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RESEARCH ARTICLE

SYSTEMATIC ERROR ANALYSIS OF CROSS-LINGUISTIC INFLUENCE IN ENGLISH AND GERMAN L2: FORM-FOCUSED INSTRUCTIONAL INTERVENTIONS FOR BENINESE INTERMEDIATE LEARNERS

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ABSTRACT

This research examines systematic error patterns in English and German L2 acquisition among 120 intermediate Beninese learners (CEFR B1-B2). The study focuses on cross-linguistic influence from French L1 and Fongbe substrate effects. Corpus analysis of written and oral data reveals high error frequencies in articles (52.3% omission in English, influenced by Fongbe's zero-article system), verb tense-aspect (41.2% progressive errors), and word order (78.7% German subordinate clause errors). Results show 36% of errors involve Fongbe substrate influence, distinguishing Beninese learners from European francophones. A 12-week quasi-experimental intervention (n=60) in Cotonou and Abomey-Calavi schools tested culturally-responsive form-focused instruction adapted for large classes and limited resources. Experimental groups showed significant improvements: English articles (58.3% to 76.8%), verb forms (52.4% to 71.3%), and German word order (38.7% to 68.4%), with medium-to-large effect sizes (ηp^2=.22-.31). Gains were largely maintained at delayed posttest. The study demonstrates that effective L2 instruction is achievable in resource-constrained African contexts through peer-based learning, low-cost materials, and explicit contrastive analysis including indigenous languages.

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INTRODUCTION

The acquisition of multiple foreign languages in West African educational contexts presents unique challenges shaped by multilingual environments, French colonial legacy, and indigenous language influences. For Beninese learners, studying English and German as foreign languages creates a complex linguistic landscape where cross-linguistic influence from French (the official language and medium of instruction), Fongbe (the predominant indigenous language in southern Benin), and other local languages shapes interlanguage development in distinctive ways. Cross-linguistic influence, defined as the effect of one language on the learning or use of another (Jarvis & Pavlenko, 2008), manifests throughout the acquisition process with particular characteristics in multilingual African contexts. Whilst positive transfer can facilitate learning when L1 and L2 share structural features, negative transfer resulting in systematic errors poses significant pedagogical challenges, especially in educational settings characterised by large class sizes, limited resources,

The Beninese Educational and Linguistic Context: Benin's linguistic landscape is characterised by remarkable diversity, with over 50 indigenous languages alongside French as the sole official language. In southern Benin where this study is conducted, Fongbe (a Gbe language of the Niger-Congo family) serves as the predominant lingua franca, with approximately 1.7 million speakers. The educational system, inherited from French colonisation, employs French as the exclusive medium of instruction from primary school onwards, though most students acquire French as a second or third language rather than as their mother tongue. English has been taught as a compulsory subject in Beninese secondary schools since the 1960s, typically beginning in the first year of lower secondary (sixième). German is offered as an optional second foreign language starting in the third year (quatrième), though availability varies significantly by school location and resources. Students typically receive 3-4 hours of English instruction and 2-3 hours of German instruction weekly, with class sizes often exceeding 60 students in public schools. The

challenges facing foreign language education in Benin are multifaceted: limited access to native-speaker teachers, insufficient teaching materials and resources, minimal exposure to authentic target language input outside classroom settings, large class sizes hindering individualised attention, examination-focused pedagogy emphasising grammar translation over communicative competence, and competing demands from indigenous languages, French, and foreign languages in learners' linguistic repertoires.

Research Context and Rationale: French, English, and German belong to different branches of the Indo-European family, Romance and Germanic respectively, whilst Fongbe represents the Niger-Congo family with substantially different typological characteristics. These differences create predictable transfer patterns that manifest as systematic errors. However, unlike European francophone contexts, Beninese learners' French itself bears substrate influences from Fongbe and other indigenous languages, creating a more complex transfer picture. Fongbe influences on Beninese French include article usage patterns (Fongbe lacks articles, affecting French article acquisition), serial verb constructions, aspectual distinctions encoded through verbal particles rather than inflection, and tone as a lexical feature.

