

**EFFECTS OF DIGITAL MEDIA ON THE ACQUISITION OF LINGUISTIC
COMPETENCY: THE USE OF ARTICLE BY UNDERGRADUATE STUDENTS IN
FULAFIA AND IBBUL**

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Abstract

French as a language has good grammatical structure and linguistic pattern that requires adherence to achieve effective communication. Non-adherence to this structure often leads to grammatical errors and complication in interpretation. This research aims at determining how digital resources used as instructional materials can affect the use of articles in French. The study adopts a mixed-method explanatory sequential design with a quasi-experimental pretest-posttest control group structure. A sample size of 48 undergraduate FLE students, including 7 males (14.6%) and 41 females (85.4%) from Federal University of Lafia (FULafia) and Ibrahim Badamosi Babangida University, Lapai (IBBUL) were selected for case study. Pretest writing scores indicate moderate baseline proficiency in the correct use of articles with a degree of error of 40.38%, while the effect of instructional group was statistically significant ($F(1, 45) = 16.42, p < .001$), with a large effect size (partial $\eta^2 = .26$). This indicates that 26% of the variance in posttest writing performance in the correct use of French articles can be attributed to the use of digital media as instructional materials, independent of prior writing ability. These findings indicate that the degree of errors in the correct use of French articles is significant and that digital media used as instructional materials have positive effects on the choice of lexical diversity and grammatical accuracy at both articulatory and expressive levels. It is therefore recommended that increased exposure to digital instructional materials be encouraged due to its association with improved lexical diversity and grammatical accuracy and that teachers should ensure digital engagement and usage intensity in order to improve writing development outcomes among learners of French.

Key Words: French, Digital media, Instructional Material, Articles, Universities, Nigeria

1.0 Introduction

1.1 Background to the study

The need for learning French language by Nigerians cannot be underestimated. Understanding of world's major languages such as French can lead to quick access to essential lifesaving and developmental information, improvement in productivity and a better bilateral relationships between and among countries. At the home front, given the proximity of Nigeria to its surrounding Francophone neighbors, it is quite expedient for Nigerians to speak French for better interactions and security. Better communication remains one of the crucial means of curbing the influx of illegal immigrants that have now contribute to problem of insecurity in the country. More often than not, these migrants are bilinguals from neighboring francophone countries who have linguistic advantage over most Nigerian citizens. While it is easier for them to obtain intelligence (information for either crime perpetuations or crime elimination) from Nigerians, it is often difficult for their Nigerian counterparts to do the same. For this reason, the acquisition of French language has become expedient and thus being encouraged in tertiary institutions in the country.

Like any other language, French grammatical structures and linguistic patterns pose certain challenges for language learners. This is because, the grammar of languages are guided by some basic rules that must be respected by learners. Non-observance of these rules could, for instance, lead to errors during communication. Since language is "rules governed" as postulated by Chomsky (1981), frequent wrong use of articles in French language by learners results to a faulty grammatical structure and poor communication. In most cases, this deformity produces a different language pattern often refers to as a fowl or pidgin language. There is therefore, the need to ascertain effective method of correct use of articles. This research is an attempt to fill this gap.

1.2 Problem Statement

Most Nigerians learn French as a foreign language and thus faced challenges due to low level of practice and ineffective methods of teaching in schools. As a result, impediments abound in their use of the language. Some of these impediments came from grammatical errors related to the use of articles in either written or oral communication. The ubiquitous nature of these errors indicate that methods adopted by some teachers of French language to correct the wrong use of article fail to yield desired results. Compounding the problem is lack of conducive environment where the language can be

sufficiently practiced. While much has been done to modify teachers' methodology and simulation of language immersion to improve correct use of French without the desired results, focus is now shifting to ways of correcting errors in French writings using technology. On the one hand, there still exist paucity of study design on how digital media can be used to correct the wrong use of French articles on the other hand, few studies on the use of digital media as instructional materials for learning composition writing in French are more qualitative than quantitative. This research therefore, seeks to ascertain the effects of digital media materials as instructional materials to correct the wrong use of articles among French learners using both quantitative and qualitative design.

