

UNLOCKING INDIGENOUS KNOWLEDGE IN THE LEARNING AND TEACHING OF TEXTILE TECHNOLOGY AND DESIGN IN ZIMBABWEAN HIGH SCHOOLS

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ABSTRACT

The learning trajectory that was introduced in 2017 in Zimbabwe aimed to empower learners with skills and knowledge relevant to their own context. This paper, focusing on the Zimbabwean Textile Technology and design (TTD) syllabus for high schools, reflects on the importance of incorporating learners' real-life experiences into the curriculum. A qualitative research approach was used in a collaborative multi-phased benchmarking study across several Southern African countries. The overall goal of the benchmarking study was to strengthen the curricula for all Home Economics subjects in participating countries, which included TTD in Zimbabwe. To address the purpose stated above, this paper only reports findings that emerged from the benchmarking study relating to the Zimbabwean TTD syllabus, and the extent to which indigenous knowledge is embedded in this document. Findings have shown that learners' indigenous knowledge is insufficiently fostered in TTD. Colour application using indigenous techniques emerged as the sole example of indigenous knowledge included in this syllabus document that relates learners to their own real-life context. Informed by some of the findings from the broader benchmarking study, recommendations are made for expanding the indigenous knowledge in the Zimbabwean TTD syllabus, through suggesting several potential topics which can be merged with the existing Western knowledge therein. Including both Western and indigenous knowledge contributes a broader, more balanced set of learning, to enable learners to appreciate various forms of knowledge. It is the scholarly mandate of curriculum designers and

implementers to develop the integration of such content into the syllabus, thereby strengthening the linking of its content to the real-life experiences of the learners.

KEYWORDS

benchmarking, curriculum transformation, indigenous knowledge, real-life experiences, textile design, textile technology

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INTRODUCTION

In the 21st-century learning trajectory, the real-life experiences of a learner are critical. Learners should be extensively exposed to the real world as part of their education (Ezeanya-Esiobu 2019). The observations made by Dewey as far back as 1916 that unwarranted consideration is given to general subject matter rather than the contents of the learner's own real-life experiences are still relevant several decades later. In academic and non-academic circles in Africa, indigenous knowledge has been underutilised, and the global North education upheld. In Africa, indigenous knowledge has not been utilised because of a lack of documentation, cultural prejudice, and professional pride (Mapira & Mazambara 2013), and it was sometimes viewed as archaic and symptomatic of ignorance (Ezeanya-Esiobu 2019). A similar situation existed in Zimbabwe for decades, where a mostly Western knowledge-based curriculum was used until recently (Chabaya & Chabaya 2023). So, when a new educational framework was introduced in 2017 in Zimbabwe, aimed at empowering learners with skills, knowledge and values that allow them to relate to their own societies and support lifelong learning prospects for all by the year 2030 (Manokore & Shava 2021), educators were hopeful that focus will be more on global South education. This framework suggests that the enacted curriculum should position learners in their own societies rather than being dominated by preserving the ideas of other societies. Yet, the question remained how this new syllabus attains the broad goals that were set for it to be more life-relevant to the learners that it serves. This paper reports on a study that explored answering that question, focusing on one subject in the Zimbabwean syllabus, specifically Textile Technology and design (TTD).

CONCEPTS AND CONTEXT

To deepen the understanding of indigenous knowledge (IK), this paper adopts Matsika's (2012:209) definition of IK: "the traditional and local knowledge that exists and is developed through the experiences of the local community in the process of managing the conditions or context that challenge the people's everyday life." It is critical for this home-grown form of knowledge to be promoted as it is derivative from a real-life context and can benefit the present and even future generations (Matsika 2012). Similarly, Emeagwali (2014) defines IK as a collective form of knowledge, approaches, practices, procedures, tools, academic resources, principles, and theories accumulated over a period, within a particular locale independent of external forces. IK is increasingly being noticed and embraced in its local contexts and that this form of knowledge is no longer considered mediocre or regressive (Ezeanya-Esiobu 2019). Studies to explore if, or to what extent IK is embedded in school subjects' curricula have been conducted, for example, in Consumer Studies in South Africa (Du Toit 2019) and design and Technology in Botswana (Du Toit & Gaotlhobogwe 2018). These contributed valuable insights and recommendations for the fostering or developing of IK in those subjects. Researchers on IK and the school curriculum in Zimbabwe have focussed on a post-colonial curriculum in Zimbabwe that is inclusive, reflective, and representative of the students' needs (Sibanda & Young 2019), decolonising the Religious Education Curriculum (Masengwe & Dube 2020), and decolonising the Food Technology and design syllabus (Mwase & Marovah 2023). No similar research could be found for TTD in Zimbabwe, indicating a gap in the literature and a need to explore this issue in this subject.

