Repositioning technical and vocational education and training in Africa for global competitiveness: a bilingual model

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Abstract: This paper aims to reposition technical and vocational education and training in Africa by modelling the Chinese and Asian Tigers’ bilingual approach. This study used inductive content analysis cum transformative paradigm to identify relevant points constituting the major component of this conceptual paper. In addition, thematic method was also used to organize the identified points into categories and sub-categories. The introduction of the bilingualism approach to TVET programs following eight key stages will be actualised. Researchers are encouraged to conduct experimental empirical studies on Bilingualism in African TVET institutions, and its programs exploring the six stages conceptualised. Adding bilingualism to the TVET program will increase enrollment, make the program easier to get into, and help African countries’ economies grow. A bilingual policy will help many local talents who cannot speak other languages.

Keywords: TVET; Curriculum; Bilingualism; African TVET; Secondary Education

Introduction

Educational planners and policymakers worldwide design the technical and vocational education and training (TVET) system to create and supply a workforce for social, political, and economic growth. TVET is a form of secondary education programme specially designed to produce skilled and semi-skilled human capital for every country. There are research evidence that TVET is playing this critical role in many countries around the world (World Bank Group, 2018). It has helped rural Indian women learn digital technology (Patil, 2022), making it easier for Malaysian graduates to get jobs (Jabarullah & Iqbal Hussain, 2019). Unfortunately, the reverse is the case in many African countries (Stander et al., 2022). TVET in African countries needs more money and has had many problems, like low enrollment rates, lousy quality, a language barrier in the classroom, and a lack of relevance in most countries (Adewale, 2018, 2021). TVET in Africa needs significant improvement to meet the demands of a rapidly changing economy and address unemployment and restiveness. To ameliorate these challenges, African countries can look to the successful example of China and the Asian Tigers (South Korea, Taiwan, Hong Kong, and Singapore), who have achieved remarkable economic and technological growth through their bilingual TVET model.

A strong emphasis on practical skills development, industry partnerships, and a demand-driven labour market are essential characteristics of China and the Asian tigers’ TVET model. This approach has produced a highly skilled workforce capable of meeting the demands of a dynamic and competitive economy. Throughout the last two decades, the Chinese government has defined an overall vision for a “modern” TVET system that is, on the one hand, headed by the government but works closely with the producing sector and responds immediately to the evolving competence needs and qualification criteria in the labour market (World Bank, 2018). Human Rights Watch (2020) says that China’s policy of
making all public schools, including kindergartens and primary schools (Human Rights Watch, 2020), bilingual is one of the most noteworthy things they have done right with TVET. Using the mother tongue as the instruction language in TVET institutions has been recognised as an integral part of China’s policy and practice. In their study, Gonzalez et al. (2022) found that parents account their contribution to the project which comes in form of intensifying efforts to endear the Chinese language to their children’s hearts than English. They further buttressed with a vital reason that the learners would forget their mother tongue if they did not use it as a medium of instruction.

Furthermore, TVET (Technical and Vocational Education and Training) classes are hard to understand because they are taught in different languages (Adewale, 2018, 2022). Many TVET programs across the continent are delivered in foreign languages such as English, French, or Portuguese, which are different from the mother tongues of many learners because they have been acculturated. Acculturation is the evolving and adapting process of ongoing interaction with a new, distinctive culture (Gonzalez et al., 2022). The contact of African countries with the colonial masters has indeed adulterated their culture to the extent that they feel inferior speaking their mother tongues among themselves. Although, people will inevitably undergo some degree of acculturation when they move away from the location where they were reared and spent a large portion of their lives to start new lives in a country with a vastly different language and culture.

Language is germane to the development and sustenance of a nation because it is the nucleus of other cultural components and it is used to pass it on to the upcoming generation (Ademowo, 2012). There have been a series of arguments against the compulsory use of languages as the official language in African institutions. It is argued that a student’s level of receptivity is low when learning his or her indigenous language (Adewale, 2018). Because of their unresponsiveness, the transition hurts the quality of their schooling. When a learner is not receptive, a gap opens up that is difficult to close because the learner has trouble following directions in a language that no longer has any connection to his or her way of thinking (James, 2015).