These substrate effects in Beninese French may, in turn, influence English and German acquisition, creating layered transfer patterns distinct from European francophone learners. Previous research on foreign language learning in West Africa has been limited, with most studies focusing on English acquisition in anglophone countries or French in francophone contexts. Few studies have systematically examined Germanic language acquisition in francophone African settings, and even fewer have addressed the specific challenges of the Beninese multilingual context. This study addresses these gaps whilst developing pedagogically practical solutions adapted to local educational realities.

Research Objectives and Questions: This research aims to achieve three primary objectives contextualised within Benin's educational environment. First, it seeks to identify and categorise systematic error patterns in English and German L2 production amongst intermediate Beninese learners, with attention to morphosyntactic, lexical, and phonological domains.

Second, it analyses error sources, distinguishing between interlingual transfer from French L1, potential substrate effects from Fongbe, intralingual developmental errors, and cross-linguistic influence between target languages. Third, it develops, implements, and evaluates culturally-responsive form-focused instructional interventions specifically designed for Beninese classroom contexts, including adaptations for large classes and limited resources.

Research Questions

- What are the most frequent and persistent error types in English and German L2 production by intermediate Beninese learners?
- To what extent can these errors be attributed to French L1 transfer versus Fongbe substrate influence?
- How do Beninese learners' error patterns compare with those documented for European francophone learners?
- What form-focused instructional interventions prove most effective and feasible in Beninese secondary and tertiary educational contexts?
- How can pedagogical strategies be adapted for large class sizes and limited resources whilst maintaining effectiveness?

Significance of the Study: This research makes several important contributions to applied linguistics and language pedagogy in African contexts. Theoretically, it extends understanding of cross-linguistic influence in multilingual environments where L1 itself carries substrate influences, providing insights into how layered linguistic influences shape L2 acquisition. By examining error patterns across two target languages in a West African setting, the study addresses the under-representation of African learners in SLA research. Methodologically, the study demonstrates how corpus-based error analysis can be conducted in resource-constrained settings and how pedagogical interventions can be designed with cultural and contextual appropriateness. The adaptations developed for large classes and limited materials provide a model for other African educational contexts facing similar challenges. From a pedagogical perspective, the research provides Beninese and West African language educators with evidence-based strategies for addressing specific error patterns relevant to their students. The culturally-responsive interventions developed consider local educational realities whilst maintaining theoretical soundness, offering practical tools that can be implemented without extensive additional resources. By demonstrating effective strategies within existing constraints, the study contributes to more equitable and contextually-appropriate language teaching practises in African educational settings.

LITERATURE REVIEW

Cross-Linguistic Influence in Multilingual Contexts: Cross-linguistic influence theory has evolved from behaviourist "interference" concepts to nuanced contemporary understandings recognising both facilitative and inhibitory effects. Odlin (1989) defined transfer as influence from similarities and differences between target and previously acquired languages, encompassing multiple linguistic levels. However, most transfer research has focused on monolingual or European bilingual contexts, with African multilingual settings remaining under-researched. In multilingual African contexts, transfer operates more complexly than in typical European settings. Learners often have multiple source languages for transfer: the colonial language (French), one or more indigenous languages (Fongbe, Yoruba, Gun, etc.), and potentially other languages depending on individual linguistic biographies. Moreover, the colonial language itself may exhibit substrate features from indigenous languages, creating what Bamgbose (1982) termed "Africanised varieties" with their own systematic patterns.

The concept of "dominant language" becomes complex in such contexts. Whilst French serves as the official language and medium of instruction, it may not be the language of primary socialisation or emotional attachment for many learners. Fongbe or other indigenous languages fulfil these roles whilst exerting covert influence on both French acquisition and subsequent foreign language learning.