1.3 Objective of the Study

The major objective of the research is to determine the effects of the use of digital media as instructional materials in correcting French article errors. The specific objectives include to:

- i. ascertain the degree of errors in the use of French articles in the written essay of learners of French in FULafia and IBBUL
- ii. determine the effects (positive or negative) of digital media materials as instructional materials to correct the wrong use of articles among French learners in FULafia and IBBUL

1.4 Justification

Eliminating errors in the use of articles is a great challenge to French learners. The persistency of this challenge indicates that French teachers' methods and simulated environment are inadequate in correcting the wrong use of French articles and thus need complimentary approach to achieve desired results. Proving that the use of digital media as instructional material has positive effect on the reduction of the rate of grammatical errors among French learners marks a landmark shift in addressing one teething problem in composition writing. In addition, this research constitutes an additional source of determining the effectiveness of the use of digital media as instructional materials to correct the wrong use of articles among French learners. This study is therefore of great benefits to French language curriculum developers, learners and teachers of French and policy makers.

2.0 Literature Review

2.1 Digital Media

In their *Introduction to Digital Media*, Delfanti and Arvidsson (2019) see media as “technologies that share the ability to mediate human activities, even beyond communication practices (9)”. They listed these technologies to include: “Personal computers, mobile phones and smartphones, tablets, digital cameras, video game consoles, telecommunications satellites, credit cards, MP3 players, RFID (radio frequency identification) chips, televisions, servers, browsers, social media services, or self-tracking gadgets”. They pointed out that all these technologies function based on the processing of information in digital formats”. They further explained that media are considered digital if they carry information in digital format and they carry information represented by binary numeric code that can be transformed into human language. Digital media could perform the functions assigned to them because they possess the following defining features like convergence, hypertextuality, distribution, pervasiveness, algorithm, and asymmetry. From the foregoing, one could define digital media therefore, as any technology that transmit information using digital format whether ephemeral or permanent.

2.2 French Articles

Articles are non-negligible little words that are attached to nouns to serve as modifiers showing their genders or their numbers. They also serve as determiners. Basically there are three types of articles in French as demonstrated by Dubois, Jouannon and Lagane. There are definite articles (le, la les), indefinite articles (un, une, des) and partitive articles (du, de la, des). Definite articles can further be classified into normal (le and la), elided (l’) and contracted (au, du). What makes the use of articles challenging in French are the rules attached to their usage whereby in some cases they are considered obligatory while in some cases are either optional or omitted completely.

2.3 Instructional Materials

Babalola (2004) defines instructional materials as any tool designed to promote and encourage effective teaching and learning experiences. In the same vein, Sale (2016) recognizes as instructional materials, sight tools used by teachers at all levels of education process for effective instructional delivery which promote learner’s academic achievement and enable the achievement of the stated objectives of a lesson. In this case, instructional materials are necessary and essential tools in the

transfer of knowledge and attainment of teaching and learning objectives. They are specifically designed and tailored towards achieving pedagogical objectives. Using conventional teaching methods there are a number of analogue tools that are used as instructional materials such as printed textbooks, drawings and physical items that are introduced in the course of teaching to aid learning. Today, the advocacy encourages the use of digital media as instructional materials.

2.4 Digital Media as Instructional Materials

The use of digital tools for language learning and acquisition is being advocated widely today even though their effectiveness as remediating tools to correct language deficiency remain an innovative stage. Arsenlau (2024) believes however, that online digital learning tools offer valuable support in overcoming difficulties in certain aspects of language pedagogy such as text revision, application of grammatical knowledge to writing and navigating the complexities of French spelling. To achieve this, Digital media are usually operationalized in three measurable dimensions. This makes analytical intervention robust. These three dimensions include the types of digital media (Videos, infographics, interactive texts, online exemplars), usage intensity (Time-on-task, frequency of access) and pedagogical integration (Task-based use, guided feedback, and modeling). This way, technology is seen as multidimensional and not a monolithic construct as Chapelle (2009) will call it.