Commenting on the importance of including the mother tongue or indigenous languages in TVET institutions, Maseko and Vale (2016) submitted that the unfortunate part is that kids do pretty well in the exam; they can achieve scores of 90 or higher for African languages. On the other hand, they do not perform well in any of the other classes they take, and as a result, they either fail to pass the matriculation exam or are denied university admission. Except for KwaZulu-Natal University in South Africa, which adopts bilingualism, all other universities in South Africa are monolingual, using English as the official language (Mkhize, 2022).

Furthermore, Botswana’s vision for 2036 is to transform the country, built on its indigenous language policy. According to Chebanne and van Pinxteren (2021), introducing indigenous languages is crucial for education and human rights. The authors submitted further that for Botswana and other African nations to reach the status of advanced countries, they must adopt indigenous languages as official communication mediums.
Hence, language is the heart of teaching and learning which constitutes a great barrier to realizing TVET benefits in Africa because of overdependence on foreign language as a mode of instruction. In fact, language barrier has given way to several other challenges, including limited access to TVET institutions. Many learners from marginalised or minority communities are not proficient in the foreign language of instruction, hindering their access to TVET programmes. Without any doubt, their participation in TVET programmes may be limited by the language barrier, leading to low enrollment rates, and widening education inequalities. No country in the world has risen to technological by depending on foreign culture (Ademowo, 2012) especially in the area of language.

Also, the language barrier has reduced the learning outcomes from TVET. The power of the indigenous language as a potential tool for socio-economic development has been underrated in Africa (Dia, 2014). Learners may need help understanding and assimilating technical and vocational education concepts when delivered in a foreign language, leading to reduced learning outcomes. This challenge is compounded by the fact that many TVET programs require a practical application, which requires a clear understanding of instructions and procedures. Adewale (2018) shared his experience during his visits to some technical colleges in Nigeria, where a TVET instructor had to switch to mother tongues when it was discovered that the learners/trainees did not understand the English language he was using to teach. In another study, Bernhofer and Tonin (2022) found that German students who took an examination using a foreign language (Italian) failed. The Italians who took the German language examination also scored low marks. This underscores the mother tongue’s importance to students’ academic performance.

Cultural disconnection is another problem caused by not adopting the mother tongue as the language of instruction in TVET institutions. Using foreign languages in TVET programs in Africa can lead to cultural disconnection among learners. The mother tongue is often an essential component of one’s cultural heritage. When a foreign language is used to teach, it can cause people to lose touch with their culture.

The unemployment that TVET was created to address keeps growing. One of the main goals of TVET programs is to give students skills that are useful in the local job market. However, using foreign languages as a medium of instruction can result in a mismatch between the skills learners acquire and the language requirements of local job markets. This mismatch can lead to high unemployment rates among TVET graduates. Degboro and Onipede (2022) believed that instructors in TVET institutions should adopt mother tongues to teach their learners employability skills. TVET is meant to offer meaningful solutions to the mismatch between South African unemployment rates and skills shortages, but it still needs to perform (Stander et al., 2022).

There is a need to be more policy frameworks that support the use of the mother tongue as a medium of instruction in TVET programs across many African countries (James, 2015). The absence of such policies can hinder the adoption of bilingual approaches in TVET, further perpetuating the language barrier.
Addressing this barrier requires adopting policies that support the use of the mother tongue as a medium of instruction in TVET programs, facilitating effective learning and enhancing the relevance of TVET programs to local job markets. TVET, according to James (2015), requires a new face that can shield the learner’s mind from linguistic intimidation and use L1 as the medium of instruction to help students understand concepts clearly and develop skills compatible with the labor market.

Recognising the linguistic diversity and cultural heritage of a region or a country drives the need to adopt bilingualism in TVET institutions in Africa. Bilingualism in TVET refers to using two languages, typically the official language and the local or regional mother tongue, as a medium of instruction in TVET programs. Many regions or countries in the African continent are characterised by linguistic diversity, with multiple languages spoken by different ethnic or cultural groups (Chebanne & van Pinxteren, 2021). In such contexts, adopting a bilingual approach in TVET programs acknowledges and values linguistic diversity, allowing learners more access to TVET programs in their mother tongue, their first language of communication and identity. Through the adoption of the bilingualism approach in TVET, the African cultural heritage can be preserved.