Substrate Influence and Multilayer Transfer: Substrate influence refers to effects of indigenous languages on colonial languages, creating stable features in new language varieties. In Benin, Fongbe substrate effects on French have been documented by researchers such as Tossa (1998), who examined language contact phenomena in Fongbe-French bilingual discourse, and Meechan and Poplack (1995), who documented orphan categories in bilingual discourse. These effects include article usage (Fongbe lacks articles, leading to omission or overgeneralisation in French), aspectual marking through particles rather than verbal morphology, serial verb constructions, and specific word order patterns in questions and negative constructions. Multilayer transfer occurs when substrate features in L1 (Beninese French) transfer to L2 (English/German), creating error patterns distinct from those of European French speakers. For example, if Beninese learners omit articles in French due to Fongbe influence, this article omission pattern may transfer to English and German, compounded by systematic differences between French and these target languages.

Error Analysis in African Educational Contexts: Error analysis methodology, established by Corder (1967) and refined by James (1998), requires adaptation for African multilingual contexts. Establishing "native speaker norms" becomes problematic when learners have minimal exposure to standard varieties and when legitimate local varieties of colonial languages exist. Moreover, distinguishing between competence and performance errors proves challenging when learners have limited opportunities for practise and automatisation. Previous error analysis studies in West Africa have focused primarily on English in anglophone countries (Nigeria, Ghana) or French in francophone settings. Bokamba (1991) analysed errors in African learners' French, identifying both universal developmental patterns and Africa-specific transfer effects. For Benin specifically, Teba (2017) examined error correction strategies in Beninese secondary schools, whilst Sena (2020) investigated oral proficiency error correction, finding high frequencies of article, preposition, and tense errors attributable to both French transfer and pedagogical factors.

Contrastive Analysis: French, English, German, and Fongbe: Systematic contrastive analysis reveals typological differences predicting specific areas of difficulty. French, English, and German share Indo-European roots but differ substantially. Fongbe, as a Niger-Congo language, exhibits more fundamental differences: it is an isolating language with minimal morphology, relies on word order and particles for grammatical functions, lacks articles (definiteness indicated through demonstratives and word order), marks aspect rather than tense as primary temporal category, and uses serial verb constructions extensively. Article systems present particular challenges. French uses definite/indefinite articles, English adds zero article complexity, German compounds this with three genders and four cases, whilst Fongbe lacks articles entirely. Beninese learners thus navigate from an article-less substrate through French articles to even more complex systems in English and German. Aspect and tense systems differ fundamentally. Fongbe primarily marks aspect (perfective/imperfective/habitual) through particles, French marks tense-aspect through verbal morphology, English grammaticalises progressive aspect, and German uses context and positional verbs for aspectual distinctions. These layered differences create multiple sources of confusion.

Form-Focused Instruction in Resource-Constrained Settings: Form-focused instruction (FFI) has proved effective in well-resourced contexts, but its applicability to African educational settings requires examination. Meta-analyses by Norris and Ortega (2000) provide evidence for explicit instruction's effectiveness, but these studies predominantly involved small classes, ample materials, and motivated learners in developed-country contexts. Adapting FFI for large African classes requires reconceptualising implementation strategies. Traditional consciousness-raising tasks designed for 15-20 students must be modified for classes of 60-80. Individual corrective feedback becomes impractical, necessitating group-based feedback strategies. Limited textbook availability requires developing low-cost materials adaptable to local contexts. Successful pedagogical adaptations in African contexts emphasise peer learning and collaborative error correction to manage large classes, using locally-produced materials and code-switching strategically, connecting grammatical instruction to examination requirements (given the high-stakes nature of national exams), and building on learners' metalinguistic awareness from studying multiple languages.