The emphasis on the use of digital media as instructional materials stems from certain outcomes of researches in cognitive science. Despite initial resistance to the essentials of research outcomes from Cognitive Science, its findings have contributed enormously to theorization in language teaching and learning. This can be attributed to the shift in favor of integrating interaction-based data from the classroom. One overarching tilt of cognitive science is their demonstration of the impact of technology on cognitive development. In the educational sector, scholars notably, Ukeje (2015) sees educational technology as a structured technique in tackling educational challenges. With the aid of educational technology Ukeje observes that the teacher becomes more of a planner, a developer and an evaluator of the educational programmes and principles, theories, skills and techniques of providing resources.

As for Nkom (2018), educational technology should be seen as non-human resources in instructional spaces, enabling the creation of conducive teaching-learning environment within those spaces. These non-human resources are further elaborated and as cited in Odudigbo (2023: 271)

“to be available in bound, unbound, kit or package form and may consist of hard backed or soft backed textbooks, consumables, learning laboratories, slides, films and filmstrips, recordings, manipulative, electronic media (instructional computer programs, online services, laser discs, CD-ROM, etc.) and other commonly accepted instructional tools”.

Since most of these materials are usually authentic materials, Adewiyin (2015), holds that improvisation with these materials can lead teachers into discovering the best learning situations, strength and weaknesses of the prevalent learning process, level of growth and development of learners through a pre-determined evaluation process. Using these instructional materials will help in monitoring and evaluating the whole educational process in minute details.

Making assertion on the impact of technology-based teaching as opposed to the traditional method in language learning, Lightbown (2019) affirms that the teaching of French has a constructive effect that goes beyond providing learners with enhanced input. He alludes to the uncertainty of the traditional areas of French teaching, such as [phonology](#), grammar and vocabulary, as have had decidedly mixed results. Doughty and Williams (1998), including Ellis (2012) however, affirm generally that pedagogy restricted to teaching grammar rules and vocabulary lists does not give students the ability to use the second language with accuracy and fluency. Rather, to become proficient in the second language, the learner must be given opportunities to use the second language for communicative purposes through a teacher's corrective feedback to attend to both meaning and formal accuracy.

With regards to the importance of learning of French Odudigbo (2023: 271) stated after reviewing Ojo (2017), Emordi (2016) and Osobebe (2004), that French would better prepare the Nigerian child who is planning to move into the future with self-assurance, hope and sense of belonging. It will assist the Nigerian child discover that even in the Nigeria of tomorrow, French will serve as a linguistic visa that would open better professional prospects for him.

As it is with the teaching of most foreign languages, teaching French in Nigerian secondary schools is not devoid of challenges. Some of these problems are highlighted by Emordi (2016), who complains that there are lack of qualified teachers and teaching materials for effective teaching of the language. Emordi recommends the teaching of only the oral aspect of French. In the light of these challenges, Osobebe (2004), states that for French to succeed in Nigeria, French must be taught as a language of culture. It is therefore of great importance for parents and guardians to allow their children and wards to learn the language as it would open wider doors of opportunities to them. It is hence required of all

of us, to speak more than one language. If we can speak an international language like French, definitely we will have certain immeasurable concessions. It will expose us to several meetings and seminars outside the shores of this country.

