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Competency Based Curriculum and its Implications for Teacher Training in Kenya

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Abstract

The Competency Based Curriculum (CBC) in Kenya was proposed, introduced, and is now a full cycle for the early years and primary school levels. It was introduced as a pilot in the Lower classes in Kenya in 2017. It proposes to change the structure and the pedagogy of basic education. This paper used a desk research methodology to look critically into the need for the proposed new CBC learning technology, the high points of the new curriculum and to show its implications for teacher education. The paper reviews the terminology surrounding the proposed new Basic Education Framework (BECF) to explain the teacher's role in the framework and suggest a way forward for teacher education. More funds from the CBC system should be allocated for preservice Teacher training for current teacher trainees to practice and experience realistic training with the 21st century resources the CBC anticipates in a Kenyan school. It concludes that the structural change from 8-4-4 to 6-4-3-3 will be the easier thing to change, while changing the spirit of the curriculum will require a more concerted effort by different players.

Keywords: Basic education curriculum framework; Competency Based Curriculum; Learning technology system; Teacher training; teacher educators

Introduction

Nations spend enormous resources thinking about their education systems because "education is a human right with immense power to transform. On its foundation rests the cornerstone of freedom, democracy, and sustainable human development" (UNICEF, 1999). A curriculum is a plan to guide learners toward specific ends (Smith, 2000). In their 1949 and 1962 treatises on curriculum, Tyler and Taba emphasise the need for learning experiences directed to specified outcomes. According to Tyler (1969:1) in his 'principles' of curriculum, the education student needs to comprehend the "kinds of problems involved in developing a curriculum and plan of instruction." Tyler also underlined the learner as the subject of instruction and learning as "what he does that he learns, not what the teacher does"p63. Taba (1962) later elaborated on Tyler's model by adding a 'why' dimension by inserting a needs analysis to the objectives step and emphasizing teacher involvement in curriculum development. Tyler and Taba were guided by four questions: what should be taught to produce better citizens, how the school develops experiences that would guide learners towards such social objectives, how to organise such experiences, and finally, how to evaluate if the learners had attained the school objectives. School is not natural; it is a recent invention to pursue societal objectives such as those proposed by Tyler.

The Public-school concept is recent, with designed subjects and content taught to learners with the hope that they become what the public system intends them to be. Subjects are content selected to be taught in public schools and colleges, akin to 'games' (Goodson, 1990). Games because we always determine if school is the best preparation for social living. The curriculum is dynamic and necessary to address a generation's educational needs (Grundy, 1985). Grundy (1987), in a practice (praxis) oriented view of curriculum, suggests that any curriculum is continually mediated and developed, a concept which, in some ways, can lead to uncertainty and anxiety among stakeholders.

In Kenya, the Basic Education Curriculum Framework (BECF) was mooted in 2016, with a Competency Based Curriculum (CBC) at its core released in 2017 (KICD, 2017). A framework is a theoretical (fictional) interlinked set of items that help to approach a complex task (Budler & Trkman,2019). This new educational

technology requires systems thinking for it to be able to translate inputs into anticipated outputs. The BECF will change the education structure from 8-4-4 years to 2-6-3-3 years and reduce primary schools' eight years of schooling to six to align it with other African countries (KICD 2018). Kenya was the country that gave the most prolonged primary education (UNESCO, 2011). The BECF also anticipated a smooth unhindered transition to secondary school without a primary school summative evaluation and grading. The more ambitious part is that competency-based education requires changing how schools teach and learn. Although change is necessary for social systems' survival, it is almost always opposed. (source) The 8-4-4 system discarded in favour of the 2-6-3-3 system was equally opposed at its inception. Change evokes insecurity, conflict, and doubts about the individual's conception of competence. Evans (1996) and Fullan (2016) argue for the importance of communication with stakeholders affected by the why of the change. However, because the change must be implemented, he suggests using the assertion of force as a pressure tactic. A new curriculum may be resisted because of society's reluctance to change, especially when sufficient evidence is not provided for the efficacy of a new system (Competency-based Learning, 2014; Morcke et al., 2013).