TTD is one of three Home Economics-related school subjects offered in Zimbabwe at the

Ordinary- and Advanced levels. TTD shares several content and skills components of Consumer Studies, the comparable subject in South Africa, and both these school subjects underpin further education in the fields of Home Economics and Consumer Sciences (Du Toit 2021). An initial structured and thematic analysis of the Ordinary-level TTD syllabus revealed that 'indigenous knowledge' is included in a very limited manner, which makes it exacting for learners to relate to their heritage in this subject. The TTD syllabus document only refers to the appreciation of heritage-based studies as one of its cross-cutting themes (Ministry of Primary and Secondary Education [MoPSE] 2015:5). Analysis of the syllabus shows no amplification of this theme to give direction to teachers on what content to focus on and strategies to use to embrace such 'heritage-based studies' which, in the context of the current study, is viewed as the only example of IK in that syllabus. The current study, therefore, elevates the need to consider how learners' IK could be developed or fostered in the TTD syllabus for high schools in Zimbabwe in cognisance of the argument that IK is substantial for linking learning to learners' real worlds (Ezeanya-Esiobu 2019). Thus, this study aimed to explore how IK could be unlocked in the learning and teaching of TTD to ensure continuity and sustainability of its learners' cultural heritage in the 21st century, which would enable learners to view themselves through more life-relevant indigenous lenses instead of foreign standpoints (Manyeruke 2024).

The aim of integrating IK into the TTD syllabus is to make the subject more relevant to the learners. Emphasising real-world learning experiences increases "academic achievement and enables students to develop stronger ties to their community and appreciate the natural world, consequently heightening their commitment to serving as active, contributing citizens" (Sobel 2007:7).

Skills development in TTD is best achieved in a real-life context, regardless of how inclusive and democratic the environment may be (Sebele *et al.* 2023). Learners take increased responsibility for developing their own methods of work, and their ability to engage in knowledge-construction processes enables them to recognize their value and dignity as uniquely creative thinkers (Sebele *et al.* 2023). Engaging learners in real-life learning experiences could enhance their self-esteem and self-worth as they see their cultural heritage (including IK) being valued and integrated into their educational context (Manyeruke 2024).

Another benefit of incorporating IK in the syllabus is that this knowledge speaks to the core of our lived experiences and of those who existed before us, and when we lose it, we will have lost parts of ourselves that cannot be simulated (De Beer & Whitlock 2009). The implication for TTD teachers is that learners need to understand how resources and tools currently utilised in TTD developed in their cultural context, which will consequently enable them to use that IK for deeper learning outcomes (Van Zyl & Mentz 2019). For learners to understand the knowledge system within their cultural context, they must first be exposed to the historical events of fashion and other IK worldviews of TTD. Such a starting point will support learners in making connections between these different worldviews or understanding how IK underpinnings in their conceptions of knowledge match up to what they are learning in the TTD classroom. To achieve this, learners must be exposed to how things were done in the past in their own culture, but, at the same time be exposed to cultures, processes and worldviews that are different from their own (Du Toit 2019). Greenwood (2013: 94) similarly reiterates "studying local issues would also broaden learners' knowledge of global issues". Furthermore, the learners need to see how the knowledge that

they acquire within their experience outside formal schooling aligns with the knowledge they learn in the classroom (Cronje *et al.* 2015). By doing so, learners develop a better understanding of their own IK, which they could later transfer into real-life situations, making their learning more meaningful (Du Toit 2019).

