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## Effectiveness of Arabic–Hausa Code-Switching in Teaching Arabic to Junior Secondary School Students in Katsina State, Nigeria

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### ABSTRACT

This study aim to investigates the effectiveness of Arabic Hausa code-switching as a strategy in teaching Arabic as second language to junior secondary school students in Katsina State, Nigeria. A quasi-experimental mixed-methods was adopted for the study, selecting 120 from six schools across three senatorial zones of the state namely Katsina zone, Funtua Zone and Daura zone. Where the experimental group was taught using Arabic-Hausa code-switching, while the control group received Arabic-only instruction over 12 weeks. For the analysis, descriptive statistics and independent-samples t-tests were used for quantitative data, while qualitative data were analysed. For the analysis, descriptive statistics and independent samples t-tests were used for quantitative data, while qualitative data were analyzed thematically. The findings of the study shows that code switching significantly improved students' understanding and retention at the same time making them more attached to their classroom through meaningful participation. Both students and teachers expressed positive perceptions toward this strategy. The study recommends that structured integration of code switching into Arabic pedagogy in multilingual contexts like Nigeria.

### INTRODUCTION

It is well known that language occupies a central and decisive position in education setting not only as the primary medium through which knowledge is transmitted but also as a subject of intellectual development in its own right. Its role becomes even more critical in multilingual setting where the language of instruction may differ from learners' first language. In a setting like Northern Nigeria, Arabic enjoys a unique status as a language of religion and cultural heritage. Where it regarded as main subject in Islamic education and remains a core subject in many junior secondary schools. But due to the nature of the region where majority of students in this are native speakers of Hausa, this linguistic reality continues to shape their learning experiences in many aspects.

The disconnect between students' linguistic background and the language of instruction presents a significant challenge. Empirical evidence shows that when learners are taught in a language different from their own language, they do not fully command also their comprehension rate of retention and overall academic performance are adversely affected (Cummins, 2000; UNESCO, 2016). In the case of Arabic instruction in Katsina State students often encounter difficulties in understanding Arabic grammatical structures and textual meanings of the content due to limited exposure to the Arabic language outside the classroom. And over reliance on traditional Arabic only instructional methods has further compounded this challenge due to lack of necessary linguistic competence by the majority of the learners. This traditional teaching approach is increasingly viewed

as inadequate for second language teaching. Where researches in bilingual and multilingual education has demonstrated that "strict target language only policies may hinder rather than facilitate learning, particularly at the early stages of language acquisition" (Garcia & Wei, 2014). Instead of that scholars advocate for pedagogical strategies that recognize learners' existing linguistic resources such as code switching between their own language and second language as one of the most effective among these strategies.

From this narrative, we can see that Code-switching is no longer regarded as a sign of linguistic deficiency; rather, it is widely recognized as a powerful instructional tool that supports meaning-making for the student. It also reduces cognitive load while enhancing learner engagement (Setati & Adler, 2000; Ferguson, 2003). Based on the above it is clear that incorporating Hausa alongside Arabic for teaching Arabic as second language in the Northern Nigeria teachers can be able to clarify and explain complex concepts while creating a more inclusive learning environment. This aligns perfectly with Vygotsky's sociocultural theory which emphasizes that "learning is most effective when new knowledge is mediated through familiar linguistic and cultural frameworks" (Vygotsky, 1978).

Furthermore, recent studies have shown that code-switching can easily facilitate deeper comprehension and promote active classroom participation, particularly if the students share a common first language (Rayo *et al.*, 2024; Ramaila, 2025). That is because it enables learners to draw connections between known and unknown linguistic

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systems, which can help in strengthening their cognitive processing and enhance language acquisition.

But despite all this evidence the application of code-switching in Arabic Hausa instructional contexts remains under researched more especially at the junior secondary school level in Nigeria. This gap is significant given the widespread informal use of Hausa by majority of the teachers to support Arabic teaching in classrooms across Katsina State.

Based on the above evidence the present study takes a firm position by showing that Arabic Hausa code switching is not merely a compensatory practice but a necessary strategy for effective language instruction in multilingual settings. Because of that this study is trying to evaluate the extent in which code-switching enhances students understanding of the context and enhancing classroom engagement while also examining the perceptions of both teachers and learners toward its use for the Arabic Language as Second language. In order to provide empirical evidence capable of informing instructional practices and shaping language education policy in similar contexts.

