Nearpod-based Instructional Design for Teaching Materials in The Production *Écrite Débutante* Course

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ABSTRACT

Writing in beginner French classes is a cognitively demanding act of real time decision making where learners must coordinate meaning, vocabulary retrieval, and morphosyntactic accuracy, and agreement driven forms such as possessive adjectives often remain unstable during contextual composing. Although digital platforms are increasingly used in language pedagogy, a persistent gap remains between explaining grammar rules and enabling learners to proceduralize those rules under writing pressure, especially when classroom time limits opportunities for immediate correction and repeated micro practice. This study addressed that gap by developing Nearpod based instructional materials for the Production *Écrite Débutante* course, designed as a structured practice ecology that sequences brief contextual writing tasks with guided decision scaffolds and rapid feedback focused on possessive adjectives. Using an ADDIE guided development design, the study conducted a needs analysis with 30 students and integrated qualitative inputs that emphasised the need for interactive learning, fast corrective feedback, and repeated practice to reduce confusion during writing, with 86.7 percent explicitly requesting interactive media and high perceived difficulty in possessive adjective selection (M = 4.43), alongside strong demand for immediate corrective feedback (M = 4.63). Expert review confirmed high feasibility, including content accuracy, clarity, usability, and assessment fit, with an overall feasibility mean of 4.58, supported by qualitative judgments that the materials were practical and instructionally aligned. A classroom tryout with 20 students showed improved writing scores from M = 68.2 to M = 82.9 and increased possessive adjective accuracy from 61.0 percent to 84.0 percent, accompanied by fewer errors. The study contributes validated materials and an evidence linked development pathway, offering scalable implications for feedback rich CEFR aligned beginner French writing instruction.

1. Introduction

Writing in beginner foreign language classrooms is a high stakes decision making activity rather than a simple transcription of ideas. Learners must plan meaning, retrieve vocabulary, and control grammar, especially morphology, and this becomes more demanding in French because dense agreement marking and a tight form meaning interface make small formal choices highly visible in terms of accuracy and perceived nativeness (Teng & Zhang, 2021).

Metacognitive strategies support learners in monitoring and regulating these processes, and gains in accuracy and fluency are more likely when instruction explicitly promotes metacognitive engagement (Teng & Zhang, 2021; Chen et al., 2023). Automated Writing Evaluation can complement this support by providing immediate formative feedback that helps beginners correct surface level errors and gradually build syntactic control (Zhai & Ma, 2022; Peng & Barrot, 2023). Such logic aligns with process genre pedagogy, which foregrounds drafting and revising as core learning mechanisms in grammatically salient languages such as French (Peng & Barrot, 2023; Yu et al., 2022). However, persistent constraints, including limited teacher preparation, time pressures, and insufficient professional development, limit implementation and point to the need for stronger writing focused teacher education, mentoring, and adaptive instruction for mixed proficiency classrooms (Bhowmik & Kim, 2021).

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Against this background, digital learning media has become central to writing pedagogy because interactive tools can externalize decision making, enable brief iterative practice, and deliver immediate feedback, which is especially valuable for structurally complex languages such as French (Boudouaia et al., 2024). Digital multimodal environments can also promote collaboration and reinforce writing through multiple modalities (Smith et al., 2020), while reducing feedback burdens and supporting revision through efficient formative assessment (Hasan, 2025). ICT and multimedia integration can increase engagement and accommodate diverse learning styles (Sivakami & Gunasekaran, 2025), but their instructional value depends on whether they cultivate metacognitive practices such as planning and self evaluation that help learners manage grammatical complexity (Teng et al., 2021).

A core challenge in French writing instruction involves grammatical choices that are easy to explain but difficult to execute during composing. Determiners illustrate this difficulty because they precede nouns and establish reference and grammatical relations that anchor meaning, yet learners often fail to apply determiner knowledge during writing without integrated, process-oriented teaching (Graham et al., 2017). When determiners are taught as memorized lists, learners may recognize forms but still struggle with contextual use needed for cohesion and clarity, particularly when instruction prioritizes discrete skills rather than embedding grammar in authentic writing activity (Birello et al., 2022). Process oriented instruction that integrates planning and grammar within writing tasks is therefore more likely to build usable control than rote learning alone (Birello et al., 2022). This gap may be complicated by culturally shaped writing expectations that shape multilingual learners' uptake of nuance (Fitriana, 2023), strengthening the case for collaborative and multimodal opportunities, including digital platforms such as Google Docs based collaborative multimodal writing, which has been associated with stronger motivation and engagement among French learners (Akoto, 2021; Bondie et al., 2019).

