

**STUDENTS' PERCEPTIONS OF MOTHER TONGUE-BASED
INSTRUCTION FOR THE FURNITURE DESIGN AND
PRODUCTION TRADE AT TECHNICAL COLLEGES IN LAGOS
STATE, NIGERIA**

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Abstract

This study examined students' perceptions of mother tongue-based instruction in Furniture Design and Production in technical colleges in Lagos State, Nigeria, focusing on conceptual understanding, implementation challenges, and creativity, innovation, and entrepreneurial skills. A descriptive survey design was adopted, involving 58 students across six Government Technical Colleges through total enumeration. Data were collected using a researcher-developed questionnaire with a reported Cronbach's alpha coefficient of 0.86. Of the 58 questionnaires administered, 54 were completed and returned, representing a response rate of 93.1%. Data were analysed using mean and standard deviation, with a criterion mean of 3.50. Findings revealed positive student perceptions of mother tongue-based instruction in understanding technical concepts (grand mean = 3.58, SD = 0.49) and supporting creativity and innovation (grand mean = 3.58, SD = 0.50). However, students also identified implementation challenges, including inadequate instructional materials, limited workshop resources, insufficient facilitator training, and institutional and linguistic constraints (grand mean = 3.57, SD = 0.50). The study concludes that Yoruba-supported instruction, alongside English technical terminology, may provide a useful approach to practical vocational learning. It recommends strengthening facilitator training, developing standardised Yoruba-English instructional materials, and

improving institutional support for integrating indigenous-language instruction into technical education.

Keywords: *Furniture Design and Production, Mother tongue-based instruction, Students' perceptions, Technical colleges, Technical and vocational education.*

Introduction

Technical and Vocational Education and Training (TVET) equips learners with occupational competencies for employment, self-employment, and economic participation (UNESCO, 2022). However, effective acquisition of these competencies may be constrained when students have difficulty understanding the language used to explain technical concepts and demonstrate practical procedures. Mother tongue-based instruction, which uses learners' familiar language to support teaching and learning, may facilitate comprehension by connecting prior knowledge with new learning experiences while promoting meaningful participation (Benson, 2004).

In furniture design and production, students are required to understand measurements, timber properties, cutting, jointing, assembly, finishing, and workshop safety. These activities demand the integration of theoretical knowledge with practical application. Where technical explanations are delivered exclusively in English, students who experience language-related difficulties may struggle to interpret instructions and apply concepts during workshop activities. Using Yoruba alongside English may improve accessibility through familiar explanations while retaining the English terminology required for examinations, technical documentation, and workplace communication (Egielewa et al., 2022).

Mother tongue-based instruction may also support students' participation in creative thinking, production problem-solving, design innovation, and entrepreneurial learning. These competencies are important for developing functional furniture products, utilising materials efficiently, responding to customer needs, and pursuing self-employment (UNESCO, 2022). Nevertheless, its implementation may be affected by inadequate instructional materials, inconsistent technical terminology, variations in students' language proficiency, teacher preparedness, and the continued dominance of English in formal technical education.

Although related studies have examined indigenous-language instruction and vocational learning, evidence concerning Furniture Design and Production students in Lagos State remains limited in the literature reviewed for this study. In particular, students' perceptions of the contribution of Yoruba-supported instruction to conceptual understanding, the challenges associated with its implementation, and its perceived relevance to creativity, innovation, and entrepreneurial skills require further investigation. This study therefore examines these three dimensions to provide context-specific evidence that may inform language-support strategies for practical instruction in technical colleges.

Students' perceptions refer to their interpretations of teaching practices and learning experiences (Akinpelu et al., 2024), which may influence their engagement with instructional activities. In technical education, understanding specialised concepts is essential for translating theoretical knowledge into practical competence (Isa et al., 2023). Bello and Nwachukwu (2024) reported that indigenous-language instruction was associated with greater student confidence and mastery, while Okolie et al. (2023) highlighted language accessibility in vocational learning and entrepreneurship. These findings underscore the potential relevance of familiar-language instruction to technical education.