Even without the BECF, other educational efforts were taking place in the Kenyan educational system through the support of the Kenyan government and its development partners. For example, the merging of primary and higher education into one Ministry (MOEST 2013), the continuing implementation of free and compulsory education to boost equity and access to all Kenyans (MoEST, 2014), 2005 sector-wide investment in education supported by the Kenya government, the PRIMR initiative supported by the USAID and DFID (Piper & Mugenda, 2014), the revision and publication of the Education Act in 2013, the establishment of Commission for University Education (CUE) and the inauguration of the Kenya Qualifications Authority with a qualifications framework are commendable initiatives that raise the quality and competitiveness of Kenyan education.

Such initiatives, although limited in their scope, have contributed to the quality of learning in Kenya educational institutions and prove that things can be done differently for the better. However, the curriculum is a direct tool of choice to address a nation's national politics and shared vision. According to NAP (1997), the curriculum and instruction are central to the educational process, what children learn, and what methods are used to achieve that end. The nation contemplates what learning outcomes to expect from its schoolers, and from these, it makes standards on content and performance to be implemented in their schools. A curriculum plan contemplates the objectives, the content to be covered, and the learning experiences necessary to direct learners toward the desired goals (Luneburg, 2011). To address problems of desperate times, a school curriculum is usually the tool of choice to guide students to desired learning outcomes.

The basic education curriculum should be regularly reviewed, evaluated, and monitored to make education relevant to the needs of citizens (ROK, 2013: Art 72, 73) at least every five years to secure the competencies and learning outcomes articulated under the National Qualifications Framework. Since the last curriculum reform in 1985, it is now 33 years. 1985 is 33 years away, three years further than the best estimate for intergenerational change suggested by Tremblay and Vezina (2000). A generation is a group that shares a set of worldviews, unique core values, attitudes, and beliefs that might produce an ordinary generational consciousness (Pilcher, 1993). It means that in the 33 years, we have at least two generations learning the same skills, with the same expected learning outcomes, indicating that some students are being prepared for out-of-sync goals. It is about time to change the curriculum since the time for a change of generation was quickly running away since the last curriculum change in 1985.

Generations differ in technology levels and how they store, retrieve, and share knowledge and information in their cultures. They value and utilise paper-based media and computer-based media differently. Terms like traditionalists, boomers, generation X, Y, Z, and alpha have been used to describe cohorts of children born after World War 2, those born in the 60s and 80s, those in the 80s to 200s, and those born after 2000 and those born after 2010 respectively (Grail Research, 2011; McCrindle & Wolfinger, 2014). These generations are described as having different characteristics in learning, socializing, and valuing work. Generation Z, also called native digitals or immigrant digitals particularly notable because they are the current youth in primary and secondary school and to whom the effort of curriculum reforms is mainly directed. Although teachers are familiar with technology, Fernadez-Cruz and Fernades-Diaz (2016) found that the scant training given to an older generation of primary and secondary school teachers needs to be scaled up to reduce the digital gap between them and their generation Z students. They reported "clear indications of a lack of preparation among current teaching staff to facilitate the development of digital competence in students." clearly, teachers cannot help students develop a competency they do not have.

Meaning of the Basic Education Curriculum Framework

The following section explains the terminology that comes together with the proposed Basic Education Curriculum Framework (BECF), so that we do not just put new wine into old bottles. A framework is a model, that shows the most important elements in the CBC technology system, and their interrelationships (Budler & Trkman, 2019). The framework is basic because it was designed for basic education, not for higher education even though it has implications for Higher education Institutions (HEI). The framework shows the interrelationships between various subsystems in the education space, the competencies, the values, issues, and the Kenyan dream nurturing each learner towards 'good' citizenship. The CBC The CBC focuses on seven competencies derived from 21st century skills, pertinent and contemporary issues, and national values (KICD, 2017). To understand the Competency-Based Education system, one needs to understand contemporary thinking in education, emphasising that every learner must be successful, not just a few, and the need to prepare the child for living comfortably in the 21st century.

Much research in Kenya on new teaching methods compared with the traditional talk-and-chalk method returns an advantage for the new method invariably while reporting the prevalence of the chalk- and talk method. To educate children of the 21st century, teachers and students require a paradigm change. The world we prepare students for has changed, so the emphasis must change from knowledge to meaningful skills in the real world. Singapore Ministry of Education, for example, introduced a 'Teach Less, Learn More (TLLM) policy in 2005 to force such a paradigm shift (Infopedia-NLB eResources, 2018). Darling-Hammond & Adamson (2010) warn that in dealing with the continuing knowledge explosion, Successful education can no longer be organized by dividing a set of facts into the 12 years of schooling to be doled out bit by bit each year. Instead, schools must teach disciplinary knowledge in ways that also help students learn how to learn so that they can use knowledge in new situations and manage the demands of changing information, technologies, jobs, and social conditions.