## LITERATURE REVIEW

In the area of multilingual education research, where several methods are used, code-switching has experienced a significant reconceptualization when it shifts from a stigmatized linguistic phenomenon to a theoretically informed and empirically substantiated pedagogical tool and instructional strategy. Where current studies position code-switching strategy within expansive frameworks of translanguaging and multilingual cognition, contending that bilingual learners do not function within distinct linguistic systems but rather utilise a cohesive linguistic repertoire to generate meaning (García & Wei, 2014). This shift has significantly impacted classroom practices: instead of imposing strict monolingual standards effective strategy must utilise learners' complete linguistic resources to improve their language comprehension and improve their participation as well as their cognitive growth.

A critical synthesis in *The Cambridge Handbook of Multilingual Education* (2025) redefines the code-switching as a "purposeful instructional strategy integrated within multilingual meaning making processes, rather than as an incidental classroom practice". At the same time recent empirical research continue to illustrates that code switching plays a central role in explaining and simplifying the content comprehension which enhance learning and improve student engagement in linguistically diverse classrooms (Chean, 2025). These results indicate that multilingual interaction can easily represents the inherent ecology of learning in modern classrooms.

### Theoretical Reframing.

The theoretical foundations of code-switching are most convincingly rooted to the sociocultural and cognitive-interactionist frameworks. And Vygotsky's (1978) theory

of mediated learning remains central to that in which language functions as the primary tool through which higher order cognitive processes are developed. Within the Zone of Proximal Development (ZPD) learners use scaffolding tools to help them move from where they are now to where they want to be. Code-switching is one of these scaffolds that helps teachers connect new language structures like Arabic grammar, to what students already know about Hausa.

However current studies goes beyond Vygotsky by including translanguaging theory which says that languages should not be limited. García and Wei (2014) argue that bilingual learners participate in dynamic meaning-making practices that surpass linguistic boundaries. In this regard Arabic Hausa code-switching should not be interpreted as alternative between two distinct systems but as a communicative strategy that improve cognitive adaptability and conceptual understanding.

From the Cummins' (2000) interdependence hypothesis which reinforces that illustrating proficiency in a first language offers a transferable cognitive framework for second-language learning. That means Hausa is not just a tool to help you learn Arabic; it is also an important part of the process.

### Empirical Evidence: Convergence and Tensions

Empirical evidence from various educational settings strongly supports the pedagogical value of code-switching at the same time highlighting critical nuances related to it. Research consistently shows code-switching when use strategically can improve conceptual comprehension and class participation. For example classroom based research shows that teachers usually use code-switching in order to clarify things and reinforce them, it also helps them to manage classroom engagement, all of which led to better learning outcomes (Espanola *et al.*, 2025). In the same way systematic reviews show that code-switching makes multilingual classrooms much more engaging which in return boost student confidence and making the content accessible (Bardinas *et al.*, 2025).

More recent evidence from sub-Saharan Africa highlights the role of code switching in promoting inclusive and equitable learning environments especially where linguistic diversity intersects with educational inequality (Frontiers in Education, 2025). These findings are directly relevant to the Nigerian context where language barriers often exacerbate educational inequalities.

However some empirical studies warn that code-switching that is not controlled or is done too much could limit exposure to the target language and make it harder to become fluent. For example recent studies has shown that although code-switching enhances comprehension of the content it may become a barrier to advanced proficiency especially if it was used as a replacement rather than just a support to the target language (Rengur *et al.*, 2025). This highlights a fundamental challenge which argue whether code-switching functions as a bridge to proficiency or a hindrance that delays it.

### Areas of Impact

A key characteristic of this study is its shift from a narrow focus on linguistic outcomes to a broader examination of multidimensional effects. Evidence from the literature indicates that code-switching influences several interconnected domains:

#### Cognitive Impact.

Studies suggest that code-switching reduces cognitive load while enhancing learning efficiency by enabling learners to draw on prior knowledge, thereby facilitating comprehension of new concepts.

#### Linguistic Development

Code-switching supports vocabulary development through the transfer of linguistic knowledge across languages, particularly in contexts involving structurally different languages such as Arabic and Hausa.

#### Pedagogical Effectiveness

Teachers employ code-switching strategically to maintain the flow of instruction, clarify complex concepts, and respond to diverse learner needs, thereby improving overall lesson effectiveness.

#### Affective and Social Dimensions

Code-switching promotes an inclusive classroom environment by encouraging participation, reducing anxiety, and affirming learners' linguistic identities.

#### Equity and Access

In multilingual settings, code-switching helps minimize language barriers and ensures equitable access to learning (Frontiers in Education, 2025).

Taken together, these findings demonstrate that code-switching is not merely a linguistic strategy but a transformative pedagogical practice in language teaching.