In Furniture Design and Production, students must understand measurements, material properties, tool selection, jointing methods, and production procedures. Yoruba-supported explanations of concepts such as measurement (*iwọ̀n*), length (*gígùn*), width (*fifẹ̀*), and cutting (*gígé*), combined with practical demonstrations and English terminology, may facilitate comprehension and the application of theoretical knowledge (Yusuf et al., 2022). Related research in vocational agriculture and blocklaying provides contextual support for examining this approach (Ndem et al., 2020). However, its perceived usefulness may depend on teachers' language proficiency, students' linguistic backgrounds, and the availability of instructional resources. This study therefore examines students' perceptions of mother tongue-based instruction in understanding technical concepts and applying workshop instructions to practical activities.

Despite its potential benefits, mother tongue-based instruction may be constrained by inadequate instructional materials, insufficient teacher preparation, inconsistent technical terminology, and differences in language proficiency (Aniah & Mohammed, 2021). In Furniture Design and Production, these challenges may complicate the teaching of timber properties, measurement, jointing, machine operations, finishing, and workshop safety. Effective implementation therefore requires accurate Yoruba terminology, appropriate resources, and teachers capable of explaining technical concepts clearly (Adeosun et al., 2022).

Beyond classroom-level constraints, Japhet (2017) identified inadequate funding, shortages of trained teachers, and limited instructional materials as barriers to integrating indigenous-language instruction in technical colleges. Similarly, Yusuf (2023) highlighted weak monitoring and inconsistent implementation of Nigeria's language-in-education policies. Furthermore, transferring knowledge from Yoruba explanations to English-language textbooks, technical drawings, examinations, and workplace communication may present difficulties without explicit links between the two languages (Ndem et al., 2020). Accordingly, this study examines students' perceived challenges concerning technical terminology, instructional resources, teacher preparedness, language proficiency, and the integration of Yoruba-supported instruction with English-based technical learning.

Creativity involves generating and refining ideas to solve problems, while innovation entails applying these ideas to develop improved products and processes (Dada, 2024). Entrepreneurial skills include identifying business opportunities, assessing market needs, and managing enterprises (Okolie et al., 2021). These competencies are essential in Furniture Design and Production, where students develop designs, optimise material use, solve production problems, and identify market opportunities. Mother tongue-based instruction may facilitate the expression of ideas and understanding of practical problems by connecting technical knowledge with familiar experiences (Cummins, 2000). Related studies highlighted the importance of creativity, innovation, and problem-solving in technical and entrepreneurship education (Isa et al., 2023).

Eze and Nwachukwu (2025) emphasised the potential of indigenous-language instruction to connect vocational knowledge with cultural practices and support innovation in practical trades. UNESCO (2023) similarly highlighted the relevance of culturally responsive vocational education to inclusive education and decent work. In Furniture Design and Production, Yoruba-supported explanations may help students understand customer needs, production costs, pricing, and product specifications, while English remains important for business documentation and professional communication.

However, evidence of the direct contribution of mother tongue-based instruction to these competencies in furniture education remains limited. Accordingly, this study examines students' perceptions of its role in supporting creative thinking, design innovation, production problem-solving, and entrepreneurial awareness. Youth unemployment and underemployment in Nigeria highlight the need for effective technical and vocational education and training (TVET) that develops practical, entrepreneurial, and employability skills. In Lagos State, Furniture Design and Production offers opportunities for vocational skill acquisition, employment, and self-employment. However, students' understanding of technical concepts and engagement in practical activities may be influenced by the language of instruction.

English is widely used in Nigerian technical colleges, yet some students may find specialised terminology, technical instructions, and practical procedures difficult to understand. Mother tongue-based instruction, particularly through Yoruba, may facilitate learning by connecting technical knowledge with students' linguistic experiences. In Furniture Design and Production, Yoruba metalanguage may help explain concepts such as measurement (*ìwọ̀n*), wood joints (*isopò igi*), and cutting (*gígé igi*). However, its application may be constrained by inconsistent technical terminology, limited instructional materials, and difficulties expressing specialised concepts accurately. Despite its potential relevance, empirical evidence on students' perceptions of Yoruba-based instruction in Furniture Design and Production at technical colleges in Lagos State remains necessary. In particular, students' views on its contribution to conceptual understanding, creativity, innovation, and entrepreneurial skill

development, as well as the challenges associated with its use, require investigation.