Related evidence suggests that technology supported writing instruction can extend practice and improve outcomes when it is structured and sustained (Little et al., 2018). Metacognitive self-assessment further supports development by fostering reflection and self-evaluation, reducing superficial rule memorization while strengthening both performance and self-worth (Noor et al., 2024). Collaborative writing can particularly benefit weaker learners through peer exchange and feedback that sustains confidence and engagement under composing load (Ngubane et al., 2020). Nonetheless, transfer depends on practice frequency and the quality of scaffolding. Regular sessions supported by clear models, such as sentence frames, can consolidate determiner choices, stabilize writing, and improve consistency across tasks. (Pennington et al., 2017; Ritchey et al., 2023).

In L2 writing, learners often struggle to translate explicit grammar knowledge into accurate, context-appropriate performance, particularly with possessive adjectives where gender and number agreement is understood theoretically but difficult to apply in real time; under time pressure, simplified heuristics, cognitive load, and L1 interference increase systematic mismatches in output (Jiang & Kalyuga, 2022). Psycholinguistic evidence further shows that sensitivity to morphosyntactic dependencies and working memory capacity shape performance, with stronger working memory predicting better outcomes (Botezatu et al., 2021). When instruction emphasizes explanation over practice, learners are more likely to rely on "good-enough processing" and produce persistent errors, underscoring the need for rule clarification paired with authentic writing practice to reduce cognitive burden and L1 transfer effects (Engelmann et al., 2019; Jiang & Kalyuga, 2022; Kim, 2023).

This study addresses that bottleneck by developing Nearpod mediated teaching materials for the Production *Écrite Débutante* course, with the specific aim of strengthening learners' procedural control in selecting possessive adjectives during beginner French writing. The novelty lies in positioning Nearpod not as a mere presentation platform, but as a structured practice ecology that systematically integrates decision scaffolds, rapid feedback cycles, and contextual micro writing tasks into a coherent learning pathway. The intended contribution is a validated set of materials that can function as both classroom support and guided independent practice, while targeting a high impact grammatical feature that frequently constrains accuracy in beginner written production.

Accordingly, the aim of the study is twofold: first, to develop teaching materials for the Production *Écrite Débutante* course using Nearpod to improve students' writing skills, and second, to assess the suitability of those materials for French Education students, with specific attention to possessive adjective mastery in writing tasks. The remainder of the paper proceeds from the rationale and foundations of the intervention to the development procedures, evaluation approach, and findings.

The study concludes by showing how scaffolded, feedback rich writing practice can reduce the gap between knowing a rule and applying it under composing demands, with implications for French language teaching that support a shift from explanation centered grammar delivery toward structured, practice-based pedagogy that can function as both a course supplement and a self-study resource.

2. Literature Review

2.1 Nearpod as an Interactive Learning Ecology and Scalable Integration

Nearpod Nearpod is increasingly recognized as a versatile platform for interactive learning that enables instructors to orchestrate dynamic, multimodal lessons by integrating text, images, videos, and quizzes within a single framework, thereby increasing participation in synchronous and asynchronous settings and supporting rapid feedback loops that inform real-time instructional adjustments (Taufik & Faisal, 2022; Khoirrohmah & Fadhilawati, 2024). It also reduces access barriers because students can join via a code or link without account creation, while compatibility with major learning management systems (LMS) such as Canvas, Google Classroom, and Schoology improves usability and supports sustained implementation in language courses (Khoirrohmah & Fadhilawati, 2024; Indrayana, 2022; Custódio et al., 2025; Taufik & Faisal, 2022).

For lesson preparation, Nearpod's built-in library and resource repositories can reduce teachers' administrative workload, and educators can design customized lesson sequences by uploading presentations and embedding formative tasks to address diverse learning needs, although effectiveness depends on pedagogical design and the extent to which Nearpod is used to cultivate structured learning rather than merely enhancing traditional presentations (Khoirrohmah & Fadhilawati, 2024; Lazarenko et al., 2025; Taufik & Faisal, 2022). In this respect, evidence suggests that structured feedback mechanisms are essential and that effective feedback practices can improve learners' experiences, engagement, and understanding, indicating that integrating Nearpod within a framework emphasizing structured practice and meaningful feedback may yield substantial benefits for learning outcomes and engagement across contexts (Fan, 2025; Alharbi, 2021; Khoirrohmah & Fadhilawati, 2024; Custódio et al., 2025).