METHODS

This paper draws on data generated from an international collaborative benchmarking study (Du Toit 2021). That study facilitated the benchmarking of several curriculum facets in Consumer Studies, Home Economics and closely related subjects (including TTD) across Botswana, South Africa, Zimbabwe, Eswatini, Lesotho, and Namibia. The overall goal of the collaborative study was to strengthen the curricula for all these subjects by identifying best practices for several curriculum aspects and topics. Ethical clearance for the study and the use of the Zimbabwean curricula was obtained from the Ministry of Primary and Secondary Education (Zimbabwe), as well as the North-West University Ethics Committee where the primary researcher is employed and where the study was approved by a scientific committee. The current paper only reports on the findings regarding the Zimbabwean TTD syllabus and its contribution towards integrating indigenous knowledge in enacting the curriculum. However, the recommendations developed in the current paper are informed and underpinned by the findings from the larger benchmarking study.

The TTD form 1-4 syllabus guided the document analysis process. This syllabus is the only document created by the government of Zimbabwe for students aged 13 to 16, and it is distributed to all high schools in the country. As a result, the credibility, authenticity, representativeness, and accuracy

of the TTD syllabus as the chosen document for the current study cannot be questioned (Bowen 2009). Iterative document (syllabus) analysis enables researchers to select relevant content from identified documents to generate and categorise themes into related genres through analysing and interpreting data. The research problem was identified in the larger benchmarking study, which found that the TTD syllabus' inclusion of content related to IK is exceedingly limited (Du Toit 2021). This gap in the TTD syllabus had to be bridged to bring learning in this subject closer to Zimbabwean learners' real-world experiences. To unlock IK in the learning and teaching of TTD required reflection on how IK could be implemented, embedded or merged in the existing syllabus. Useful initial insights were gained from the findings of the larger benchmarking study that explained how other countries have embedded IK in their Home Economics-type subjects (Du Toit 2021). Subsequently, a deeper, exploratory curriculum document analysis of the TTD syllabus was conducted to add to those initial insights and explore where or how IK could be implemented in this subject.

DISCUSSION OF THE FINDINGS

The TTD syllabus document analysis revealed limited provision for Zimbabwean learners' understanding of IK. Other than colour application using indigenous techniques and grooming and culture, there is no subject-specific content included in this syllabus that relates learners to their own indigenous and real-life context. However, there is much more to heritage than just colour application using indigenous techniques. The following sections, therefore, discuss strategies for integrating indigenous knowledge into the TTD syllabus, informed by the findings of the larger benchmarking study (Du Toit 2021).

Utilising indigenous knowledge or technologies in product design

To effectively integrate IK in the TTD curriculum, the term 'technology' (which is part of the subject's name) must be reconceptualised, and an indigenous perspective on this concept must be embraced. From a Western viewpoint, technology is seen as an anthropological action that can be traced back to ancient times (de Vries 2022). Subject developers who must integrate IK into curricula with a predominantly Western slant towards technology might find this challenging (Du Toit & Gaotlhobogwe 2018). However, all technology in each society emanates from culture (Ogungbure 2011). Drawing from this definition, 'technology' seems to be closely related to indigenous aspects of learning. There is, therefore, notable potential for TTD teachers to build on and promote an indigenous outlook of technology. For example, indigenous handicraft in basketry could embrace more modern or even digital innovations, such as mechanical looms. Basketry is the creative art of producing interwoven artefacts for interior decoration. This handicraft utilises locally available resources such as brushwood, grasses, twigs, bamboo, and other synthetic materials. Basketry weaving techniques, taught as part of the TTD syllabus, convert these basic materials into magnificent, crafted artefacts of utility. The methods of basket weaving are simple and include, among others, coiling, plaiting and twining. The patterns are usually rooted in local culture. Combining such methods and culturally inspired designs with existing or even new technologies would contribute to showcasing the value of such IK in TTD.

Furthermore, basket weaving in Zimbabwe is an educational and beneficial craft that makes use of various materials that are naturally available for free. Indigenous (often affordable

or free) materials, together with IK can, therefore, be woven into learners' TTD learning. Art and craft exports from Zimbabwe increased by 19% in 2024 (Zim Trade 2024). This suggests a growing interest in indigenous arts. It is critical for TTD teachers to note that this indigenous art has thrived from the pre-colonial era to modern times, implying traditional and emerging technologies co-exist and complement each other (Dei 2024). Merging the greatest of existing indigenous knowledge, skills and traditions with those of the Western world is valuable (King & Schielmann 2004). Conceptualising technology differently urges TTD teachers to consider culture in defining technology. If learners are only asked to deliberate, reflect, perceive, and utilise emerging technologies in TTD it limits their potential to learn about traditional technologies that are of cultural significance in the community.

