						
Skill level	0.0% (0)	36.1% (13)	55.6% (20)	8.3% (3)	36.1% (13)	63.9% (23)
Interests relative to learning objectives and targets						

Continued

Helping students develop insights into the products they'll be creating, performances they'll be delivering and/or tasks they will be completing to demonstrate what they have learned by Providing models of high-quality work	11.1%	38.9%	44.4%	5.6%	50.0%	50.0%
11) Rubrics	(4)	(14)	(16)	(2)	(18)	(18)
12) Checklists						
Indicators of teacher effectiveness.						
Ask questions about learning goals.	2.8%	36.1%	52.8%	8.3%	38.9%	61.1%
	(1)	(13)	(19)	(3)	(14)	(22)
Know what they have to produce and what's expected of them	0.0%	19.4%	80.6%	0.0%	19.4%	80.6%
	(0)	(7)	(29)	(0)	(7)	(29)
Assess their own knowledge of vocabulary	2.8%	38.9%	50.0%	8.3%	41.7%	58.3%
	(1)	(14)	(18)	(3)	(15)	(21)
Generate questions about content or personal goals	5.6%	38.9%	47.2%	8.3%	44.4%	55.6%
	(2)	(14)	(17)	(3)	(16)	(20)
Understand the plan for learning	2.8%	19.4%	75.0%	2.8%	22.2%	77.8%
	(1)	(7)	(27)	(1)	(8)	(28)
MRS	2.1%	28.2%	61.6%	8.1%	30.3%	69.7%
	(9)	(122)	(266)	(35)	(131)	(301)

The data indicate that in aggregate teachers performed slightly above average in establishing purpose, activating students' prior knowledge, and preparing them for learning.

Table 2. Characterization of teachers' preparation of pupils for new learning based on observation.

Characterization of teachers' presentation of new learning based on observation by teachers	Stretched				Collapsed	
	Partially good	Good	Very good	Excellent	Partially good	Very Good and Excellent
Presenting new learning						
Essential Question: How does the teacher present new information and provide opportunities for students to actively engage with content?						
Designing lessons and units around the way the content is organized and breaking the content up into meaningful "chunks"						
13) Topic	0.0%	38.9%	55.6%	5.6%	38.9%	61.1%
14) Subtopic	(0)	(14)	(20)	(2)	(14)	(22)
15) Cycle						
16) Procedural						
17) Comparison						
Incorporating multiple sources of information including multimedia resources, into lessons to help students acquire new knowledge	11.1%	44.4%	41.7%	2.8%	55.6%	44.4%
	(4)	(16)	(15)	(1)	(20)	(16)

Continued

Demonstrating high-quality communication skills	2.8%	41.7%	44.4%	11.1%	44.4%	55.6%
18) Expressive language	(1)	(15)	(16)	(4)	(16)	(20)
19) Rich vocabulary						
Using a variety of presentation techniques to make lessons vivid and memorable (presenting declarative information)	8.3%	47.2%	36.1%	8.3%	55.6%	44.4%
20) Visuals	(3)	(17)	(13)	(3)	(20)	(16)
Using modeling and think-aloud to help Praise (Recognize positive teaching behaviors that enhance students understand the thinking skills, processes, learning.) and procedures they'll need to master (presenting procedural information)	2.8%	44.4%	52.8%	0.0%	47.2%	52.8%
	(1)	(16)	(19)	(0)	(17)	(19)
Using a variety of questions and response techniques (e.g., signaling, surveying, whiteboard-response systems, Think-Pair-Share, provisional writing) to check for understanding in real time	5.6%	38.9%	44.4%	11.1%	44.4%	55.6%
	(2)	(14)	(16)	(4)	(16)	(20)
Making use of outside resources (e.g., fieldtrips, guest speakers from community, interactive technology) to make learning authentic	8.3%	47.2%	41.7%	2.8%	55.6%	44.4%
	(3)	(17)	(15)	(1)	(20)	(16)
Helping students assemble big ideas and important details through note making, summarizing, graphic organizers, and/or other forms of linguistic and nonlinguistic representation improve practice.	0.0%	30.6%	66.7%	2.8%	30.6%	69.4%
	(0)	(11)	(24)	(1)	(11)	(25)
Actively process new content (e.g., notes)	11.1%	3.3%	55.6%	0.0%	44.4%	55.6%
	(4)	(12)	(20)	(0)	(16)	(20)
Are able to identify big ideas and important details	2.8%	47.2%	41.7%	8.3%	50.0%	50.0%
	(1)	(17)	(15)	(3)	(18)	(18)
Communicate about their learning.	0.0%	41.7%	55.6%	2.8%	41.7%	58.3%
	(0)	(15)	(20)	(1)	(15)	(21)
Can answer questions about their learning.	0.0%	52.8%	47.2%	0.0%	52.8%	47.2%
	(0)	(19)	(17)	(0)	(19)	(17)
Make connections to the real world.	5.6%	27.8%	52.8%	13.9%	33.3%	66.7%
	(2)	(10)	(19)	(5)	(12)	(24)
Raise their own questions.	0.0%	41.7%	55.6%	2.8%	41.7%	58.3%
	(0)	(15)	(20)	(1)	(15)	(21)
MRS	4.2%	41.3%	49.4%	5.2%	45.4%	54.6%
	(21)	(208)	(249)	(26)	(229)	(275)