2.2 Beginner Writing and Production Écrite within CECRL

Writing is widely recognized as a complex skill requiring simultaneous control of grammar, meaning, and organization, which helps explain why it is often introduced later in language instruction even though it remains essential; learners must internalize target language conventions to express ideas effectively, and supporting strategic behaviors through instruction is critical because expert writers rely on well-developed strategies that can enhance learners' writing quality and overall competence (Mallahi, 2019).

Consistent with this view, the Common European Framework of Reference for Languages (CEFR) situates production écrite within an integrated repertoire of reception, production, interaction, and mediation, implying that beginner writing proficiency is better assessed through task performance than isolated form rehearsal, and its genre and text-type classifications provide a scaffold for varied writing practices aligned with progression across levels A1 to C2 (Li et al., 2024).

Practically, novices benefit from guided practice designs that promote noticing, revision, and repeated rehearsal of key forms, with evidence showing that peer-led writing workshops can improve competence and confidence (Gumusoglu et al., 2022) and that structured group discussions grounded in task-based language teaching can effectively operationalize CEFR principles while fostering collaborative learning and the cognitive processes needed for textual construction (Lebel et al., 2018).

2.3 Grammar Bottlenecks, Research Gaps, Novelty, and Implications

In grammar-sensitive domains such as beginner French writing, a central difficulty concerns procedural control rather than rule explanation, and Nearpod is salient because it provides multimodal input with immediate evaluative feedback through quizzes and embedded tasks that reduce corrective delays and sustain practice (Elnagar, 2023). Yet a persistent pedagogical gap remains, as learners may recognize grammatical forms but struggle to apply them accurately in composition when cognitive load increases and attention shifts toward meaning and organization (Kim, 2025; Arseneau et al., 2018).

Addressing this gap, the present study positions Nearpod not as a delivery tool but as a structured practice ecology for Production *Écrite Débutante* , targeting possessive adjective selection via sequenced scaffolds, rapid feedback loops, and contextual micro-writing tasks, with novelty rooted in pedagogical design rather than technology and in the intentional orchestration of platform affordances to support decision-making during writing (Wang, 2023).

This has clear implications for French instruction, suggesting that grammar pedagogy for production écrite should prioritize feedback-rich practice architectures that make selection rules executable under composing demands (Karomah, 2025; Saiful, 2025). Prior research also supports integrating grammar instruction into writing processes to strengthen metalinguistic awareness and improve writing quality, including clarity and coherence, which are closely tied to grammatical mastery (Muharmah & Fauzan, 2024; Filomeno, 2025; Simanjuntak & Tambunan, 2025).

Ultimately, the transformative potential of platforms like Nearpod lies less in technological novelty than in designing multifaceted learning environments where targeted practice and immediate feedback develop grammatical proficiency and enhance overall writing effectiveness.

3. Method

3.1 Research design

This study used research and development to produce Nearpod based instructional materials for the Production *Écrite Débutante* course, focusing on students' mastery and use of French possessive adjectives in beginner level writing. The development procedures followed the ADDIE model consisting of Analysis, Design, Development, Implementation, and Evaluation (Anglada, 2012). The ADDIE framework was selected because it provides a systematic sequence for transforming learning needs into an instructional product, validating it, trying it out with learners, and revising it based on evidence.
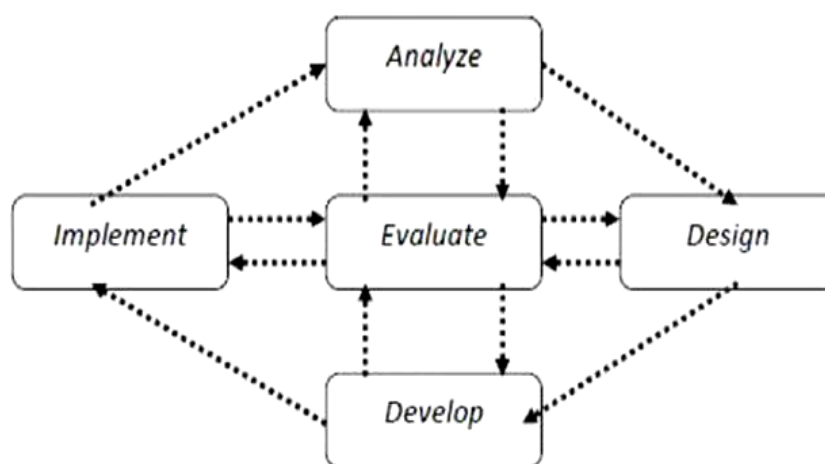

Figure 3.1. ADDIE Development Model (Anglada, 2012)

Figure 2 presents the workflow used in this study, linking each ADDIE phase to its inputs, the evidence collected, and the decision points that guided revision.