With this kind of new thinking, the new competency-based education curriculum framework is claimed to be ambitious, futuristic, and follow global trends. It is the trending educational system worldwide, so we may have to join sooner or later. The system aims to nurture each child's potential to produce engaged, empowered, and ethical citizens, but although this is familiar, the new emphasis may make a difference. The new system was initiated through Sessional Paper No.2 of 2015, which suggested a competency-based curriculum to facilitate the successful progression of learners with diverse interests and abilities. This was followed in 2015 with a national curriculum policy launched with, among other objectives, to establish a competency-based curriculum for all levels of education and, in addition, to establish new pedagogical approaches to implement the competency-based curriculum. For this second part, one wonders if it is the correct mandate.

The BECF is a comprehensive plan in an Outcomes Based Education system that specifies the expected outcomes of every student who passes through the Kenyan education system (Paterno, 2001). The framework is usually at a national or state level, a strategic document that explains the why, what, and how of curriculum reform, complete with vision, goals, and evaluation. Outcomes Based Education has been espoused in the U.S., Australia, India, the Philippines, and South Africa. Examples are the National Curriculum Framework for India (NCERT, 2005,) the Philippines Curriculum Framework, and the Michigan Curriculum framework. However, this system has not been without criticism, especially on enormous resources needed to implement it, the dearth of research evidence on its efficacy making it a fad and the possibility of lowering academic standards by reducing the emphasis on subject content while demeaning success and norm referencing (Competency- based Learning, 2014). At a declaration, teachers, even the most experienced ones, must start learning new jargon for things they do in school and keep records for 'accountability.' Although teachers always planned for lessons and used different methods in the classroom, they are now required to use new vocabulary for things they already did and kept records. For example, that teachers must replace the words 'syllabus' with 'curriculum design', 'objective' with 'Outcome', topic with 'strand', 'remarks' with 'self-reflection' in their professional documents. Writing behavioural objectives is based on behaviourism learning theories of the sixties. Educational systems then moved on to standards, where national systems developed objective content batteries for different levels of education. These standards define the examination, and teachers teach the test with shortcomings. The CBC hoped to remove testing, but in fact testing seems to be now nationalized, by giving control of child formative test questions and test data to the Kenya National Examination council to keep.

The BECF is a contemporary approach to teaching and learning; contemporary because there is nothing new in the ideas, perhaps, only a paradigm shift. writers have before argued for the need to make our schools learner-centred (Strevens,1975; Mclean1980), culturally responsive (Ladson-Billings, 1995; Freire, 1970), resource-based (Beswick, 1977), and the need to shift schools away from the factory model in education. The BECF still

needs clarity on the model of CBC they follow. The competency Based Curriculum (CBC) is an outcome-based approach to curriculum development that may take three forms: traditional, transitional, and transformational (Donelly, 2007). Does the 'competency based' refer to the seven competencies stated in the BECF or improving competence in the learning areas?

Competency was initially mentioned as an explanation for children's exploratory and playful behaviour, which White (1959) argued could not be explained by drive-based motivation theories. Previously terms such as mastery learning and outcome-based learning have been used extensively in the United States in the 60s, advocated by Bloom and Carol in the 1960s and the70s and Spalding in the 1990s on outcomes-based education). Evidence on mastery learning advocated by Carol and Bloom assumed that all children could learn if given adequate time and support (Anderson,1975). Later evidence showed that mastery learning did work with students scoring in higher percentiles than traditional teaching and learning models. Kulik (1990) found that the mastery learning model showed significant positive results in about 70% of the 103 studies, with an effect size between .22 to 1.58 standard deviations. Anderson (1994) found that mastery learning had a significant positive effect in 90% of the studies with an effect size of .27 to .94 standard deviations. A high percentage of studies returned a significantly higher student attitude. (.10 – 1.33 SD effect size.).