Previous Studies on Beninese Language Learners: Research specifically on Beninese foreign language learners remains limited. Recent studies have examined language learning challenges amongst Beninese learners, with Hounhanou (2022) investigating vocabulary teaching practices in Benin EFL classes and demonstrating the effectiveness of contextualised approaches in addressing systematic errors. Egounleti and Toboula (2022) explored the effects of lesson planning on EFL teachers' classroom performances in Beninese post-beginners' classes, revealing challenges related to teacher training and pedagogical standards. For German learning in Benin, research is even scarcer. Anecdotal evidence from teachers suggests high attrition rates in German programmes, partly due to perceived difficulty and limited practical applications. No systematic error analyses comparing English and German learning amongst Beninese students have been published, representing a significant gap this research addresses.

METHODOLOGY

Research Design: This study employs a two-phase sequential mixed-methods design adapted for the Beninese educational context. Phase 1 consists of systematic error analysis using learner corpus data from multiple schools in Cotonou and Abomey-Calavi. Phase 2 implements a quasi-experimental intervention study with pretest-posttest-delayed posttest design, conducted within existing class schedules to ensure ecological validity and practical feasibility.

Participants: Phase 1 included 120 Beninese secondary and university students (ages 16-24, M=19.2, SD=2.1) at intermediate levels (CEFR B1-B2) studying both English and German. Participants were recruited from three secondary schools (two public, one private) in Cotonou and Abomey-Calavi, and from Université d'Abomey-Calavi. All participants had Fongbe as their primary indigenous language (though 35% reported speaking additional indigenous languages), had acquired French primarily through schooling rather than as a home language, and had studied English for at least 5 years (M=6.8 years) and German for at least 3 years (M=3.4 years).

Socioeconomic diversity was represented: 45% attended public schools with limited resources, 25% attended fee-paying private schools, and 30% were university students. This diversity ensures findings reflect the range of educational contexts in Benin rather than elite institutions only. Phase 2 intervention study involved 60 participants (subset of Phase 1) from two secondary schools, assigned to experimental (n=30) and control (n=30) groups by intact classrooms to avoid contamination. Groups were matched for school type, prior achievement, and teacher qualifications. Attrition was minimal (3.3%), with final analysis including 58 participants (experimental n=29, control n=29).

Data Collection Instruments: Data collection was designed considering local constraints: limited computer access, inconsistent electricity supply, and the need for instruments administrable in large groups. The learner corpus comprised written production samples collected during regular class time: narrative writing based on picture sequences (250-350 words), argumentative essays on familiar topics (300-400 words), formal letter writing (200-250 words), and guided composition responding to prompts. Oral data were collected through small-group discussions (4-5 students) recorded on mobile devices, and individual presentations on prepared topics. The complete corpus comprised approximately 160,000 words of English production and 140,000 words of German production. Background questionnaires (administered in French to ensure comprehension) gathered information on: languages spoken at home and in the community, age and context of French acquisition, years of English and German study, access to target language resources (internet, TV, books), perceptions of language difficulty and utility, and socioeconomic indicators (parental education, school fees payment status). Proficiency assessment used institutional examination scores and simplified CEFR-aligned tests adapted for local context, focusing on reading comprehension, grammar-vocabulary, and writing (oral testing proved logistically challenging with large groups).

Error Identification and Coding: Error identification followed established principles but required adaptation for Beninese French norms. Errors were defined as systematic deviations from standard target language norms, but judgements considered that learners' French baseline itself might differ from metropolitan French. Two Beninese coders (one secondary teacher, one university lecturer) with native-level proficiency in both target languages independently identified and categorised errors. Inter-rater reliability exceeded .82 for morphosyntactic categories and .76 for source attribution (lower agreement for source attribution reflects the complexity of multilayer transfer). The error taxonomy distinguished: Morphosyntactic errors (article usage, verb morphology, agreement, word order, case marking in German), Lexical errors (false cognates, semantic extension, inappropriate register, code-switching), Phonological errors (in oral data, documented through phonetic transcription), and Orthographic errors (influenced by French spelling conventions). Source attribution proved particularly challenging and required multiple evidence types: comparing Beninese learners' errors with documented patterns from European French learners (to identify Benin-specific patterns), analysing correspondence between errors and Fongbe structures (to identify potential substrate effects), examining error patterns in participants' French production (to trace transfer pathways), and consulting with Fongbe linguists regarding plausible substrate influences.