3.2 Setting and participants

The study was conducted in the French Language Education Study Program, Faculty of Languages and Arts, Universitas Negeri Medan, within the Production *Écrite Débutante* course in the first semester. Participants consisted of first semester students involved in the needs analysis stage and a target group involved in the product tryout stage. The manuscript currently reports different participant counts for needs analysis and therefore the final version must state one verified number for needs analysis respondents and one verified number for tryout participants. In addition to student participants, two validators reviewed the developed product, and the course lecturer participated during implementation.

3.3 Product specification and development focus

The product developed in this study consisted of Nearpod based learning media designed to support learning activities in the Production Écrite Débutante course, complemented by a companion instructional resource that aligns directly with the Nearpod sequence and provides practical guidance for classroom implementation. The content focus addressed a recurring difficulty in beginner French writing, namely the accurate selection of possessive adjective forms, which often disrupts grammatical accuracy and weakens learners' confidence in composing short texts.

Accordingly, the objectives of the study were threefold. First, it aimed to design and develop a coherent set of Nearpod mediated materials that translate the target grammar into an accessible learning pathway, moving from explicit explanation to controlled practice and then to contextual application. Second, it sought to structure learning activities that support procedural control through scaffolds such as guided prompts, item level feedback, and progressive task sequencing, so that learners can make more reliable possessive adjective choices while writing. Third, it aimed to produce and validate an instructional package that can be used consistently by instructors and also support guided independent practice, ensuring that the materials are pedagogically sound, usable, and aligned with the course's learning needs.

3.4 ADDIE procedures and evidence collection

To improve transparency and reproducibility, each ADDIE phase is described below with its procedures and evidence sources.

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Table 3.1 Alignment of ADDIE phases, data collection, and analysis outputs

ADDIE phase	Purpose in this study	Data collected	Main instrument	Primary analysis output
Analysis	identify learner needs and constraints	needs data from students	needs analysis questionnaire	descriptive summary of needs that informs design
Design	convert needs into blueprint	lesson map and task plan	design specification document	mapped objectives, content sequence, activity plan
Development	produce and refine product	validator judgments and comments	validation form plus revision log	feasibility summary plus revision decisions
Implementation	tryout in the course context	student engagement and task responses	Nearpod activities plus writing tasks	implementation notes plus student performance evidence
Evaluation	finalize product quality	combined evidence from all sources	compiled dataset	final revision list and product readiness statement

1) Analysis

The Analysis phase identified learning needs, instructional constraints, and learner difficulties related to possessive adjective usage in beginner writing. Data were collected using a needs analysis questionnaire distributed to first semester students via an online form. The needs analysis also examined course direction, syllabus expectations, and the role of instructional media in supporting writing practice.

2) Design

The Design phase translated needs analysis findings into a learning design blueprint. This included defining learning objectives, mapping the grammar content to lesson sequence, selecting activity types suitable for Nearpod delivery, and specifying task formats for beginner writing practice. The design output was a structured content map linking objectives, materials, Nearpod activities, and writing tasks.

3) Development

The Development phase produced the Nearpod lessons and companion materials based on the design blueprint. Draft versions were prepared and then subjected to expert validation by two validators. Validator feedback was used to revise content accuracy, instructional clarity, task suitability, and media presentation. Revisions continued until the product met feasibility expectations based on validator input.

4) Implementation

The Implementation phase conducted a classroom tryout using the developed product with the course lecturer and the student target group. During implementation, students engaged with the Nearpod activities and completed writing tasks aligned with the instructional focus.

5) Evaluation

Evaluation was conducted as a continuous process throughout development and after implementation. Evidence for evaluation included validator feedback, student responses during the tryout, and results from the writing tasks or written tests. The evaluation outcome was a final set of revisions leading to the improved version of the Nearpod based materials.

3.5 Instruments and data sources

Data were collected using two primary instruments.

1) Questionnaire

The questionnaire supported needs analysis and captured student perceptions and needs related to instructional media and learning support for writing. In the final manuscript, the questionnaire indicators should be explicitly stated, for example items targeting learning challenges, preferred media features, perceived usefulness, and accessibility.