This study therefore examined students' perceptions of Yoruba-based mother tongue instruction in Furniture Design and Production at technical colleges in Lagos State, Nigeria, focusing on conceptual understanding, implementation challenges, creativity, innovation, and entrepreneurial skill development

Method

The study adopted a descriptive survey design to examine students' perceptions of mother tongue-based instruction in Furniture Design and Production in technical colleges in Lagos State. The design was appropriate for collecting and describing respondents' views on conceptual understanding, implementation challenges, and the perceived contribution of indigenous-language instruction to creativity, innovation, and entrepreneurial skills (Creswell & Creswell, 2022). The study was conducted in Lagos State, Nigeria, across six Government Technical Colleges offering Furniture Design and Production. Lagos State was selected because of its technical and vocational education provision and its established furniture-production industry. The study population comprised 58 students enrolled in Furniture Design and Production across the six Government Technical Colleges. Owing to the manageable population size, the study adopted a total enumeration sampling technique, involving all 58 students. Of the questionnaires administered, 54 were completed and returned for analysis.

Data were collected using a researcher-developed questionnaire titled *Students' Perceptions of Mother Tongue-Based Instruction for Furniture Design and Production Trade Questionnaire* (SPMTIFDPQ). The questionnaire comprised four sections. Section A elicited demographic information; Section B examined perceptions of the contribution of mother tongue-based instruction to understanding technical concepts; Section C addressed perceived implementation challenges; and Section D assessed its perceived contribution to creativity, innovation, and entrepreneurial skills. Items were rated on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The questionnaire's content validity was assessed by three specialists in Woodwork Technology Education,

curriculum development, and language pedagogy. Their feedback informed revisions to the wording and structure of the items. Reliability was assessed through a pilot test involving 20 students with characteristics similar to those of the target population. The instrument yielded a Cronbach's alpha coefficient of 0.86, indicating good internal consistency.

The researchers, assisted by three trained research assistants, administered 58 questionnaires to the participants. Clear instructions were provided, and confidentiality was maintained to encourage honest responses. A total of 54 completed questionnaires were returned, representing a response rate of 93.1%. Data were analysed using mean and standard deviation. A criterion mean of 3.50 was adopted as the study's decision threshold on the five-point Likert scale. Items with mean scores of 3.50 and above were interpreted as indicating agreement, whereas scores below 3.50 were interpreted as falling below the agreement threshold. These statistics were used to summarise students' perceptions across the three substantive dimensions of the study.

Results

Research Question 1: What are students' perceptions of the influence of mother tongue-based instruction on their understanding of concepts in the Furniture Design and Production trade?

Table 1: Table 1. Students' perceptions of the influence of mother tongue-based instruction on conceptual understanding
(N = 54)

S/N	Perceived influence	M	SD	Remarks
1.	Mother tongue-based instruction improves understanding of technical terms.	3.61	0.47	Agreed
2.	Indigenous language instruction reduces confusion when interpreting design concepts.	3.58	0.52	Agreed
3.	Mother tongue explanations make workshop instructions easier to understand.	3.55	0.49	Agreed
4.	Students understand measurement and construction processes better when taught in their mother tongue.	3.63	0.50	Agreed

5.	Indigenous language instruction enhances understanding and retention of safety rules and procedures.	3.54	0.53	Agreed
6.	Mother tongue enables facilitators to explain complex ideas more clearly.	3.57	0.51	Agreed
7.	Mother tongue-based instruction encourages active participation and questioning in class.	3.59	0.48	Agreed
8.	Explaining design principles in the mother tongue promotes deeper understanding.	3.60	0.46	Agreed
G	Grand Mean / Standard Deviation	3.58	0.49	Agreed

Table 1 presents students' perceptions of the influence of mother tongue-based instruction on their understanding of Furniture Design and Production Trade concepts. Item mean scores ranged from 3.54 to 3.63, all exceeding the criterion mean of 3.50. Improved understanding of measurement and construction processes recorded the highest mean ($M = 3.63$, $SD = 0.50$), followed by technical terminology ($M = 3.61$, $SD = 0.47$) and design principles ($M = 3.60$, $SD = 0.46$). Understanding safety rules and procedures recorded the lowest mean ($M = 3.54$, $SD = 0.53$), followed by clarity of workshop instructions ($M = 3.55$, $SD = 0.49$); both remained above the criterion mean. The grand mean of 3.58 indicates an overall positive perception of mother tongue-based instruction as a support for conceptual understanding. However, these findings reflect students' perceptions rather than objectively measured learning gains.