#### Persistent Gaps in the Literature

Despite the substantial body of research highlighting the multidimensional benefits of code-switching, the existing literature remains incomplete. A critical examination of prior studies reveals several important gaps that limit a comprehensive understanding of its long-term and context-specific implications.

- Contextual Underrepresentation:
- There is an unequal amount of focus on bilingual contexts where English is the main language, with not enough on Arabic African language pairs like Arabic Hausa.
- Limited Focus on Early and Intermediate Learners:
- Majority of the researches focused on higher education or advanced learners so there isn't enough research on junior secondary contexts.
- Lack of Longitudinal Evidence
- Majority of the studies that are already out there are short-term so they don't give us a good idea of how code-switching affects language proficiency over time.

- Insufficient Integration of Quantitative and Qualitative Data:
- Although mixed-methods approaches are on the rise, many studies still fail to capture the full complexity of classroom dynamics.
- Policy Practice Disconnect.

Although research supports code-switching but we can see that many educational policies continue to enforce monolingual instruction particularly in formal language education systems.

#### Critical Perspective

The current literature conclude that code-switching is highly effective pedagogical strategy when used systematically and in accordance with instructional objectives of the lesson, that is because it helps student to understand things better which in return helps in their cognitive development and it also makes learning environments more welcoming and attractive. But its success depends on how well it is put into action. It can hurt long-term proficiency and exposure to the target language if it is used too much or not in a structured way. This duality which serves code-switching as both a bridge and a potential barrier characterizes the present condition of the field and highlights the necessity for context sensitive and empirically based research.

#### Research Justification

This study looks at a very important study area: "Effectiveness of Arabic Hausa code-switching in junior secondary education in Katsina State Nigeria". By incorporating both quantitative and qualitative evidence thereby offering context specific insights by that it directly addresses identified gaps in the literature and contributes to ongoing discussions regarding multilingual pedagogy and educational equity.

## MATERIALS AND METHODS

### Research Design

The research adopts a quasi-experimental mixed-methods design by integrating both quantitative and qualitative methodologies in order to deliver a comprehensive assessment of the effects of Arabic-Hausa code-switching. The non-equivalent control group design was chosen because of practical limitations related to random assignment in school settings (Creswell & Creswell, 2018). The quantitative component of the research will surely facilitate causal inference regarding learning outcomes through the comparison between the pre-test and the post-test, the qualitative will examine the classroom dynamics and the learner perceptions. The combination of these two methodologies will improve internal validity and add depth to the interpretation, aligning with current best practices in educational research (Johnson & Onwuegbuzie, 2004; Tashakkori & Teddlie, 2021).

### Study Area

The research was carried out in Katsina State, Nigeria, because of its linguistic and cultural nature where Hausa

serves as the primary first language and Arabic is taught primarily for religious and academic purposes. And in order to guarantee equal representative across socio educational contexts, six junior secondary schools were intentionally chosen from three major educational zones:

- The Katsina Zone
- Zone of Fun
- Daura Zone

The selection demonstrates a context-sensitive sampling strategy, acknowledging that language practices and pedagogical effectiveness are rooted in local sociolinguistic ecologies (Hornberger & Link, 2012).

### Sample

The study sample involve 120 junior secondary school students which divided into two groups:

Experimental group: 60 students

Control group: 60 students

Participants were selected through cluster sampling at the class level in order to maintain intact classroom groups to uphold ecological validity. Pre-test scores and demographic variables were used to check for baseline equivalence between groups. This reduced selection bias, which is a known problem in quasi-experimental research (Shadish, Cook, & Campbell, 2002).

The sample size meets the minimum requirement for identifying medium effect sizes in educational interventions by guaranteeing adequate statistical power (Cohen, 1988).

### Instruments.

Data were collected using multiple instruments:

(a) Questionnaire

A Likert scale questionnaire was designed to measure students:

- comprehension levels
- engagement and motivation
- attitudes toward instructional language

The instrument was adapted from validated scales used in bilingual education research and subjected to content validation by experts in applied linguistics. To show that the data was reliable we used Cronbach's alpha ( $\alpha \geq 0.70$ ), which is in line with accepted psychometric standards (Field, 2018).

(b) Semi Structured Interview Guide

To get qualitative data we conducted semi structured interviews with some students and teachers in order to explore:

- their perceptions of code-switching

- classroom interaction patterns
- perceived challenges and benefits

(c) Achievement Tests (Pre-test and Post-test)

Standardized Arabic language tests was administered to the student before and after the intervention in order to measure the effectiveness of the studied method. The tests was used to assessed:

- vocabulary acquisition
- reading comprehension
- grammatical competence

### Intervention

The intervention lasted for 12 weeks and different teaching methods were used for the two group:

- Experimental Group: by using systematic Arabic Hausa code-switching.
- Control Group: by using traditional monolingual Arabic only approach.