2.5 Theoretical model and motivation

This study is anchored on the theoretical model of collaborative and interactive media and complemented with a touch of the use of authentic documents. These models are complemented with the theory of authenticity of documents. Collaborative and interactive model asserts that beyond the technological, economic, and organizational transformations of information societies, accessibility, user participations and active collaboration remain the most enriching and attractive of the media tools. Delfanti and Arvidsson (2019) hold strongly that this evolution broaden access to information, democratization of productive contents, and are at the core of the richness and diversity of digital media information. The consequence of these, they stated, is the unlimited coverage of all areas of culture, education, journalism, science and beyond. One of the requirements of collaborative media model is that digital services except where it is not possible, should remain interactive and allow for public participation, or even rely fully on forms of production completely entrusted to users. It is thanks to these features that this model provide the motivation of seeing digital media as mines for the exploration of knowledge including linguistic resources in order to facilitate teaching and learning. The adoption of collaborative and interactive media model is particularly appealing because it foregrounds the relevance of authentic documents in FLE teaching and Learning. This is also very crucial since one of the primary goals of language is effective communication. The essentiality of authentic materials as tools for teaching hinges on the ability of non-pedagogical documents to awaken creativity in learning and due to the facts that authentic documents are real, verifiable and reusable (Oyugi, 2008). In this study, it is intended that learners will be exposed and given access to large digital data of samples of oral and written French language in use. By accessing and interacting with these data and drawing attention to how articles are used in French, study participants should be able to learn the correct use of articles in French.

3.0. Methodology

3.1. Research Design

The study adopts a mixed-method explanatory sequential design with a quasi-experimental pretest–posttest control group structure. At the quantitative phase, the causal tendency and magnitude of the effect of digital media instruction on writing performance was measured while at the qualitative phase, explanation was provided on *how and why* digital media influence writing development through learner artefacts and reflections. A design of this nature strengthens internal validity while allowing pedagogical interpretation of results (Creswell & Clark, 2018). The distinctiveness of the methodology lies with its treatment of digital media as a *pedagogically mediated construct*, not mere exposure. It also integrates usage analytics with linguistic output analysis and captures both writing product and writing process in a way that is adaptable to AI-mediated or mobile learning contexts.

3.2. Population and Sampling

The population consists of undergraduate FLE students enrolled in the Departments of French of Federal University of Lafia (FULafia) and Ibrahim Badamosi Babangida University, Lapai (IBBUL). For these students, academic written composition is a compulsory component of their courses at the universities. The Sample size of the study is $N \approx 48$ students (including 7 males (14.6%) and 41 females (85.4%)). Intact group sampling was adopted as the sampling technique since the population of the students was not too large. There were two group allocations consisting of the Experimental group (digital media-based instruction, $N \approx 24$ students) and the Control group (print-based / traditional instruction, $N \approx 24$ students). The same research protocols were observed in the two universities and their written productions were treated as one. Prior writing proficiency is established through a diagnostic test to ensure group comparability (Field, 2018).

3.4. Design of Instructional Intervention

The experimental group receives Digital Media–Integrated Writing Instruction (DMIWI) over 8 weeks. The DMIWI offered to the experimental group involves multimodal input where model texts given as videos, annotated PDFs, and interactive slides are analyzed by students. Then, there are guided noticing tasks where students identify lexical and rhetorical patterns from digital exemplars. There is also scaffolded production in which writing tasks are completed using digital prompts and planning tools. Finally, there is feedback mediation whereby the instructor’s feedback is delivered via audio

comments and screen-recorded explanations. These same contents are received by the control group but exclusively through printed texts and oral explanations as instructional contents.

3.5. Instruments for Data Collection

Writing Tests is one of the instruments for data collection. These tests consist of Pretest and posttest argumentative essays of 500 words. These tests were rated using a validated analytic rubric of content, organization and language use. Inter-rater reliability is established using Cohen's kappa. Another instrument was Digital Media Usage Log which automatically records the time spent on digital materials, the frequency of access and the types of materials consulted. As Stockwell (2013) points out, such procedure enables fine-grained correlational analysis between usage intensity and writing gains. Additional instrument was learner reflection questionnaire designed to measure perceived usefulness of digital media, students' cognitive engagement and perceived impact on writing processes. This aligned with Likert-scale items adapted from the Technology Acceptance Model (Davis, 1989).