Research Question 2: What challenges do students perceive in the use of mother tongue-based instruction for learning the Furniture Design and Production Trade?

Table 2: Students' perceived challenges associated with integrating mother tongue-based instruction. (N = 54)

S/N	Perceived challenge	M	SD	Remarks
1.	Inadequate locally developed instructional materials limit effective implementation.	3.64	0.48	Agreed
2.	Inadequate facilitator training in mother tongue-based pedagogy presents implementation challenges.	3.59	0.52	Agreed
3.	Limited workshop resources constrain the practical application of mother tongue-based instruction.	3.62	0.50	Agreed
4.	Gaps in educational policy reduce institutional support for mother tongue integration.	3.57	0.53	Agreed
5.	Students' diverse language backgrounds complicate uniform instructional delivery.	3.55	0.49	Agreed
6.	Negative attitudes towards indigenous languages hinder their acceptance in technical education.	3.51	0.54	Agreed
7.	Limited access to digital tools constrains the integration of modern technologies with indigenous language instruction.	3.56	0.51	Agreed
8.	Inadequate collaboration between schools and industry weakens implementation.	3.58	0.47	Agreed
G	Grand Mean / Standard Deviation	3.57	0.50	Agreed

Table 2 presents students' perceptions of the challenges associated with integrating mother tongue-based instruction into Furniture Design and Production Trade education. The mean scores ranged from 3.51 to 3.64, with all eight items exceeding the criterion mean of 3.50. Inadequate locally developed instructional materials recorded the highest mean ($M = 3.64$, $SD = 0.48$), followed by limited workshop resources ($M = 3.62$, $SD = 0.50$). Other notable challenges included inadequate facilitator training ($M = 3.59$, $SD = 0.52$), insufficient school-industry collaboration ($M = 3.58$, $SD = 0.47$), policy gaps ($M = 3.57$, $SD = 0.53$), limited access to digital tools ($M = 3.56$, $SD = 0.51$), and students' diverse language backgrounds ($M = 3.55$, $SD = 0.49$). Negative attitudes towards indigenous languages had the lowest mean ($M = 3.51$, $SD = 0.54$), but still met the criterion for

agreement. The grand mean of 3.57 indicates that respondents generally perceived all eight factors as challenges to implementation. Overall, the findings highlight the need for context-appropriate instructional materials, improved workshop resources, facilitator training, and stronger institutional support for effective implementation.

Research Question 3: What are students' perceptions of the role of mother tongue-based instruction in promoting creativity, innovation, and entrepreneurial skills in the Furniture Design and Production Trade?

Table 3: Students' perceptions of the role of mother tongue-based instruction in creativity, innovation, and entrepreneurial skills.
(N = 54).

S/N	Perceived role	M	SD	Remarks
1.	Explaining design concepts in the mother tongue stimulates imaginative thinking.	3.61	0.47	Agreed
2.	Indigenous language instruction encourages experimentation with new ideas.	3.58	0.50	Agreed
3.	Using local languages in workshops promotes originality in project execution.	3.55	0.52	Agreed
4.	Mother tongue explanations help students develop innovative solutions to design problems.	3.63	0.49	Agreed
5.	Mother tongue-based instruction strengthens students' confidence in undertaking creative tasks.	3.57	0.51	Agreed
6.	Local language instruction encourages cultural expression in furniture design.	3.60	0.48	Agreed
7.	Students become more resourceful when guided in their mother tongue.	3.56	0.53	Agreed
8.	Mother tongue-based instruction promotes collaborative creativity among students.	3.54	0.50	Agreed
G	Grand Mean / Standard Deviation	3.58	0.50	Agreed

Table 3 presents students' perceptions of the contribution of mother tongue-based instruction to creativity, innovation, and entrepreneurial skills in Furniture Design and Production Trade education. Item mean scores ranged from 3.54 to 3.63, exceeding the criterion mean of 3.50. Innovative

problem-solving recorded the highest mean ($M = 3.63$, $SD = 0.49$), followed by imaginative thinking ($M = 3.61$, $SD = 0.47$) and cultural expression ($M = 3.60$, $SD = 0.48$). Other items, including experimentation, creative confidence, resourcefulness, originality, and collaborative creativity, also exceeded the criterion mean. The grand mean of 3.58 indicates positive perceptions of the contribution of mother tongue-based instruction to creativity and innovation. However, entrepreneurial competence was not directly measured; thus, conclusions are limited to perceived creative and innovative benefits.