Teachers' skills in presentation of new information and provision of opportunities for students to actively engage with content were on the average.

Table 3. Characterization of teachers' deepening of learning of pupils.

Deepening Learning	Stretched				Collapsed	
	Partially good	Good	Very good	Excellent	Partially good	Very good and Excellent
Essential question: Identifying critical junctures in the learning sequence, establishing targets that students must achieve at each juncture, and using a variety of formative assessment activities to help students assess their progress toward the targets						
Engaging students in regular content-based writing that helps them clarify their thinking and deepen their understanding	5.6% (2)	41.7% (15)	50.0% (18)	2.8% (1)	47.2% (17)	52.8% (19)
Building in periodic review and guided practice opportunities to help students master key skills and content	5.6% (2)	36.1% (13)	55.6% (20)	2.8% (1)	41.7% (15)	58.3% (21)
Providing clear and descriptive feedback to help students refine their use of key skills and/or deepen their comprehension Praise (Recognize positive teaching behaviors that enhance)	5.6% (2)	16.7% (6)	69.4% (25)	8.3% (3)	22.2% (8)	77.8% (28)
Using heterogeneous and homogeneous learning. Groups to maximize student learning						
21) Grouping students according to ability levels	2.8% (1)	47.2% (17)	47.2% (17)	2.8% (1)	50.0% (18)	50.0% (18)
22) Interests						
23) Learning styles						
Providing a wide variety of resource to enhance practice and learning Pose						
24) Models	8.3% (3)	36.1% (13)	44.4% (16)	11.1% (4)	44.4% (16)	55.6% (20)
25) Learning centers						
26) Multimedia						
Providing students opportunities to process decisions and their impact new knowledge deeply through						
27) Questions,	0.0% (0)	22.2% (8)	66.7% (24)	11.1% (4)	22.8% (8)	77.8% (28)
28) Discussion, and						
29) Critical thinking activities						
Assigning purposeful and grade-appropriate homework for students to practice and reinforce learning	5.6% (2)	22.2% (8)	66.7% (24)	5.6% (2)	27.8% (10)	72.2% (26)
Practice and rehearse.	0.0% (0)	30.6% (11)	58.3% (21)	11.1% (4)	0.6% (11)	69.4% (25)
Use writing and thinking strategies.	0.0% (0)	22.2% (8)	72.2% (26)	5.6% (2)	22.2% (8)	77.8% (28)
Display effort	2.8% (1)	38.9% (14)	52.8% (19)	5.6% (2)	41.7% (15)	58.3% (21)

Continued

Coach each other.	2.8% (1)	47.2% (17)	47.2% (17)	2.8% (1)	50.0% (18)	50.0% (18)
Use feedback (what they see, hear) to assess and modify their performance	0.0% (0)	47.2% (17)	50.0% (18)	2.8% (1)	47.2% (17)	52.8% (19)
Think critically—synthesize and discuss ideas, give explanations, make new hypotheses.	0.0% (0)	38.9% (14)	50.0% (18)	11.1% (4)	38.9% (14)	61.1% (22)
MRS	3.0% (14)	34.4% (161)	56.2% (263)	6.4% (30)	37.4% (175)	62.6% (293)

Teacher's effectiveness in identifying critical junctures in the learning sequence, establishing targets that students must achieve at each juncture, and using a variety of formative assessment activities to help students assess their progress toward the targets was on slightly above average.