Language is an integral part of a community’s cultural heritage (Maseko & Vale, 2016), and adopting bilingualism in TVET can help preserve and promote local or regional cultures. By incorporating mother tongue instruction in TVET programs in their mother tongue instruction in TVET programs, learners can maintain their cultural identity, practices, and traditional knowledge, which are often embedded in the local language. (Nzembe, 2018) found that the language of instruction significantly affects the learning outcome. A student learning an indigenous language tends to perform and comprehend better than one learning a foreign language. Students comprehend during the practical sessions using the indigenous language, but find it difficult to write down their understanding in English during test or examination (Stander et al., 2022).

Furthermore, bilingualism enhances learning outcomes. Research shows that using the mother tongue as a medium of instruction in education can lead to better learning outcomes. Learners tend to grasp concepts faster and have higher retention rates when instruction is delivered in their mother tongue. Adopting a bilingual approach in TVET facilitates effective learning, understanding, and application of technical and vocational skills among learners. It was found in the study conducted by Stander et al. (2022) that complex subjects in TVET institutions should be taught in the mother tongue for effective learning to take place. This (the mother tongue) will enhance learning and make the graduates from the TVET programs productive. The present study intends to pragmatically propose ways and procedures of working the talk. Often time, policy makers and implementers are aware of the missing link in policy provisions, however, do not know how to fix it. Thus, the present conceptual paper operationalises the stages and path to follow to get TVET working and achieving its goals in African continent especially.
Adopting a bilingual approach in TVET can enhance access and equity in education (Nzembe, 2018). It can overcome language barriers that might hinder learners from marginalised or minority communities from accessing TVET programs. Using the mother tongue as a medium of instruction can enable these learners to participate effectively in TVET programmes, promoting inclusivity and social equity. It was found in the study where lecturers were participants that adoption of indigenous that students make them understand TVET faster and as well build confidence in them (Stander et al., 2022).

Adopting a bilingual approach will ensure workforce relevance to local or regional job markets. One of the goals of TVET is to prepare learners for the workforce. Industries and job markets often require bilingual or multilingual skills to effectively serve local communities or interact with diverse stakeholders. By incorporating the local or regional mother tongue in TVET programs, learners can develop relevant language skills for local job markets, enhancing their employability (James, 2015).

Method

This study used inductive content analysis (Mckibben et al., 2022) cum transformative paradigm (Omodan & Makena, 2022). Inductive content analysis is a flexible research method that enables researchers to conduct a descriptive and allows new themes to emerge from messages rather than coding by using pre-defined categories (Mckibben et al., 2022). This approach allows the researchers to plan, execute, report, reproduce and critically evaluate the analyses (Krippendorff, 2018) after a purposeful exploration. On the other hand, the transformative paradigm is used by researchers especially in social sciences to explain the reason behind social injustices (Phelps, 2021).

The transformative paradigm in this study explains the rationale behind the failure of African countries to reap the goals of TVET, causing inequalities, poverty, and unemployment as a form of social injustice. After that, the assumptions transformative paradigm anchoring on relevant theories was used to explain ways of ensuring social justice and creating ways for maximizing TVET using bilingual mode of instruction as done by the Asian tigers and China.

The Cultural Relevant Pedagogy

This conceptual paper is anchored on Culturally Relevant Pedagogy (CRP). Gloria Ladson-Billings in 1995 (Hollebrands et al., 2021). By being sensitive to cultural variations, culturally relevant pedagogy allows schools to incorporate students’ home-community cultural experiences, values, and understandings into the classroom (Brown-Jeffy & Cooper, 2011). CRP is built on three pillars, namely: a) students’ academic achievement, b) students’ cultural competence, and c) students developing an understanding and critique of societal norms, which requires critical reflection in guiding actions (Hollebrands et al., 2021). Cultural relevance pedagogy will help to identify mismatches in the mode of teaching and learning and then look for a way to eradicate the mismatch (Brown-Jeffy & Cooper, 2011). This theory is relevant to this conceptual paper because it helps to identify the language of instruction in TVET institutions in Africa as a significant mismatch and clog in the wheel of the success of the programs. Then, provide a conceptual analysis of how to fix the mismatch.
The Theory of Policy Circle

The understanding of this conceptual paper is also built on the theory of policy circle introduced by Bowe et al. in 1992 (Ngo et al., 2006). These theories (policy cycle and theory of culturally relevant pedagogy) are blended to develop a model of making and implementing the bi-lingual model for TVET in Africa. The policy is worked and reworked because of its complex processes. The central idea of the policy cycle is to differentiate certain stages in policy making analytically (Höchtl et al., 2016; Steffek, 2013). In this conceptual paper, six phases are considered worthy, and they are i) the agenda setting ii) research and analysis iii) policy formulation iv) policy decision v) policy implementation, and vi) policy monitoring and evaluation as shown in figure 1. Every stage of policy involves three things: struggle, compromise and adhocery (Ngo et al., 2006). Policies are made in the context of influence, where different actors struggle to influence the policy’s definition and social purposes.