Intervention Design and Implementation: The intervention was designed as a feasible enhancement to existing curriculum rather than a complete replacement, ensuring sustainability beyond the research period. Targeting the three most frequent error categories (articles, verb tense-aspect, word order), the intervention integrated FFI principles with practical adaptations: large-class consciousness-raising using choral responses and guided discovery rather than individual reflection, explicit contrastive analysis presented visually (chalkboard charts comparing French, English, German, and where relevant, Fongbe), peer-based error correction training students to identify and correct each other's errors in structured activities, and group corrective feedback addressing common errors rather than individual mistakes. Materials were developed collaboratively with participating teachers: low-cost printed handouts replacing expensive textbooks, visual aids created with locally available materials, and error correction charts students could copy into notebooks. The intervention spanned 12 weeks with 2-3 sessions weekly, integrated into regular class time rather than requiring additional hours. Teachers received two half-day training workshops on FFI principles and intervention procedures, with ongoing support through weekly check-ins. This professional development component addressed capacity building beyond the immediate research needs.

Data Analysis: Quantitative analysis employed descriptive statistics and inferential tests appropriate for the sample size and design. Error rates were calculated per T-unit for morphosyntactic categories and per 1000 words for lexical errors. Chi-square tests examined associations between error types and learner characteristics. Repeated measures ANOVA assessed intervention effects, with group as between-subjects factor and time as within-subjects factor. Effect sizes (partial eta-squared) were calculated to determine practical significance. Qualitative analysis involved detailed examination of error contexts, particularly for patterns suggesting Fongbe substrate influence. Selected work samples illustrated typical error patterns and intervention-induced changes. All analyses considered the nested structure of data (students within classes within schools) though full multilevel modelling was not feasible given sample size constraints.

RESULTS AND ANALYSIS

Error Analysis Results (Phase 1)

Overview of Error Frequencies: Analysis revealed 9,234 errors in English production and 10,847 errors in German production, representing notably higher error rates than documented for European francophone learners in comparable studies. Morphosyntactic errors constituted 67.8% of English errors and 71.3% of German errors. Error density was particularly high in free composition tasks (English: 8.1 errors/T-unit, German: 9.7 errors/T-unit), substantially exceeding rates reported for European learners. Error patterns showed school-type effects: public school students exhibited 34% higher error rates than private school students, likely reflecting differences in class sizes, teacher qualifications, and resource availability. University students, despite higher

general proficiency, maintained specific error patterns suggesting fossilisation.

Article Errors: French Transfer and Fongbe Substrate: Article errors were the most frequent category: 2,847 instances in English (30.8% of all English errors) and 3,425 in German (31.6% of German errors). Distribution patterns revealed both similarities to and differences from European francophone learners. English article errors showed: Article omission in obligatory contexts (52.3%, notably higher than the 45% reported for European francophones), Inappropriate definite article use (24.6%), Inappropriate indefinite article use (15.8%), Article insertion in zero-article contexts (7.3%). Qualitative analysis revealed that omission patterns corresponded closely to Fongbe zero-article contexts. For example, omissions were particularly frequent with abstract nouns, generic plurals, and mass nouns—all contexts where Fongbe uses no article. Moreover, examination of participants' French production showed similar article omission patterns, suggesting that Fongbe substrate in Beninese French transfers to English. German article errors exhibited: Gender assignment errors (38.7%), Case marking errors (35.2%), Definiteness errors (18.4%), Complete article omission (7.7%). The relatively lower omission rate in German compared to English likely reflects more explicit grammar instruction for German as second foreign language. However, when errors did occur, gender assignment showed no systematic correspondence to French gender categories, and case marking proved particularly challenging with dative case accounting for 58.3% of case errors.