The rationale behind the collection of drafts and revisions is to trace the following items: Lexical expansion, error reduction patterns and structural improvements across drafts. Writing performance is measured using product-based and process-based indicators in alignment with contemporary SLA research. Product-Based measures lexical diversity (Type-Token Ratio), grammatical accuracy (error-free clauses), textual cohesion (use of cohesive devices) and the overall writing quality (analytic rubric). The Process-Based measures revision frequency, use of digital exemplars during drafting and responsiveness to feedback. Such triangulation enhances according to Skehan (2009), the construct validity.

Quantitative and qualitative analysis procedures were adopted in this study. At the quantitative level, application of descriptive statistics for all variables, ANCOVA to determine the effect of digital media instruction on posttest writing scores, controlling for pretest scores, Pearson correlation to examine relationships between digital media usage intensity and specific writing indicators and Effect size reporting using partial eta squared, (r^2) were used. This combination Tabachnick & Fidell (2019) stated, "allows both group comparison and effect estimation". At the qualitative level, a thematic analysis of learners' reflections, a textual analysis of their draft progression and coding focusing on strategy use, noticing, and autonomy development were done. Then qualitative findings are used to interpret and contextualize quantitative outcomes.

3.6. Validity and Reliability Strategies

For construct validity, multiple indicators per construct were used. To ensure internal validity, control group and pretest–posttest design were adopted. Inter-rater agreement and instrument piloting were introduced to maintain reliability while methodological triangulation was done for Tests, logs, texts and reflections in order to align with best practices in educational research (Shadish et al., 2002).

3.7. Ethical Considerations

Informed consent was obtained from participants, the writing samples were anonymized and equal access to digital materials was granted after the study to control group.

4.0 Results

Below is the results of the analysis of the data. All participants (7 males, 14.6% and 41 females, 85.4%) completed the pretest, instructional intervention, and posttest writing tasks. Though gender was a variable, it was not treated as an experimental variable but rather retained as a control variable to ensure sample transparency, as recommended in educational research.

4.1 Effect of Digital Media Instruction on Writing Performance

Table 1 presents descriptive statistics for the key variables of the study. According to the score of Pretest writing analysis, assessment outcome indicates moderate baseline proficiency of 59.62%. This implies a degree of error of 40.32%, an outcome significant enough to distort communication. The posttest and gain scores however, suggest meaningful improvement in understanding of teaching among students exposed to digital media as instructional materials as can be seen in table 1 below:

Table 1

Descriptive Statistics of Study Variables (N = 48)

Variable	Mean	SD	Min	Max
Pretest writing score	59.62	4.87	48.10	71.90
Posttest writing score	67.85	6.41	54.20	83.60
Writing gain score	8.23	4.36	1.20	19.80

Variable	Mean	SD	Min	Max
Digital media use (hrs/week)	3.12	2.18	0.40	6.50
Lexical diversity index	0.56	0.07	0.41	0.73
Grammatical accuracy (%)	78.14	6.82	62.40	92.80

The pretest writing score has a mean score of 59.62 while the mean score for posttest writing stands at 67.85. Considering the mean scores of other variables such Writing gain (8.23), Digital media use (3.12), Lexical density index (0.56) and the percentage of grammatical accuracy (78.14), it is evident that the observed dispersion points to sufficient variability for inferential analyses.

The pretest equivalence of instructional group of an independent samples t-test examined the significant level of variability of digital media group to the traditional instruction group in writing ability prior to the intervention, the results obtained is presented in table 2 below.

Table 2

Independent Samples t-Test for Pretest Writing Scores

Group	Mean	SD	T	Df	Sig.
Traditional instruction (n = 23)	59.21	4.95	-0.47	46	.641
Digital media instruction (n = 25)	60.01	4.81			

It is seen from the table that the difference between the digital media instruction group and the traditional instruction group in pretest writing scores was not statistically significant ($p > .05$). However, the posttest writing scores analysis of covariance (ANCOVA) that examines the effect of instructional mode while controlling for pretest performance yielded the following outcome as presented in table 3.