The agenda setting is the phase where the nature of the problem that needs to be addressed is defined. These are the institutional agenda that are meant to be considered in the policy making (Subroto, 2012). At the research and analysis stage, the stated agenda is analysed, and relevant data are fetched to support it. Policy formulation phase allows for the actual making of the policy which in the case is the officialising the use of indigenous language as part of the languages of instruction in TVET institutions in Africa. Afterwards, the stakeholders decide on the implementation and the requirements of actualising that phase before transiting to policy implementation, and vi) policy evaluation.

At this junction, it is important to move beyond this stage because many policies This policy cycle is to describe what the concerned educational stakeholders must do at every stage to get the indigenous languages officialised and embraced in TVET institution for repositioning.

Figure 1: Policy Cycle for Bilingual TVET in Africa
Source: Researcher’s Design

A conceptual framework was constructed to understand the stages to follow in introducing bilingualism in TVET institutions to reposition TVET in Africa for global competitiveness. Bilingualism as a method of teaching according to Ademowo (2012) as a
method of imparting knowledge that allows the use of two languages (the indigenous and foreign) as media of instruction. The needed elements of theories (what and how) were adopted to conduct a literature review and the development of the conceptual framework.

Results and Discussion

Thematic approach was used to identify the barriers to the use of indigenous language in TVET institutions in Africa and develop a conceptual model for adopting bilingualism approach in TVET institutions in Africa.

Barriers to the Use of Indigenous Language in TVET Institutions in Africa

The first challenge that has been working against the use of indigenous African dialects as a language of instruction is the political elite. The political elite in Africa usually give preference for the foreign language over their local dialect (Kangira, 2016). It is their belief that foreign language is a tool to perpetuate themselves in power, such that the local people will see their inability to speak foreign language as barriers to be integrated into the leadership positions. The aftermath of this is felt by both male and female citizen because the local initiatives are suppressed and substituted for alien culture. For this reason, every citizen should be socially included in every sphere of life, especially women (Potokri & Perumal, 2019).

Secondly, the pluralism of language in Africa countries is a challenge to the use of local dialect as a language instruction in TVET institutions. There is a fight for ethnic superiority among tribes in Africa. The fear that one ethnic group will be seen to be above others in its ethnocentric tendency will not make Africans to have a unified voice and agree to a dialect, which resultantly perpetuate the use of foreign languages. For instance, African was rejected by the leadership that took over in Namibia as they saw it as the prolongation of apartheid because it was used as official language during the colonial rule (Kangira, 2016).

Policy summersault is another barrier to the use of African indigenous language of instruction, especially in TVET institution. Some policies have been made in respect of indigenous language in education in the past but could not see the light of the day in the area of implementation. Effort made at the United Nations Educational Scientific and Cultural Organization (UNESCO) intergovernmental conference on language policy in Africa held in Harare in 1997, where all African governments were advised to review their national language policy, has not been fruitful (Ademowo, 2012).

Similarly, the colonial masters have also made using indigenous languages fail. For instance, the French colonialist is benefiting from making her language the official language in all francophone counties in Africa with her policy of assimilation (Ademowo, 2012). The constitutionality of indigenous languages is another barrier. Unlike South Africa, where eleven indigenous languages are given legal backing in its constitution (Ntlama-makhanya, 2021), many other African countries are yet to achieve this feat. Therefore, this constitutes a barrier to making the indigenous language official. Despite this South African government effort, indigenous languages are still struggling to be officialised, and the two dominant languages are still Afrikaans (Munyai & Phooko, 2021)
Conceptual Model for Adopting Bilingualism Approach in TVET Institutions in Africa

Incorporating bilingual teaching and learning approaches in technical and vocational education and training requires meticulous planning and implementation. Building on the theory of culturally relevant pedagogy (Brown-Jeffy & Cooper, 2011; Hollebrands et al., 2021), the following models can be adopted in African countries.