Table 4. Characterization of teachers' helping pupil apply learning.

Applying knowledge	Stretched				Collapsed	
	Partially good	Good	Very good	Excellent	Partially good	Very Good and Excellent
Essential Question: How does the teacher help students demonstrate their learning and what kinds of evidence does the teacher collect to assess student progress?						
Aligning summative assessments with learning goals and targets	2.8% (1)	22.2% (8)	72.2% (26)	2.8% (1)	25.0% (9)	75.0% (27)
Designing culminating assessments that require students to transfer their learning in meaningful ways	0.0% (0)	30.6% (11)	66.7% (24)	2.8% (1)	30.6% (11)	69.4% (25)
Developing tasks around the kinds of writing required for college and career readiness 30) Argument, 31) Informative/explanatory, 32) Narrative	5.6% (2)	27.8% (10)	66.7% (24)	0.0% (0)	333.3% (12)	66.7% (24)
Engaging students in research projects that capture student interest and have relevance in the world beyond the classroom	2.8% (1)	41.7% (15)	47.2% (17)	8.3% (3)	44.4% (16)	55.6% (20)
Challenging students to present their findings and defend their ideas	2.8% (1)	27.8% (10)	61.1% (22)	8.3% (3)	30.6% (11)	69.4% (25)
Equipping students with the planning, thinking, and self-assessment skills they need to analyze and address task demands	2.8% (1)	33.3% (12)	61.1% (22)	2.8% (1)	36.1% (13)	63.9% (23)

Continued

Making sure students understand what's expected of them. And providing feedback as they work.	2.8%	33.3%	61.1%	2.8%	36.1%	63.9%
33) Examining rubrics,	(1)	(12)	(22)	(1)	(13)	(23)
34) Checklists,						
35) Models of exemplary work						
Differentiating assessment tasks so that students can show what they know in different ways	2.8%	38.9%	44.4%	13.9%	41.7%	58.3%
	(1)	(14)	(16)	(5)	(15)	(21)
Plan out their work.	2.8%	22.2%	61.1%	13.9%	25.0%	75.0%
	(1)	(8)	(22)	(5)	(9)	(27)
Analyze and revise their own work to improve its quality.	2.8%	30.6%	58.3%	8.3%	33.3%	66.7%
	(1)	(11)	(21)	(3)	(12)	(24)
Incorporate feedback into their revisions.	5.6%	22.2%	63.9%	8.3%	27.8%	72.2%
	(2)	(8)	(23)	(3)	(10)	(26)
Use rubrics and checklists.	2.8%	55.6%	38.9%	2.8%	58.3%	41.7%
	(1)	(20)	(14)	(1)	(21)	(15)
Develop meaningful products.	0.0%	44.4%	50.0%	5.6%	44.4%	55.6%
	(0)	(16)	(18)	(2)	(16)	(20)
Present and explain their work.	0.0%	25.0%	69.4%	5.6%	25.0%	75.0%
	(0)	(9)	(25)	(2)	(9)	(27)
Take pride in their work.	0.0%	27.8%	55.6%	16.7%	27.8%	72.2%
	(0)	(10)	(20)	(6)	(10)	(26)
MRS	2.4%	32.2%	58.5%	6.9%	34.6%	65.4%
	(13)	(174)	(316)	(37)	(187)	(353)

Teacher abilities to help students demonstrate their learning was slightly above average.