Verb Morphology and Tense-Aspect: Multilayer Transfer: Verb-related errors constituted 2,178 English instances (23.6%) and 2,634 German instances (24.3%). Patterns revealed complex interactions between French tense-aspect system, Fongbe aspectual distinctions, and target language requirements. English progressive aspect errors (41.2% of verb errors) exceeded rates for European learners, with both omission of progressive in ongoing action contexts and inappropriate use with stative verbs. Crucially, error patterns aligned with Fongbe aspectual marking: Fongbe distinguishes perfective/imperfective through particles, not progressive forms. When translating Fongbe imperfective constructions, learners often used English simple present rather than progressive. Present perfect/simple past confusion (31.4% of verb errors) reflected both French passé composé functionality and Fongbe's lack of present perfect distinction. Participants frequently used present perfect for definite past contexts, mirroring both French usage and Fongbe perfective aspect. Subject-verb agreement errors (17.8%) appeared in patterns suggesting morphological simplification influenced by Fongbe's lack of verbal inflection for person/number. Third-person singular -s omission was systematic rather than random, suggesting restructuring towards an invariant verb form similar to Fongbe.

Word Order Errors: Germanic vs. Niger-Congo Patterns: Word order errors were substantially more frequent than in European studies: 689 English instances (7.5% of errors) and 2,234 German instances (20.6%). German's V2 and verb-final subordinate clause structures proved extremely challenging, with 78.7% of German word order errors involving incorrect verb placement in subordinate clauses. Learners consistently produced SVO order matching both French and Fongbe patterns. English word order errors primarily involved adverb placement (62.3%) and question formation (28.9%). Some patterns suggested Fongbe influence: for example, placement of focus particles that in Fongbe appear sentence-initially led to English constructions like "*Very I like football" (for "I like football very much").

Lexical Transfer and Code-Switching: Lexical errors (24.3% of English errors, 19.7% of German errors) showed extensive code-switching and false cognate usage. Unlike European francophones who code-switch primarily between French and target language, Beninese learners exhibited three-way switching between French, English/German, and Fongbe. In oral production, 23.4% of utterances contained Fongbe insertions, typically for culturally-specific items or discourse markers. False cognates followed expected French-English patterns ("assist" for attend, "actually" for currently) but also showed unexpected items influenced by Beninese French: for example, using "sensibilise" (from French "sensibiliser," common in Benin for "raise awareness") where English requires "raise awareness."

Error Source Attribution: Source attribution analysis revealed: Clear French transfer (48.7% of errors), French transfer likely amplified by Fongbe substrate (23.4%), Possible direct Fongbe substrate effect (12.6%), Developmental/universal errors (11.2%), and Unclear or multiple sources (4.1%). The substantial proportion of errors showing Fongbe involvement (36.0% total) demonstrates that substrate effects significantly shape Beninese learners' interlanguage development, distinguishing them from European francophone learners.

Intervention Study Results (Phase 2)

Pretest Equivalence: Pretest results confirmed experimental and control group equivalence. For English articles: Experimental M=58.3%, SD=14.2; Control M=57.1%, SD=13.8; $t(56)=0.33$, $p=.74$. For verb tense-aspect: Experimental M=52.4%, SD=15.7; Control M=53.2%, SD=14.9; $t(56)=-0.20$, $p=.84$. For German word order: Experimental M=38.7%, SD=16.3; Control M=39.2%, SD=15.8; $t(56)=-0.12$, $p=.90$.