The 'competency' part in Kenya was first mentioned in 2013 in the Basic Education Act in establishing a National Qualifications framework, a system for rationalizing Kenya's certification to the world. The framework was to set the standards and benchmarks for qualifications and competencies, including skills, knowledge, attitudes, and values; to b) define the levels of qualifications and competencies; and to provide for their recognition (ROK, 2013: article 68). CBE In the national curriculum policy, it was decided that the curriculum should be changed to competency based as a quick fix to problems articulated earlier, with 29 mentions of the term in 33 pages of the policy. The policy quotes the need from a 2012 sessional paper. Nevertheless, looking at the sessional paper, one finds that competency-based education is suggested only as a by-the-way strategy to respond to growing problems in education. Competency-based education (CBE) was mentioned 16 times in the document but among many other suggestions. For example, at the primary school level, it is mentioned as the 27th out of 31 suggestions, and in secondary school as the seventh in 24 suggestions. At the same time, in Special Needs Education, the CBE was the 14th out of 15 suggestions. This escalation in importance, from a mention in 2012 to a national solution in 2015, points to the contribution of external power in enforcing a new curriculum system.

The needs analyses by the Kenya Institute of Curriculum Development (KICD) followed. However, these offered little help because they rushed documents with weak methodology, all set to prove what had already been decided for implementation. The conclusions arrived at by the resulting documents only served to justify the objectives. The needs analyses, for example, recommended a competency-based curriculum, even though that is what it had tacitly been asked to do, even after reporting that Kenyans wanted reform of curriculum towards education for self-reliance, the same aim that the just completed 8-4-4 had been introduced to bring about. One study concluded that "the current scenario paints a picture of a scarcity of resources and poor infrastructure in most learning institutions, inadequate schools, and teaching staff has immensely contributed to poor curriculum delivery and access to quality education" (KICD, 2016, p827). It explained that the resources needed to implement a competency-based curriculum include laboratories, print materials, quality teachers, ICT infrastructure, workshops, classrooms, play materials, and play fields". While not entirely correct, this view reinforces that the problem with Kenyan education is resources, even though it has yet to be suggested how a new curriculum would provide for these documented gaps. The new curriculum serves as a technology system with many components required to work together to achieve a goal, through the activity of teaching and learning.

This escalation in importance, from a mention in 2012 to a national solution in 2015, points to the contribution of external power in enforcing adoption of the new system alluded to by Amutabi (2003). This was called the coercive Power strategy (Havelock & Huberman, 1978). Havelock and Huberman also mentioned the hurry in implementing new curricula in Africa by very rapid movement through the problem-solving cycle from an initial assessment of the need for change to the design of the solution and implementation. The politics of curriculum is evident in the CBC implementation in that the sitting government decides how the education should look like , and allocates priority to the project by availing needed resources possibly with development partners. Politics influences education, and because of this the true value of a new curriculum may be lost (Dowden, 2013). A donor funded curriculum may even complicate things further when "Decisions perceived to have significant consequences for people's lives are made by "gatekeepers" who control decisions at each of those levels " (Chapman,2002, p3). Islam (2007) argues that in most funded projects in Bangladesh extension reform were found to be unsustainable when donor support was removed donor support was removed. To be fair, education is considered political because

it is situated in society, decides on what is good and desirable for the people, and requiring discourse on the desirable to transform or reproduce its status quo (Carr and Hartnett, 2010).

Teachers' Role in Competency-Based Education

A change to competency-based education is hinged on quality resources. The significant change required is pedagogical. The key to better-quality instruction is the teacher, their motivation, training, efficiency, self-efficacy, and the belief that they can cause a change through actions in the classroom. An often-cited reason for joining teaching is social service and altruism (DeLong, 1988; Grant & Gillette, 2006), but more is needed. Unfortunately, the teacher is run down with media bashing and over-supervision (Aronson & Laughter, 2016). Howard (2012) argues that schools perform reasonably well and require more freedom to be creative, stating that successful teaching and good school cultures do not have a formula. However, their teachers and principals must feel free to act on their best instincts. To perform at their best, Teachers should feel confident and not overwhelmed by many enforced curriculum changes (Moyahabo & Venitha, 2018).