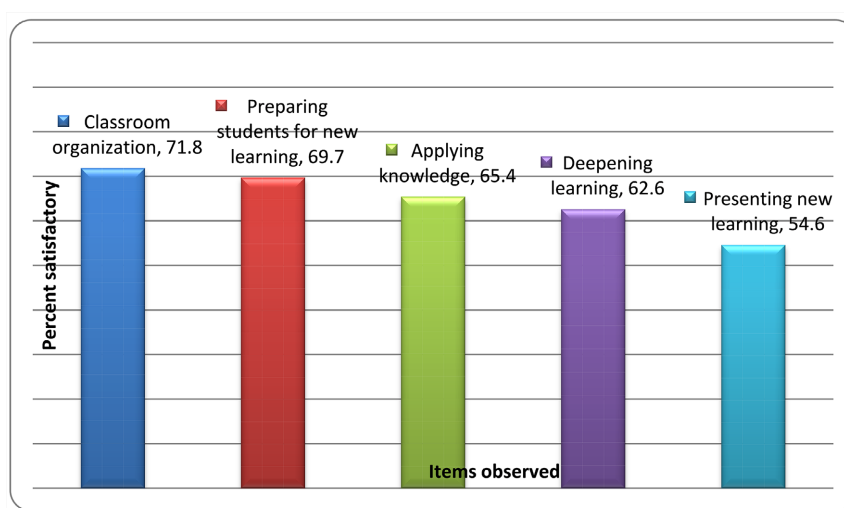


Figure: Comparing teachers' effectiveness based on observation.

Figure 1. Teachers' effectiveness.

In essence, the data from observation of classroom teaching indicate that in general the level of the development of professional skills for effective teaching demonstrated by teachers was slightly above average, corroborating the findings from the interview data (See **Figure 1**).

6. Discussion

The didactics of citizenship education positively contributed to teachers' effectiveness in teaching as they generally agreed that it assists them in solving their professional problems, enables them develop understanding, gain knowledge and develop skills for participation in democratic society, while at the same time strengthening their moral structure. They equally indicated that in-service training, use of technology and pedagogic supervision were additional elements contributing to their increasing career development as classroom teachers. The findings align with the results of a study carried out by Galiero [20], that citizenship education is one of the strategies that can generate changes in attitudes, values and social behavior systems to be able to address challenges, and that citizenship beyond state borders would have to be built, basing our actions on the awareness of human dignity and the belonging to a local and global community involved in building a sustainable world in schools that promotes democratic debate, through school councils and other bodies representing the pupils, which are more likely to fulfill the conditions necessary for such participation to be real and effective, Crick [42]. However, it seems there is unanimity that the success of this will depend on the teacher's ability to play a new role, as the methodological change demands a new type of teacher, with a pedagogy that knows how to excite and sustain the pupil's interest in an attempt to foster motivation and learning, Stenhouse [43]. This is where teachers play a critical role in stifling or in promoting the discussion of controversial issues. They decide if these issues will be part of the planned curriculum, if pupils can bring these issues into the classroom, and how they will be discussed. Most importantly, if they are able to create a classroom environment that supports or inhibits the pupil's expressed opinions. In the same light, McCowan [18] found out that citizenship education was a tool for reproduction of the socio-economic order, and of democracy as its political complement.

In conclusion, therefore, the Pedagogic Content Knowledge of the Cameroon Teacher Education Curriculum contributes positively to the development of teachers' skills in their endeavors to promote effective teaching in Primary school Classroom's in Fako Division. In this pursuit, they are benefiting from assistance from continuous in-service training, pedagogic supervision and the pursuit of integrating technology into the teaching and learning processes in their classrooms.

The study was limited to the curriculum for the training of primary school teachers in Cameroon. Focus was on the didactics of citizenship, national culture and national languages, to find out how training influence classroom practices of

graduates. Data collection was through observation of teaching and structured interviews based on multiple case studies.