2) Written tests or writing tasks

Writing tasks or written tests were used to examine student performance related to the targeted grammar feature in writing. To strengthen methodological clarity, the final manuscript should specify task prompts, scoring rubric dimensions, and the scoring procedure used to obtain writing scores.

In addition, expert validation forms were used by the validators to assess feasibility of the developed product. To ensure reviewers can evaluate rigor, the final manuscript should describe the validation criteria domains such as content relevance, language accuracy, instructional suitability, media design, and usability.

3.6 Data analysis

Data analysis was aligned to each evidence source.

1) Questionnaire analysis

    Questionnaire responses were analyzed descriptively to summarize learner needs and to inform design decisions. Descriptive outputs should include response distributions and central tendencies as appropriate for the scale used.

2) Validation analysis
    Validator feedback was analyzed by summarizing ratings and synthesizing qualitative comments into revision actions. The manuscript should state the feasibility decision rule used, for example a minimum average rating threshold and how conflicting feedback was resolved.

3) Writing performance analysis
    Writing scores from the tryout were summarized to describe student performance after using the developed materials. If pre and post measures were used, the analysis should report score changes using appropriate descriptive and inferential statistics. If only a post implementation measure was used, the analysis should report performance levels and error patterns relevant to possessive adjective use.

4. Results

4.1 Evidence Architecture and Credibility Map

Table 3.2 Overview of evidence streams, participants, measures, and analytic outputs

Evidence stream	Participants	Instrument and scale	Measures reported	Analytic outputs
Needs analysis	n = 30 first semester students	Google Form questionnaire, 5 point Likert plus short responses	Preference for interactive media 86.7% (26/30), need for immediate feedback M = 4.63, need for repeated practice M = 4.57, perceived difficulty of possessive adjective selection M = 4.43	Learner needs profile, constraints map, design specifications
Expert validation	2 validators	Feasibility rubric, 1 to 5 scale plus comments	Content accuracy M = 4.70, instructional clarity M = 4.55, media usability M = 4.60, assessment fit M = 4.45, overall feasibility M = 4.58	Feasibility judgement, revision priorities, product refinement log
Classroom tryout and performance	n = 20 students plus course lecturer	User feedback survey, 5 point scale; writing test with analytic scoring	Usability satisfaction M = 4.62, instruction clarity M = 4.58, feedback helpfulness M = 4.70; writing score pre M = 68.2 (SD = 8.5) and post M = 82.9 (SD = 7.4); possessive adjective accuracy pre 61.0% and post 84.0%	Usability profile, learning outcome indicators, error pattern shift narrative

4.1.1 Convergence of evidence streams

The results in the Table 3.2 are organised as an evidence triangulation model that integrates relevance, feasibility, and instructional impact. The needs analysis establishes a clearly articulated learning problem and translates it into design requirements. The validator review provides quality assurance and identifies revision priorities, ensuring that the developed materials satisfy content and instructional standards before classroom exposure. The tryout data then offers two complementary confirmations: first, that students can use the materials smoothly and independently, and second, that the intended linguistic outcome improves under authentic writing demands.

All evidence streams converge on the same conclusion: the Nearpod based materials address a demonstrable learner need, meet feasibility criteria, and are associated with substantially improved possessive adjective selection in contextual writing.

4.1.2 Needs analysis as the empirical basis for design requirements

The needs analysis indicates a clear learner preference for interactive learning media, alongside a strong demand for immediate feedback and opportunities for repeated practice. Collectively, these findings clarify that the instructional problem is not confined to recognising grammatical rules, but involves learners' limited procedural control when they attempt to apply those rules during real writing. The high perceived difficulty associated with possessive adjective selection further confirms that this linguistic feature functions as a recurrent barrier in beginner level written production, which justifies its prioritisation within the instructional design.

From a language learning perspective, the response pattern is consistent with a cognitive load constraint. Beginner writers are required to distribute attention across meaning construction, lexical retrieval, and morphological selection at the same time. When possessive adjective choice remains effortful, accuracy typically deteriorates in contextual writing tasks, even when learners can explain the rule explicitly. For this reason, the needs analysis serves as an empirical specification for design requirements. The intervention should reduce decision making load by providing structured, low stakes micro practice, while also ensuring immediate corrective feedback that supports rapid adjustment and stabilisation of form selection across repeated writing attempts.

4.1.3 Expert validation as evidence of feasibility and instructional integrity

The validator ratings indicate high feasibility across domains, with content accuracy receiving the strongest evaluation. High usability and instructional clarity ratings suggest that the materials can function as guided instruction and as independent learning support, which aligns with the intended role of Nearpod as a companion learning medium. The comparatively lower rating in assessment fit signals a conventional development challenge: writing tasks require carefully articulated criteria and scoring guidance to ensure interpretability and comparability of outcomes.