IK embraces technologies and practices that are still prevalent today (Onwu & Mufundirwa 2020) and TTD teachers should use traditional, native, indigenous knowledge and technology (such as basketry) commensurably (Mapara 2021). The authors of the current paper are not averse to the use of modern technologies. Rather, they propose that technology in TTD be viewed as the technical use of physical cultural products found in nature to meet the needs of society. In the above-mentioned example, when learners can use local (free) resources in a sustainable manner, their learning experience will be enriched even further. Therefore, to realise the MoPSE (2015) mandate, TTD learners need to be capacitated in the use of indigenous technologies in basketry, a skill that has been relegated to rural communities (Figure 1).

The skill of basketry would provide 21st-century learners with a better understanding of exploring sustainability issues in textiles and weave interdisciplinary themes, such as



FIGURE 1: COMMUNITY MEMBERS ENGAGED IN BASKETRY
SOURCE: THE CHRONICLE, 11 AUGUST 2023

environmental, health, financial, economic, and entrepreneurial issues into the TTD content. Integrating such a variety of relevant issues will better prepare learners for the 21st-century working environment (Partnership for 21st Century Skills 2007a).

Despite advanced technology, basketry should not be allowed to disappear, but should rather be developed to introduce other concepts in TTD, such as weaving in fabric construction (MoPSE 2015:7), to enable learners to study indigenous knowledge and -technologies. Including more traditional or indigenous learning content could facilitate the preservation of a valuable set of learning for future generations and make learning more life-relevant to diverse learners. Ultimately, expanding IK in the Zimbabwean TTD curriculum will contribute to more inclusive education (Yishak & Gumbo 2015).

Transforming indigenous animal resources into contemporary designs

Other natural resources that could be exploited to indigenise the TTD curriculum are the country's animal species. Zimbabwe is rich in fauna and has successfully capitalised it as tourist attraction (Owomoyela 2002). In TTD, a strong foundation in understanding fibres and fabrics would result in learners being able to select appropriate fabrics for specific end-uses (MoPSE 2015:3). While there are many advantages to high-performance fabrics, Zimbabwe is rich in animal life, which can be more than a safari attraction. This natural resource could also be used to create fashion. TTD teachers should encourage learners to draw inspiration from Zimbabwean designers and entrepreneurs such as Nkanyeziyethu Malunga, who uses natural products (Figure 2), including angora goat fur, leather and other materials to create fashionable clothing and textiles, while preserving traditional knowledge. Malunga's collections feature in international fairs and



FIGURE 2: DESIGNS PRODUCED USING NATURAL FIBRES FROM ANIMAL SOURCES
SOURCE: THE CHRONICLE, 1 APRIL 2023



FIGURE 3: DESIGNS PRODUCED USING NATURAL FIBRES FROM ANIMAL SOURCES
SOURCE: THE CHRONICLE, 1 APRIL 2023



FIGURE 4: ALOE VERA PLANT FOUND NATURALLY IN THE ZIMBABWEAN LOCAL ENVIRONMENT

highlight how broadening learners' knowledge of using a variety of indigenous materials could expand opportunities for their futures.

Decoding indigenous cultural narratives through textile designs

TTD is a discipline of specialisation that also seeks to develop knowledge in creating surface designs using colour applications. Culturally significant and indigenous patterns and motifs could, therefore, be kept relevant and immortalised through fabric prints. TTD learners could draw inspiration from designers like Nkanyeziyethu Malunga, who fuses

tradition with modern fashion to elevate these designs to the international stage (Figure 3).

Custodians of indigenous knowledge are passing away without having their knowledge documented (Khumalo *et al.* 2018). TTD learners should be supported and taught how to profile such custodians to enable learners to obtain as much indigenous knowledge from them as possible, with the purpose of preserving it. This strategy will contribute to preserving learners' culture and identity.