Table 3

ANCOVA Results for Posttest Writing Scores

Source	df	F	Sig.	Partial η^2
Pretest writing score (covariate)	1	21.83	.000	.33
Instructional group	1	16.42	.000	.26
Error	45			

The results show statistically significant effect of instructional group ($F(1, 45) = 16.42, p < .001$). The outcome indicates a large effect size (partial $\eta^2 = .26$). This implies that 26% of the variance in posttest writing performance can be attributed to the use of digital media as instructional materials, independent of prior writing ability. Using Pearson product–moment correlation analysis, the relationships between digital media usage intensity and writing development indicator shows the following outcome:

Table 4

Pearson Correlations between Digital Media Variables and Writing Outcomes (N = 48)

Variables	Writing Gain	Lexical Diversity	Grammatical Accuracy
Digital media use (hrs/week)	.52**	.44**	.39**
Digital engagement score	.46**	.41**	.35*

Note. $P < .05$; $p < .01$.

The results in table 4 reveal a moderate-to-strong positive association between digital media use and writing improvement. Specifically, time spent using digital media accounted for approximately 27% of the variance in writing gain scores ($r^2 = .27$). Performing a multiple regression analysis in order to identify predictors of writing gain scores, it was discovered that there was a 49% improvement in writing as shown in table 5 below.

Table 5

Multiple Regression Analysis Predicting Writing Gain (N = 48)

Predictor	B	t	Sig.
Digital media use (hrs/week)	.43	3.98	.000

Predictor	B	t	Sig.
Digital engagement	.31	2.84	.007
Prior ICT experience	.21	2.02	.049

From the above scores, the calculation of R^2 yielded .49 while $F(3, 44) = 14.12, p < .001$ implying that the regression model shows 49% of the variance in writing improvement, with digital media usage intensity emerging as the strongest predictor.

4.2 Summary of Findings

1. Digital media-based instruction significantly enhances students' writing performance.
2. The observed effect remains reasonable and robust after controlling for pretest ability.
3. Increased exposure to digital instructional materials is associated with improved lexical diversity and grammatical accuracy.
4. Digital engagement and usage intensity jointly predict writing development outcomes.

4.3 Discussion

The findings of this study demonstrate that the use of digital media as instructional materials has a significant and substantial effect on students' writing performance in French as a Foreign Language (FLE). Importantly, this effect remains robust after controlling for initial writing proficiency, suggesting that the observed gains are not attributable to pre-existing differences among learners but to the pedagogically mediated use of digital media. These results are consistent with contemporary CALL research, which emphasizes that learning outcomes depend less on technology itself than on its instructional integration within language pedagogy (Chapelle, 2009; Hubbard, 2008).

From an SLA perspective, the improvement observed in lexical diversity and overall writing quality can be interpreted through the Input Hypothesis (Krashen, 1985). Digital media provide FLE learners with rich, multimodal, and contextualized inputs derivable from written texts, images, audios, and videos. This multimodality facilitates comprehension and supports the internalization of new lexical and grammatical forms. In the FLE context, where exposure to authentic French outside the classroom is often limited, digital instructional materials help compensate for reduced natural input by offering repeated, meaningful exposure to target-language models. This likely explains the strong association found between digital media usage intensity and writing gains.

The significant improvement in grammatical accuracy aligns with the Noticing Hypothesis (Schmidt, 1990), which posits that learners must consciously notice linguistic forms in the input for acquisition to occur. Digital media, particularly annotated texts, interactive exemplars, and multimodal feedback, enhance the salience of linguistic forms, making it easier for FLE learners to establish form–meaning connections.

In writing instruction, this enhanced noticing supports more accurate morphosyntactic production, which is especially relevant for FLE learners dealing with complex agreement systems, verb morphology, and discourse markers characteristic of French. Beyond product-level improvements, the findings indicate that digital media also positively affect the writing process itself, particularly through revision and self-regulation.