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] Shulman, L.S. (1986) Those Who Understand: Knowledge Growth in Teaching. *Educational Researcher*, **15**, 4-14. <https://doi.org/10.3102/0013189X015002004>
- [2] U.S. Department of Education and National Center for Education Statistics (2004) The Condition of Education 2004 (NCES 2004-077). U.S. Government Printing Office.
- [3] Abanador, P.D. and Reyes, V.L. (2019) Teacher's Pedagogic Competence and Pupils' Academic Achievement in English. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3471282>
- [4] Tchombe, T.M.S. (2017) Epistemologies of Inclusive Education and Critical Reflexivity for Pedagogic Practices in Primary Years (4-11). In: Phasha, N., Mahlo, D. and Dei, G.J.S., Eds., *Inclusive Education in African Contexts*, Sense Publishers, 19-36. https://doi.org/10.1007/978-94-6300-803-7_2
- [5] Shulman, L. (1987) Knowledge and Teaching: Foundations of the New Reform. *Harvard Educational Review*, **57**, 1-23. <https://doi.org/10.17763/haer.57.1.j463w79r56455411>
- [6] Ornstein, T.J., Iddon, J.L., Baldacchino, A.M., Sahakian, B.J., London, M., Everitt, B.J. and Robbin, T.W. (2000) Profiles of Cognitive Dysfunction in Chronic Amphetamine and Heroin Abusers. *Neuropsychopharmacology*, **23**, 113-126. [https://doi.org/10.1016/S0893-133X\(00\)00097-X](https://doi.org/10.1016/S0893-133X(00)00097-X)
- [7] Shulman, J.H. (1992) Case Methods in Teacher Education. <https://api.semanticscholar.org/CorpusID:152580524>
- [8] Brown, S. and McIntyre, D. (1993) Making Sense of Teaching. Open University Press.
- [9] Van Driel, J.H., De Jong, O. and Verloop, N. (2002) The Development of Preservice chemistry Teachers' Pedagogical Content Knowledge. *Science Education*, **86**, 572-590.
- [10] McNamara, D. (1991) Subject Knowledge and Its Application: Problems and Possibilities for Teacher Educators. *Journal of Education for Teaching*, **17**, 113-128. <https://doi.org/10.1080/0260747910170201>
- [11] Shulman, L. (1986) Teacher Knowledge Model—Models of Teacher Knowledge (library.net).
- [12] Li, M. (2019) Educational Reform and Teacher Education: A Theoretical Overview. In: Li, M., Ed., *Understanding the Impact of INSET on Teacher Change in China*, Palgrave Pivot, 3-18. https://doi.org/10.1007/978-981-13-3311-8_2
- [13] Bromme, R. (1995) What Exactly Is 'Pedagogical Content Knowledge'?—Critical Remarks Regarding a Fruitful Research Program. In: Hopmann, S. and Riquarts, K., Eds., *Didaktik and/or Curriculum*, IPN, 205-216.
- [14] Goodson, I.F. (1996) Teachers' Professional Lives. Routledge. <https://doi.org/10.4324/9780203453988>
- [15] De Couvreur, L., Dejonghe, W., Detand, J. and Goossens, R. (1983) The Role of