Part of the unsaid part of good education is good teachers who are satisfied with their job. Remuneration is a sensitive matter, but teachers become motivated to perform at their best when their effort is appreciated. Teachers pay has positive implications for student learning outcomes. (Garcia & Hanushek, 2019). Tightening the rules and requiring more certificates from teachers will not automatically raise the quality of teaching anticipated in the CBC. The teacher management body's accountability and efficiency rules may only further degrade teacher confidence. Although there are advantages to teacher classroom guides and new compulsory courses introduced by the implementing authorities, there is danger that these may serve only to further lower the teachers' self-efficacy in implementing the new curriculum. Teacher status is a good measure of the health of a national education system. A phenomenon observed in Southeast Asia and Scandinavian countries is reflected more in high social regard than in salary terms (Bennell,2004; Schleicher & Stewart, 2008). Teacher quality affects student learning positively, and a lower workload gives teachers the space to be creative, and to raise student scores (Santiago, 2002; Maithya & Akala, 2014).

Teachers are a necessary component of education; their influence permeates all spheres of national development, providing a service essential in realizing educational goals (ROK, 2015; Hanushek, 2015; Ole Katitia, 2015). They are the drivers of society's social, economic, and political development. Most good innovations in education start from enthusiastic teachers, and in fact, egocentric teaching is already practiced by teachers in Kenya with excellent results. The Kenyan heads associations for primary schools (KEPSA) and secondary (KESSHA) schools devised a scheme to recognize and award their best teachers and heads whom they saw as their role models to benchmark with. The best innovations start from enthusiastic teachers, and in fact, pupil-centred teaching is already practiced by several teachers in Kenya with excellent results. The Kenya Heads Association for primary schools (KEPSHA) and The Kenya Secondary Schools Principal Association (KESSPA) have the scheme to recognize and award their best teachers and heads whom they see as their role models to benchmark from. The teacher management body, TSC, now supports this effort; KEPSHA and KESSPA donate the financial awards while TSC rewards with promotion. The teacher heads' bodies have rewards for the best teacher and principal and ICT teacher of the Year (TOYA, POYA, and i-TOYA) that proceed from the grassroots to the national level. Such winner teachers should be used to mentor other teachers because the things that matter in education happen in the classroom (Hattie, 2013) and every chance to empower teachers has multiplier benefits in job satisfaction (Zembylas & Papanastasiou, 2005).

Implications for Teacher Training

To prepare for the proposed curriculum changes, it is necessary to use competency-based concepts in teacher training. The higher education space needs to note what transpires in the lower education levels to be able to prepare future teachers for reality in the classroom. The college must consolidate the Commission for University (CUE) report requirements for planning to teach, say, writing course outlines. The Commission for University Education (CUE) has instilled a more ordered thinking into course design and delivery by insistence on standards in higher education, including the education science area. Alternatively, teacher educators need to come together, to plan together, possibly form a teacher educator organization that can guide standards in teaching, although rare, national teacher educator bodies may help towards a uniform approach to teacher education, using the most culturally appropriate methods and skills to prepare teacher trainees (Snoek et al., 2003; Kolb& Koln, 2005; Bowers, 2006; Duit et al., 2012; Ongondo, 2017; Chatoupis, 2019). Teacher training institutions should work collaboratively to interrogate course outcomes for education courses and see how they relate to the desired competencies. Since

BECF is for basic education, there is a need for higher education institutions to keep refreshing their curricula curriculum to reflect social changes. This programme review is already prescribed by the Commission for University Education (CUE) to be done after every five years with stakeholders (CUE, 2014). To build on the CUE thrust and to strengthen teacher educators, there is need too for sharing data on practices, and peer review of teacher preparation programs (Feur et al., 2013). Effort is needed to introduce the critical CBC technology elements in teacher training institutions, and Insets for teacher trainees and initial teachers to learn from. Part of this system is the resources, in terms of teaching-learning materials, ICT infrastructure, the management, and the system software, the knowledge base on which the system rests

Teacher preparation for a new curriculum requires more funds in the teacher education system. This may become less feasible with more funding directed to basic education. Cuts in educational budgets have been happening in other countries well (Mitchell, Leachman, & Saenz (2019). Cuts have already been effected on the university budget and the student subsistence. Nevertheless, research has shown that teacher quality and preparation are the strongest correlate of educational quality (Darling-Hammond, 2000). Some resources must be spared for this activity in Pre-service Teacher education programs in the teacher training colleges and universities, which are already struggling in the face of budget cuts, rising costs, and dwindling enrolment. Already life is economically very hard for most university students (Yakaboski & Birnbaum, 2013). One way is by policy to support student teachers, by giving a special loan to student-teachers to finish their studies on time and fund their teaching practicum (Odundo et al., 2018).