Stage one

*Language Assessment:* The government will have to conduct a comprehensive language assessment to determine the local languages spoken by the target learners in the TVET programmes. This assessment should consider many factors, such as the learners’ linguistic backgrounds, proficiency levels, and language preferences. This will help to figure out the missing link in the low certification of the students in TVET institutions. In South Africa TVET institutions for instance, Stander et al. (2022) attributed low success rate or certification to students’ language choice and literacy level.

Stage Two

*Curriculum Adaptation:* TVET institutions should leverage the outcome of the language assessment to adapt the TVET curriculum to incorporate bilingualism (the mother tongue and a foreign language) instruction. This could mean translating materials like textbooks, instructional videos, and tests into the local languages. The adapted curriculum should align with the national TVET standards and objectives and ensure that the technical concepts and skills are accurately translated and culturally relevant. Local industries can be supportive through partnership for industrial attachment programme to operationalize the desired curriculum (Adewale, 2021).

Stage three

*Teachers’ Capacity Building:* This stage is crucial because it involves teachers’ capacity building. The government will have to provide professional development and training to TVET teachers and instructors to enable them to teach in their mother tongue effectively. This could include training in language skills, teaching strategies for teaching in the mother tongue, and training in cultural competence. Teachers/instructors should also be equipped with appropriate instructional materials and resources in the local languages. This aligns with the proposal that experts form universities could be hired to train TVET personnel in the areas needed (Marhaya et al., 2015) to enhance teaching and learning outcomes.

Stage Four

*Development of Learning Resources:* At this stage, instructional materials in the mother tongue, textbooks, workbooks, and other teaching tools are made or changed. These resources should match the modified curriculum and be made to help learners understand and remember technical ideas and skills. Ismail et al., (2019) submitted that the development and use of technologies for teaching and learning enhance it.
Stage Five

**Community Engagement:** This is when the local community and stakeholders are involved in implementing the bilingual instructional language policy in TVET programs. This could mean getting help and feedback from local language experts, community leaders, parents, and students. Community engagement is a way of restoring African indigenous people education (Rajah, 2020) to transform TVET for sustainable development. Community engagement can also help promote the value and importance of bilingualism in TVET and build a sense of ownership among learners and their communities (Lange et al., 2020).

Stage Six

**Collaboration and Partnership:** Collaborative efforts among policymakers, educators, communities, industries, and other stakeholders are essential to successfully incorporate institutionalised bilingual TVET curriculum and ensure the programmes are inclusive, practical, and relevant to the learners’ linguistic and cultural backgrounds. Public-Private Partnership idea will reposition TVET and lessen the burden of making provision for some facilities (Adewale, 2021). Partnership with industries can help in the area of achieving bilingual policy.

Stage Seven

**Monitoring and Evaluating:** Monitoring is the process of continual gathering of information and assessment of it, in order to determine whether progress is being made or not on the achievement of the pre-determined goals (Nigussie, 2022). The government needs to set up a way to track and evaluate how the new bilingual language policy and practice is being used in the TVET curriculum. This could be done through regular classroom observations, tests of the student’s language and technical skills, and feedback from the students, teachers, and other important people. The similar approach was used in Thailand and has been proven to be critical and effective (Suksatan et al., 2018). Monitoring and evaluating can help find problems, track progress, and make any necessary changes to ensure the bilingual instructional language policy is working. Monitoring and evaluation helps to determine the performance of both the administrators and teachers in the delivery of knowledge (Suksatan et al., 2018).

Stage Eight

**Continuous Improvement:** This stage of quality assurance will foster a culture of continuous improvement. To do this, the adapted curriculum and teaching materials will be reviewed and updated regularly based on feedback and evaluation results. This could mean improving teachers’ language skills training, figuring out how to deal with problems in adapting the curriculum, and ensuring that bilingual instruction is still helpful and practical for students (Stander et al., 2022).
Conclusion

At this point, the exact way to add the mother tongue to the TVET curriculum in Africa to make it bilingual and eradicate the language barrier to the achievement of its noble goals will depend on the situation and the local community’s needs. Therefore, conducting thorough research, engaging with the stakeholders, and tailoring the approach to the African context’s specific linguistic and cultural diversity is crucial. In a nutshell, combining mother tongue and foreign language in the TVET curriculum in Africa is likely to work if careful planning, implementation, and continuous improvement are made.

References