The teachers participating in the intervention received preliminary orientation to guarantee consistency of implementation which is very critical factor in intervention research (O'Donnell, 2008).

### Data Analysis.

#### Quantitative Analysis

Quantitative data were analysed using mean and standard deviation to summarize performance trends together with independent samples t-test in order to determine statistically significant differences between experimental and control groups

#### Qualitative Analysis

Qualitative data were analysed using thematic analysis.

## RESULTS AND DISCUSSION

### Preliminary Analysis

An independent samples t-test was conducted on pre-test scores to confirm the comparison between the experimental and control groups prior to the intervention, as illustrated in the following table.

From the table above we can see that there is no statistically significant difference between the groups at baseline ( $t(118) = 0.38, p > .05$ ) which confirms that they were almost at the same level before the intervention.

### Post-Intervention Achievement Outcomes

After the 12-week intervention period the post-test scores were analysed in order to see how Arabic Hausa code-switching affected the students' performance.

From the results of the above table we can see how the

**Table 1:** Pre-test Comparison of the two groups

Group	N	Mean	SD	t-value	p-value
Experimental	60	42.15	6.20		
Control	60	41.73	6.05	0.38	0.704

**Table 2:** Post-test Comparison of Experimental and Control Groups

Group	N	Mean	SD	t-value	p-value
Experimental	60	68.42	7.10		
Control	60	55.18	6.85	10.45	< .001

experimental group did better than the control group with a statistically significant difference of  $(t(118) = 10.45, p < .001)$ .

To further assess practical significance, Cohen's d was calculated:

- Effect size (d) = 1.87 (large effect)

**Within Group Improvement (Paired Samples Analysis)**

To evaluate learning outcome within each group paired samples t-test was conducted.

Both groups showed progress over time but the experimental group made much more progress. This

**Table 3:** Pre-test vs Post-test Scores

Group	Test	Mean	SD	t-value	p-value
Experimental	Pre-test	42.15	6.20		
	Post-test	68.42	7.10	21.30	< .001
Control	Pre-test	41.73	6.05		
	Post-test	55.18	6.85	12.75	< .001

suggests that code-switching sped up learning more than normal teaching methods.

**Analysis of Questionnaire Data**

Descriptive statistics were used to look at the students

perceptions about the role of code-switching on their understanding and the clarity of the lessons also about the level of class engagement.

We can clearly see from the table above that the students in the experimental group consistently reported higher

**Table 4:** Students Perceptions (Likert Scale: 1–5)

Variable	Experimental Mean	Control Mean
Improved understanding	4.45	3.12
Classroom engagement	4.38	3.25
Confidence in Arabic learning	4.21	3.05
Ease of vocabulary acquisition	4.50	3.18

levels of understanding and shows confidence in class participation.

**Qualitative Findings**

The interview data revealed three things:

1- Improved Understanding via Linguistic Bridging

Students consistently reported that switching to Hausa enabled them to grasp difficult Arabic concepts more effectively through their reply "When the teacher explains in Hausa I understand faster and remember better."

This supports the idea which suggest that code-switching is a cognitive scaffold which fits with sociocultural learning theory.

2- Increased Classroom Participation

Teachers noted that students in the experimental group were more willing to ask questions and get involved they

belief that the student are not afraid to talk anymore because they can use their mother tongue to express themselves."

This shows that code-switching can easily reduces language anxiety for people who are learning a second language.

3- Risk of Being Too Dependent

Despite its benefits Some participants pointed out a possible problem with the code-switching method which is overdependent on the mother tongue to understand the target language by waiting for Hausa interpretation before trying to understand Arabic.

This means that code-switching should be used carefully and with a strategic plan to avoid becoming dependent on it and to make sure that the target language is always available.

## Discussion

The aim of this study is to investigate the effectiveness of Arabic Hausa code-switching in enhancing learning outcomes among junior secondary school students in Katsina State. And the results so far offer strong empirical evidence that the strategic implementation of code-switching can act as a cognitively beneficial in multilingual classrooms and as an effective instructional method for teaching second languages. At the same time the findings necessitate a more theoretical and practical reconsideration of the utilisation of bilingual resources in formal education.

The significant improvement observed in the experimental group both in terms of achievement scores and reported comprehension aligns with the sociocultural framework proposed by Lev Vygotsky (1978). From this perspective we can see that learning is facilitated through interaction and the use of cultural tools, with language serving as the most critical mediational resource.