For improved learning outcomes, teacher training must recruit the best educators to train future teachers who can communicate their intentions, and who are literate (Hanushek, 2019). Avalos (2011), Duit et al., (2012), and Inyega & Inyega (2017) suggest improving teachers' communication and classroom skills that are appropriate to school social contexts. Mnathoko in Botswana noted that primary school teacher supervisors felt they needed more confidence to supervise the creative and performing arts, not prepared, yet this is an area in which CBC can make the most contribution beyond what was available in the 8-4-4 system. While colleges of education can insist on higher minimum grades for language, say a C in English or Kiswahili for undergraduates and a Minimum B grade in the education units to be studied in the masters' courses, it is wise to consider the limited supply of teacher applicants (Akyeampong, 2003). Teaching practicum is the opportunity for the government to reassert its direction for the country's education by building an improved breed of teachers, as anticipated by sessional paper No 6 (Republic of Kenya, 1988).

We must strengthen the teaching practicum to make it more efficient and reflective for our students. Ideally, only trained and model tutors should supervise teachers. Teaching must no longer emphasize the completion of lessons but serve to inculcate new thinking in education such as culturally responsive and creative teaching approaches that help learners appreciate the process of learning (Lewin & Stewart, 2003, Akyeampong, 2013). There is a need for more tutor – student reflection during Teaching Practicum e programmes to support students in practicing and internalizing the new CBC way of thinking and learner focus. A resident tutor is a model teacher who should act as the field coach to teaching practicum students, harmonize the supervision standards and provide scaffolding for students on teaching placement (Snyder & D'Emidio-Gatson, 2001). The resident coordinator placement support supervisor should also help learners navigate the social and cultural issues arising from teaching practice so that student teachers can teach learners of diverse backgrounds. (Kelly, 2006; Grant and Gillette, 2006).

Teacher education institutions should consider including partners from the teacher manager Teachers Service Commission (TSC) and its affiliate bodies, such as the Centre for Mathematics Science and Technology in Africa (CEMASTEA), to contribute to teacher training standards; their involvement matters in graduate employability (Mason et al, 2009). During Teaching practicum, many apprentices use teacher-centred teaching, most reflective of how the student teachers are taught in a university class. Modern practice should be agreed on with the teacher's employer, TSC. Universities and teacher training should not be left alone in planning and preparing for the CBC; they require funding from the programme funds to supervise teacher practicum and gain a situated understanding of targeted learners, to evaluate teacher preparation programs, and for holding symposia to inculcate relevant pedagogy centred skills. (Vavrus et al, 2011; Feuer et al., 2013). These suggestions should be anchored to a Teaching Practicum (TP) policy that consolidates a vision for TP and strategies to achieve that vision.

Conclusion
The change anticipated in the BECF will only succeed by putting the teacher at the centre of implementation, with a policy emphasis and increased attention to teacher training. According to this writer, the main change is pedagogic, a change that can be effected in a less costly way through teacher education and supervision, not curriculum. As

things stand, the effectiveness of this project will depend on coordination in the different arms of the education system in Kenya. However, the constitution of Kenya has already decided to make the teacher management body (TSC) an independent commission, meaning that they do not need to take directives even from the education ministry. In addition, the TSC doubles up as the teacher registrar and the main teacher employer, giving it monopolistic powers in pushing any school changes their way. The government must build dependable structures for financing student teaching practicum. The government must support students teaching apprenticeship period for students to learn smoothly.

Despite the challenges that competency-based curriculum may face, the change is a much-needed adjustment in pedagogy, and an opportunity for all educators and teacher trainees to practice flexibility in a changing world. Teacher educators provide much needed scaffolding for teacher trainees to learn new approaches to teaching and learning while still rooted in African culture. Although there is nothing new under the sun, the CBC gives us a fresh opportunity to renew our creed about our children and to chart a sustainable future for Kenya. On the politics of curriculum implementation, further research and debate is needed to guide the place of HEI teacher trainers and the teacher employer in conducting INSETS.

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