From a sociocultural perspective (Vygotsky, 1978; Lantolf & Thorne, 2006), digital tools function as mediational artifacts that support cognitive activity. In this study, digital feedback tools, model texts, and planning resources facilitated iterative drafting and revision, enabling learners to operate within their Zone of Proximal Development. In FLE contexts, where learners often rely heavily on teacher correction, such mediation fosters greater writing autonomy and encourages learners to take responsibility for monitoring and improving their own written output.

The results also support principles from Cognitive Load Theory (Sweller, 2011). When digital media are pedagogically structured, they reduce extraneous cognitive load by organizing information visually and procedurally. This allows learners to allocate more cognitive resources to higher-order writing processes such as planning, lexical selection, and syntactic structuring.

The finding that time spent engaging with digital instructional materials was the strongest predictor of writing gains suggests that sustained, well-scaffolded digital exposure enhances learning efficiency rather than overwhelming learners. The study reinforces several key principles for effective CALL implementation in FLE instruction. One of such principle is that Digital media should be treated as didactic tools, not as neutral or supplementary resources. This is because evidences in this study show that writing development in FLE benefits most when digital materials are used for modeling, guided noticing, and scaffolded production as well as learner engagement which mediates the relationship between technology use and linguistic outcomes, highlighting the importance of task design and instructional guidance. These findings support a pedagogically driven CALL model in which digital media are systematically aligned with writing objectives and Second Language Acquisition (SLA) principles.

Despite the strength of the findings, certain limitations must be acknowledged. The relatively small sample size and gender imbalance limit the generalizability of the results. Future studies could examine gender as a moderating variable or explore longitudinal effects of digital media use on the stabilization of writing competence in FLE. Additionally, further research could investigate the differential impact of specific digital media types (e.g., AI-assisted feedback, corpus-based tools) on distinct dimensions of FLE writing.

5. Conclusion

This study set out to examine the instructional value of digital media as pedagogical materials in the development of writing competence in French as a Foreign Language. Drawing on a quasi-experimental design and multiple performance indicators, the findings provide compelling evidence that digitally mediated instruction can meaningfully enhance learners' written production when it is purposefully integrated into writing pedagogy.

The results demonstrate that students exposed to digital media-based instruction achieved significantly higher gains in writing quality than their peers receiving traditional instruction, even after controlling for initial proficiency. Importantly, these gains were not confined to overall scores but extended to core dimensions of written competence, including lexical richness and grammatical accuracy. This suggests that digital media can support both the form-related and meaning-oriented aspects of FLE writing, a balance that remains difficult to achieve in conventional classroom settings.

Two contributions that is teased out in this study is that beyond outcome measures, the study contributes to a more nuanced understanding of how digital media influence the writing process in FLE. The strong association between usage intensity, engagement, and writing improvement indicates that digital media function most effectively as cognitive and pedagogical mediators, rather than as passive repositories of content. In this respect, the findings reinforce SLA perspectives that emphasize noticing, mediation, and learner agency as central mechanisms of language development. Secondly, the study advances from computer assisted language learning standpoint that instructional effectiveness of digital media lies in its design, scaffolding, and alignment with learning objectives, not necessarily in technological novelty. Digital media appear to be most beneficial when they are embedded within structured writing tasks that guide learners' attention to linguistic form, provide access to models, and encourage iterative revision. This has direct implications for FLE instruction, particularly in contexts where learners have limited exposure to authentic French outside the classroom.

Despite these contributions, the study calls for further inquiry. Future research should explore the longitudinal sustainability of digitally mediated writing gains and examine how specific forms of digital media such as AI-assisted feedback and corpus-based tools for instance, interact with learner variables in FLE contexts. Expanding sample diversity and incorporating classroom ethnographic data would also deepen understanding of how digital media reshape writing practices over time. This study emphasizes that digital media, ought to be treated as intentional instructional resources rather than auxiliary tools, if they are to play any transformative role in FLE writing instruction.

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