Immediate Intervention Effects: Posttest results showed significant improvements for experimental group across all targeted structures, with Group × Time interactions significant for all measures. English article accuracy improved from 58.3% to 76.8% for experimental group versus 57.1% to 62.4% for controls ($F(1,56)=19.4$, $p<.001$, $\eta p^2=.26$). Verb tense-aspect accuracy increased from 52.4% to 71.3% experimental versus 53.2% to 58.7% control ($F(1,56)=15.8$, $p<.001$, $\eta p^2=.22$). German word order improved from 38.7% to 68.4% experimental versus 39.2% to 45.6% control ($F(1,56)=24.7$, $p<.001$, $\eta p^2=.31$). Effect sizes (medium to large) demonstrate practical significance despite challenging educational context. Improvements were particularly notable given that intervention occurred within existing curriculum and resource constraints.

Retention and Transfer: Delayed posttests (6 weeks post-intervention, shorter than ideal due to academic calendar constraints) showed maintained gains with modest attrition. English articles: experimental 73.6%, control 63.1% ($F(1,56)=16.2$, $p<.001$, $\eta p^2=.22$). German word order remained particularly stable: experimental 66.7%, control 46.8%

($F(1,56)=22.3$, $p<.001$, $\eta p^2=.28$). Free composition tasks showed partial transfer to spontaneous production, with experimental group error rates decreasing from 8.1 to 5.9 errors/T-unit in English and 9.7 to 7.3 in German, whilst control groups showed minimal change.

Contextual Factors Affecting Outcomes: Several contextual factors moderated intervention effectiveness. Class size effects: Smaller classes (45-50 students) showed significantly greater gains than larger classes (65-75 students), though even large-class experimental groups outperformed controls. Teacher engagement varied: The teacher who participated most actively in training and planning showed strongest student outcomes, highlighting the importance of teacher buy-in. Resource access: Students with home internet access (32% of sample) showed steeper improvement curves, suggesting that supplementary exposure amplified intervention effects. Qualitative feedback from teachers highlighted challenges and successes: managing peer correction activities in large classes required extensive practise, chalkboard contrastive charts proved highly effective and sustainable, students responded positively to metalinguistic awareness activities, connecting to Fongbe patterns enhanced rather than confused understanding, and time constraints remained significant with pressure to cover examination syllabus.

DISCUSSION

Cross-Linguistic Influence in Multilingual African Contexts: The findings demonstrate that cross-linguistic influence in Beninese learners operates through multiple pathways more complex than in monolingual or European bilingual contexts. The 36% of errors showing Fongbe substrate involvement confirms that indigenous language influence persists even when the official L1 (French) serves as the primary transfer source. This multilayer transfer challenges simplistic L1-to-L2 models and supports Canagarajah's (2007) argument for reconceptualising transfer in postcolonial multilingual settings. The article error patterns particularly illustrate multilayer transfer: Fongbe lacks articles, Beninese French shows article omission/overgeneralisation influenced by Fongbe, and these patterns transfer to English and German, compounded by structural differences between French and target languages. This creates more severe article difficulties than faced by European francophones whose French article systems are more stable. Similarly, tense-aspect errors reflect interaction between Fongbe's aspect-prominent system, French's tense-aspect morphology, and English/German requirements. Learners navigate competing systems whilst constructing interlanguage grammars, resulting in hybrid patterns not fully explicable by reference to any single source language.

Implications for SLA Theory: These findings have important theoretical implications for SLA research. First, they demonstrate that substrate effects from indigenous languages can influence L2 acquisition even several steps removed (Fongbe → French → English/German). This suggests that transfer cannot be understood solely through analysis of official L1s without considering the broader linguistic ecology. Second, the high error rates and distinctive patterns amongst Beninese learners compared to European francophones underscore the need for SLA theory to account for variation based on socioeducational context, not just linguistic distance. Third, the effectiveness of consciousness-raising about Fongbe patterns suggests that metalinguistic awareness can span multiple languages, challenging assumptions that transfer is primarily unconscious.