Exploring indigenous grooming products

Other African practices could be embedded to

indigenise TTD content. The current TTD syllabus content on grooming and personal hygiene includes little local or indigenous materials, rather focusing on Western products for this purpose. Reliance on Western products hinders the successful inclusion of IK in the TTD syllabus. Grooming is part of culture. Indigenous and culturally relevant products which could be used for this purpose include, among others, aloe vera (Figure 4). Aloe vera soothes and moisturises, nourishes, hydrates, cleanses and rejuvenates the skin (Saleem *et al.* 2022). TTD learners could, for example, explore how aloe vera could be used as a cleansing product with equal or even superior functions to those of Western origin.

Alternative pedagogies

Another approach to increasing the relevance of IK in the TTD curriculum is through closing the gap in pedagogical methods and introducing learning and teaching processes that involve interactions between the school and the community, or issue-based learning (IBL) (Sibanda & Phuti 2023). Issues in IBL are societal needs that are addressed using locally available resources in collaboration with community members. Adopting IBL in TTD could result in the transformation of learners' preconceived ideas about learning TTD in the 21st century. Learning cannot be meaningful if it is disconnected from practice (Dewey 1987). True education is a result of the interplay between the learner and the environment, in which learners will develop a sense of place. Developing a sense of place results in learners exercising care and taking responsibility for the sustainability of their environment for the future (Gruenewald & Smith 2008), and may improve learners' critical thinking about their environment (Azano 2011). Surrounded by their communities, learners could explore local and indigenous resources and make the best of them in TTD. IBL requires that learners interact with indigenous resources to create

goods and offer services that are beneficial to their communities rather than pursuing education that results in a mere qualification. Adjustments in TTD education, similar to the ones suggested in this paper, may however, entail some challenges, as explained subsequently.

Barriers to implementation and recommendations to overcome them

Of importance to this study is the inclusion of IK in the TTD syllabus. However, teachers have limited guidance and are still not well-versed in the strategies that could help facilitate these learning processes in the classroom, inspiring learners to be more active and engaged in IK (Sithole 2022). Current TTD teacher preparation programmes lack instructional methods to include or implement IK in the subjects' teaching. To receive the maximum benefit in the implementation process, efforts should be devoted towards supporting in-service teachers to effectively enact an IK-integrated curriculum that would weave IK into the formal TTD context within Zimbabwean learning environments.

The following recommendations are made for curriculum developers in support of their efforts to develop strategies which can help curriculum implementers (teachers) to embrace IK into their TTD teaching practices. The first recommendation that emerged in this study is that higher learning institutions training pre-service TTD teachers should play a role in filling this gap. Such institutions should start changing their teaching methodologies to include IK integration in the teaching and learning of TTD. Teacher educators should investigate the curriculum documents which are provided to the teachers (MoPSE documents). These documents do not seem to align well concerning the integration of IK in enacting the TTD syllabus. Furthermore, teacher education institutions, in their creation of these syllabus documents,

should provide teachers with some tangible examples of IK and ways to include them while teaching certain concepts in the TTD. In this way, teachers would have an idea of what to include and may be further encouraged to create IK ideas that are suitable for the community in which they teach.

The document analysis conducted in the current study showed a misalignment concerning curriculum documents and the integration of IK in the learning and teaching of TTD. As such, these are important documents which Zimbabwean TTD teachers use on a regular basis. Seeing that there is a misalignment, it is recommended that further studies explore how these different documents could align and provide guidance to teachers for successfully integrating IK into the teaching of TTD. In addition, it is recommended that possibilities for professional development opportunities to develop teachers' skills, knowledge, and practices to embrace IK in their TTD teaching practices must be explored in depth.

CONCLUSION

Based on the findings from the benchmarking study, it was concluded that there is notable positive potential for the expansion of indigenous, more real-life relevant content in the Zimbabwean TTD syllabus. Recommendations are made for expanding the IK in the TTD syllabus, through suggesting several potential topics and strategies which can be merged with the existing Western knowledge therein. Including both Western and indigenous knowledge contributes to a broader, more balanced set of learning, which will enable learners to appreciate various forms of knowledge. Curriculum designers and implementers have a scholarly mandate to develop the integration of such content into the syllabus to strengthen the linking of its content to the social constitution and the

learners' real-life experiences. The collaborative efforts of curriculum designers, teacher training institutions and teachers themselves can contribute toward more meaningful, life-relevant IK being successfully included and implemented into the TTD syllabus in Zimbabwe.

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