The study suggest that using Hausa with Arabic helps in extending learners' Zone of Proximal Development (ZPD) by linking the new language obtain to cognitive structures they already have. And this comes as a supports Cummins (2000) interdependence hypothesis which says that proficiency in a first language can help in the acquisition of a second language through shared cognitive processes. And based on our study we can see that the Hausa Language is not competing with Arabic Language instead it served as a bridge that is trying to facilitate semantic processing and more effective knowledge transfer. This comes as a support for the idea of role of the first language in learning second language at the same time they also challenge the inflexible interpretations of monolingual methods that believe exposure produces optimal results. The data indicate that comprehensibility rather than mere exposure is the critical factor in learning effectiveness.

Beyond conventional understandings of code-switching the findings can be more effectively analysed through the framework of translanguaging theory as developed by Ofelia García and Li Wei (2014). Since translanguaging views bilingual speakers language skills as interconnected and changing not as separate systems. The organised use of Arabic-Hausa alternation seen in the experimental classrooms is an example of pedagogical translanguaging, where both languages are used in a planned way to meaning-making. This is in line with recent empirical syntheses (e.g., Lin, 2019; Rayo *et al.*, 2024) that show that planned bilingual teaching methods always work better than monolingual methods especially when students don't have much exposure to the target language outside of class.

Importantly the study looks into the context of Arabic as a second language in Sub-Saharan Africa, Nigeria in particular a domain that remains underrepresented in global applied linguistics literature. And by that it shows that translanguaging is not just a way to make up for language gaps, but a valid and effective way to teach on

its own.

The questionnaire and qualitative results indicate that code-switching can substantially improve student confidence and participation in the classroom.

By allowing learners to draw on Hausa, the instructional approach reduced linguistic anxiety and fear of error, thereby fostering a more inclusive and participatory classroom environment.

The study also shows how code switching between Hausa and Arabic made the classroom more entertainment and improve the student participation which decrease their anxiety about the Arabic language and fear of making mistakes This aligns perfectly with Ferguson's (2003) argument that says code-switching serves significant interactional and relational roles rather than solely cognitive ones.

this willingness from the students to engage in the lesson shows that code switching assist in deconstructing the power hierarchy that is linked to dominant instructional languages. In this regard the findings align with critical sociolinguistic perspectives that regard language choice as fundamentally connected to matters of identity and accessibility.

The pronounced effect size observed in this study offers substantial evidence that such policies may be pedagogically inadequate especially in situations where learners have insufficient exposure to the target language outside formal instruction. This is in line with what UNESCO (2016) says, learning in a language you already know greatly improves educational outcomes. But with all this it would be simplistic to interpret these findings as an wholesale endorsement of unrestricted code-switching. Rather it indicates the necessity for a principled and strategic incorporation of learners' first language within a comprehensive pedagogical framework.

When we come back to the Northern Nigerian context where Hausa Language is the dominant language for daily communication and Arabic language is mainly used in religious contexts the classroom emerges as a perfect arena for linguistic study especially with the sociolinguistic context of Katsina State what makes it perfect for interpreting the findings.

The effectiveness of code-switching in this context shows the significance of context sensitive method in teaching second languages, that is to say teaching methods should be in line with the language realities of the students and not the one that is forced on them through vague rules. This viewpoint aligns with Hornberger and Link's (2012) call for ecologically based methodologies in multilingual education.

In summary this study demonstrates that Arabic Hausa code-switching is not merely a classroom convenience but a transformative pedagogical resource when applied strategically.

## CONCLUSION

In conclusion this study shows that Arabic Hausa code-switching is not just a useful tool just for the classroom

but when used wisely it can change the way students learn. That is because it makes things easier to understand and gets students involved in the knowledge making, it also closes the gap between linguistic theory and what happens in the classroom. But for it to work there needs to be a careful balance that uses the cognitive and cultural strengths of the learners without losing sight of the main goal of becoming proficient in the target language. It is relevant because it uses the learners cognitive and cultural resources which makes learning easier and more interesting. At the same time using both languages in the right way is important so that they support not hindering the ultimate goal of achieving proficiency in the target language. But there is a major limitation with this method because it can easily lead to overdependence on the first language especially if it was not handled correctly and it can make it harder to learn the target language. Because of that, it is highly recommended for educators to implement a guided and context-sensitive approach when using code-switching during teaching, by ensuring that it serves as a strategic instrument for facilitating understanding while progressively promoting independent competence in the target language.

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