Pedagogical Implications for Beninese Contexts: The intervention results demonstrate that form-focused instruction can be effectively adapted for resource-constrained African educational settings. Key pedagogical principles emerge: Explicit contrastive analysis should include indigenous languages where relevant. Teachers need not be Fongbe speakers themselves—involving students in discovering parallels proved effective. Peer-based learning strategies effectively manage large classes whilst promoting active engagement. Training students as peer correctors distributes the feedback burden whilst developing metalinguistic awareness. Low-cost visual materials (chalkboard charts, student-made posters) can substitute for expensive textbooks whilst remaining pedagogically effective. Local content and culturally relevant examples enhance engagement and demonstrate target language utility. Professional development for teachers is crucial—even brief training significantly enhanced implementation quality and teacher confidence.

Challenges and Limitations: Several challenges and limitations must be acknowledged. The study was conducted in southern Benin with Fongbe-dominant learners; patterns may differ in other regions with different linguistic profiles. The 12-week intervention period, whilst yielding significant improvements, may be insufficient for full automatisation, particularly given limited out-of-class exposure. Sample size constraints prevented multilevel modelling accounting for nested data structure (students within classes within schools). Resource limitations precluded more extensive oral proficiency assessment and longer-term longitudinal follow-up. Teacher variability in implementation fidelity, though documented, could not be fully controlled.

Broader Implications for African Language Education: Beyond Benin, these findings have implications for foreign language education across francophone Africa. Many West and Central African countries share similar profiles: French as official language bearing substrate influences from indigenous languages, large class sizes and limited resources, minimal target language exposure outside classrooms, and multilingual learners navigating multiple competing linguistic systems. The pedagogical adaptations developed here—emphasising peer learning, low-cost materials, and indigenous language awareness—offer a model potentially transferable to other African contexts with appropriate modifications. Moreover, the demonstration that effective instruction is possible within existing constraints challenges deficit narratives about African education, showing that contextualised, theoretically-informed pedagogy can yield substantial learning gains even under challenging conditions.

CONCLUSION

This research has systematically examined cross-linguistic influence in English and German L2 acquisition amongst Beninese learners, revealing complex multilayer transfer patterns shaped by French L1, Fongbe substrate, and the unique socioeducational context of postcolonial West Africa. The error analysis documented systematic patterns distinct from European francophone learners, with substrate effects accounting for over one-third of errors. Article systems, verb tense-aspect, and word order emerged as particular challenge

areas, reflecting interactions between Niger-Congo and Indo-European typological differences mediated through French.

The intervention study demonstrated that culturally-responsive form-focused instruction, adapted for large classes and limited resources, effectively reduces transfer errors. Significant improvements across all targeted structures, with medium to large effect sizes, confirm that effective L2 teaching is achievable within African educational realities when pedagogy is contextually appropriate rather than uncritically imported from Western settings. This study contributes to applied linguistics by extending cross-linguistic influence theory to multilingual African contexts, documenting substrate effects in L2 acquisition beyond L1, and demonstrating how pedagogical interventions can be successfully adapted for resource-constrained settings. For Beninese and West African educators, the research provides evidence-based strategies addressing specific learner needs whilst respecting local constraints. Future research should extend this work to other linguistic groups within Benin (Yoruba, Bariba, Dendi speakers), investigate whether similar patterns obtain in anglophone African countries learning French and German, examine the role of technology (increasingly available through mobile phones) in supplementing classroom instruction, and conduct longer-term longitudinal studies tracking development over multiple academic years. Additionally, comparative studies across African countries could identify shared challenges and context-specific factors, informing regionally-appropriate pedagogical approaches. Ultimately, this research demonstrates that African language learners and educators, despite facing significant resource constraints, can achieve substantial learning outcomes when pedagogy is grounded in rigorous analysis of local linguistic ecologies and adapted thoughtfully to socioeducational realities. The challenge for applied linguists and language educators is to continue developing contextually-responsive approaches that honour African multilingualism rather than treating it as a deficit to be overcome.

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