- Subjective Well-Being in Co-Designing Open-Design Assistive Devices. *International Journal of Design*, **7**, 58-70.
- [16] Watkins, C. and Mortimore, P. (1999) Pedagogy: What Do We Know? In: Mortimore, P., Ed., *Understanding Pedagogy and Its Impact on Learning*, Sage, 5-8. <https://doi.org/10.4135/9781446219454>
- [17] Schugurensky, D. and Myers, J.P. (2003) An Introduction to Curriculum Research and Development. Heinemann Educational Books. <https://doi.org/10.15572/ENCO2003.00>
- [18] Macowan (2006) Rethinking Citizenship Education. A Curriculum for Participatory Democracy. Continuum International Publishing Group.
- [19] Kerr, J.C. (1999) Citizenship Education: An International Comparison.
- [20] Galiero, M. (2009) Citizenship Education as an Integrative purpose of the Curriculum Potentials and Difficulties. <https://www.researchgate.net/publication/280738013>
- [21] Okolocha, C.C. and Onyeneke, E.N. (2013) Secondary School Principals' Perception of Business Studies—Teachers' Teaching Effectiveness in Anambra State, Nigeria. https://www.researchgate.net/publication/255698322_Secondary_School
- [22] Oyekan, S.O. (2000) Foundations of Teacher Education. Ebun-Oluwa Press.
- [23] Akinmusire, P.A. (2012) Critical Reading and Story-Mapping Instructional Strategies as Determinants of Nigeria Certificate in Education Teachers Classroom Practices and Achievement in English Reading Comprehension. Ph.D. Thesis, University of Ibadan.
- [24] Okolie, U.C. (2014) Management of Woodwork Workshop in Tertiary Institutions in Nigeria: An Analytical Study. *Malaysian Online Journal of Education*, **2**, 20-36.
- [25] Omoifo, C.N. and Urevbu, A.O. (2007) An Overview of Teaching and Learning. A Paper Presented at Working on Pedagogy for Junior and Intermediate Lecturers in University of Benin. Organized by Centre for Gender Studies.
- [26] Oviawe, J.I. (2016) Teachers' Effectiveness as Correlates of Students' Academic Achievement in Basic Education in Nigeria. *International Journal of Academic Research in Progressive Education and Development*, **5**, 111-119. <https://doi.org/10.6007/IJARPED/v5-i2/2129>
- [27] Adegbile, R.O. (2008) Effects of Computer-Assisted Instructional Package on Pre-service Teachers' Classroom Practices and Secondary School: Students Learning Outcomes in Christian Religious Knowledge. Ph.D. Thesis, University of Ibadan.
- [28] Tchombe, T.M. (2014) Progressive Transformative Teacher Education in Cameroon. *Open Development & Education*, **3**, 23-33.
- [29] Steering Committee for the Coordination and Monitoring of the Education Sector Wide Approach Implementation (2013) Education and Training Strategy Paper.
- [30] MINEDUB, MINESEC, MINEFOP and MINESUP (2020) Draft Document of the Sector Wide Approach/Education.
- [31] Republic of Cameroon (2009) Growth and Employment Strategy Paper. Reference Framework for Government Action over the Period 2010-2020.
- [32] Ministry of Economy, Planning and Regional Development (2020) Evaluation and Training Sector Strategy Paper.
- [33] Ministère de l'Économie, de la Planification et de l'Aménagement du Territoire (2009) Cameroon, Vision 2035.
- [34] Collins, A., Brown, J.S. and Newman, S.E. (1989) Cognitive Apprenticeship: Teach-

- ing the Crafts of Reading, Writing, and Mathematics. In: Resnick, L.B., Ed., *Knowing, Learning, and Instruction: Essays in Honor of Robert Glaser*, Lawrence Erlbaum Associates, 453-494. <https://doi.org/10.4324/9781315044408-14>
- [35] Grimmett, P.P. and Erickson, G.L. (1988) Reflection in Teacher Education. Atlantic Books.
- [36] Loughran, J.J. (2004) A History and Context of Self-Study of Teaching and Teacher Education Practices. In: Loughran, J., Hamilton, M.L., LaBoskey, V.K. and Russell, T., Eds., *International Handbook of Self-study of Teaching and Teacher Education Practices*, Kluwer Academic Publishers, 7-39. https://doi.org/10.1007/978-1-4020-6545-3_1
- [37] Hammond, R.A. and Axelrod, R. (2006) The Evolution of Ethnocentrism. *Journal of Conflict Resolution*, **50**, 926-936. <https://doi.org/10.1177/0022002706293470>
- [38] Tharp, R.G. and Gallimore, R. (1988) Rousing Minds to Life: Teaching, Learning, and Schooling in Social Context. Cambridge University Press. <https://doi.org/10.1017/CBO9781139173698>
- [39] Bandura, A. (1977) Self-Efficacy: Toward a Unifying Theory of Behavioral change. *Psychological Review*, **84**, 191-215. <https://doi.org/10.1037/0033-295X.84.2.191>
- [40] McLoughlin, C. (2002) A Learner-Centred Approach to Developing Team Skills through Web-Based Learning and Assessment. *British Journal of Educational Technology*, **33**, 571-582. <https://doi.org/10.1111/1467-8535.00292>
- [41] Yin, R.K. (2009) Case Study Research: Design and Methods. 4th Edition, Sage.
- [42] Crick, B. (1998) Education for Citizenship and the Teaching of Democracy in Schools. Qualifications and Curriculum Authority.
- [43] Stenhouse, L. (1975) An Introduction to Curriculum Research and Development. Heinemann.