Discussion

The findings in Table 1 showed that respondents agreed with all eight statements concerning the perceived contribution of mother tongue-based instruction to understanding Furniture Design and Production concepts, with mean scores ranging from 3.54 to 3.63, above the criterion mean of 3.50. Students perceived Yoruba-supported instruction as helpful for understanding technical terminology, interpreting design concepts, following workshop instructions, understanding measurement and construction processes, and retaining safety procedures. This finding is consistent with Bello and Nwachukwu (2024), who reported greater confidence and mastery among students taught technical subjects in their indigenous language. It also complements Okolie et al. (2023), who highlighted the importance of language accessibility in vocational learning. The present study extends this discussion by providing context-specific evidence of students' perceptions within Furniture Design and Production in technical colleges in Lagos State.

Table 2 revealed that respondents agreed with all eight statements concerning the challenges of integrating mother tongue-based instruction, with mean scores ranging from 3.51 to 3.64, exceeding the criterion mean of 3.50. The perceived challenges included inadequate instructional materials, insufficient teacher preparation, limited workshop resources, weak policy support, and diverse student language backgrounds. These findings align with Japhet (2017), who identified inadequate funding, shortages of trained teachers, and insufficient instructional materials as barriers to indigenous-language instruction in technical colleges. Similarly, Yusuf (2023) highlighted weak policy monitoring and inconsistent implementation as constraints on language-in-education initiatives. Taken

together, these findings suggest that successful integration requires adequate resources, relevant teacher training, and institutional support, alongside appropriate instructional practices.

The findings in Table 3 indicated that respondents agreed with all statements concerning the perceived contribution of mother tongue-based instruction to creativity, innovation, and entrepreneurial skills, with mean scores ranging from 3.54 to 3.63. Students perceived Yoruba-supported instruction as encouraging imaginative thinking, experimentation, originality, innovative problem-solving, and confidence in creative tasks. This finding is consistent with Eze and Nwachukwu (2025), who emphasised the potential of indigenous-language pedagogy to connect vocational knowledge with cultural practices and support innovation. It also relates to UNESCO's (2023) emphasis on culturally responsive vocational education. Nevertheless, the results establish students' perceptions of these potential benefits rather than demonstrating that mother tongue-based instruction directly improves creativity, innovation, or entrepreneurial competence.

Conclusion

This study examined students' perceptions of mother tongue-based instruction in Furniture Design and Production in technical colleges in Lagos State, focusing on understanding technical concepts, implementation challenges, and creativity, innovation, and entrepreneurial skills. The findings indicated that students perceived Yoruba-supported instruction as helpful for understanding technical concepts and engaging in creative and innovative activities. However, inadequate instructional materials, insufficient teacher preparation, limited workshop resources, policy-related constraints, and diverse linguistic backgrounds were identified as challenges to effective implementation. The study concludes that integrating Yoruba explanations with English technical terminology offers a potentially valuable approach to practical vocational instruction. Realising this potential requires appropriate instructional resources, teacher training, and institutional support. These findings provide context-specific evidence to inform language-support strategies in technical and vocational education.

Recommendations

Based on the findings, the following recommendations were made:

1. Technical colleges should provide regular professional development in Yoruba-supported bilingual instruction and collaborate with language experts and furniture-production practitioners to develop standardised Yoruba-English technical glossaries, manuals, and workshop materials.
2. The Lagos State Ministry of Education and relevant TVET authorities should strengthen policy implementation, monitoring, and resource provision to support the effective integration of Yoruba alongside English in Furniture Design and Production programmes.
3. Technical colleges should incorporate Yoruba-supported explanations into workshop demonstrations, design projects, problem-solving activities, and entrepreneurship education while retaining English technical terminology to prepare students for formal assessment and workplace communication.

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