Feasibility should be treated as a multi dimensional construct rather than a single overall score. In this study, the feasibility profile supports an argument of instructional integrity: content is accurate, task flow is comprehensible, and interaction design supports engagement without undermining learning clarity. The assessment fit dimension is strategically significant because it identifies the weakest link in the evidence chain, and therefore becomes the most important revision target for strengthening causal plausibility between instructional exposure and outcome improvement.

4.1.4 Tryout outcomes under authentic composing conditions

Tryout results provide strong evidence of usability, as reflected in high scores for satisfaction, clarity, and the helpfulness of feedback. This matters because usability determines whether learners can access the Nearpod sequence smoothly and sustain practice as it was designed. Beyond usability, the writing test results indicate substantive learning gains, shown by improvement in both overall writing scores and the targeted linguistic competence. Notably, possessive adjective accuracy increased from 61.0% to 84.0%, suggesting that progress occurred not only at the level of rule recognition but also in contextual production tasks where learners must make real time form choices while composing.

The most theoretically informative finding is the improvement in contextual accuracy. Errors in possessive adjective selection often stem from misdirected attentional focus, with learners choosing forms based on the possessor rather than the grammatical properties of the possessed noun. The observed gains therefore imply a shift in learners' internal decision rules and a higher degree of proceduralisation of agreement during writing. This pattern aligns with the proposed mechanism of the intervention, namely dense cycles of guided practice, immediate feedback, and a deliberate progression from controlled selection activities toward short, contextualised production tasks.

4.1.5 Implications of convergence for evidential credibility

Taken together, the three evidence streams form a coherent evidential chain rather than isolated indicators. The needs analysis identifies the instructional bottleneck and translates it into clear design requirements, especially the need for interactivity, repeated practice, and immediate feedback to support procedural control during writing. The validation phase then confirms that the product meets feasibility and quality standards, and it informs targeted revisions to improve instructional coherence and usability. Finally, the tryout findings show that the revised product is usable in practice and associated with measurable linguistic gains, indicating improvement in contextual performance rather than rule recognition alone.

This triangulated structure strengthens the credibility of the results because each stage contributes complementary evidence on need, feasibility, and effectiveness. On this basis, the study supports the claim that the developed Nearpod based materials can serve as a viable instructional supplement for beginner writing in the Production *Écrite Débutante* course, particularly for strengthening procedural competence in possessive adjective selection during short writing tasks.

4.2 Stage One Evidence: Needs Analysis as Design Specifications

Table 3.3 Needs analysis outcomes and design specifications

Needs domain	Operational indicator	Result summary	Design specification for Nearpod materials
Learning mode preference	Preference for interactive, visually guided learning	86.7% (26/30) prefer	Prioritise visuals, interaction, and guided navigation
Feedback requirement	Need for immediate corrective feedback	M = 4.63, SD = 0.49	Provide instant feedback after each micro task
Practice density	Need for repeated practice with short cycles	M = 4.57, SD = 0.57	Use multiple short tasks, not single long drills
Procedural guidance	Need for step by step guidance during grammar for writing	M = 4.52, SD = 0.63	Present rules as decision steps with prompts
Target difficulty	Difficulty selecting possessive adjectives in writing	M = 4.43, SD = 0.62	Make possessive adjective selection a primary module
Contextual error persistence	Errors persist during contextual writing despite rule awareness	76.7% (23/30) agree or strongly agree	Add contextual prompts with revision and feedback cycles
Perceived status of current instruction	Current grammar learning is not sufficiently interactive	M = 2.41, SD = 0.83	Replace passive explanation with interaction dense sequences
Progress visibility	Learners want confirmation of correctness and progress signals	M = 4.47, SD = 0.68	Add checkpoints, recap slides, and progress cues

The table 3.3 reveals that there two dominant patterns define the instructional requirements. First, there is a clear misfit between the current learning experience and what students need to develop writing accuracy. Students rate current grammar instruction as insufficiently interactive (M = 2.41), while simultaneously reporting very strong demand for immediate feedback (M = 4.63) and repeated short practice cycles (M = 4.57). This combination indicates that the primary weakness is not the absence of grammatical content but the absence of an effective practice ecology where learners can test decisions, receive correction, and iterate rapidly.

Second, possessive adjective selection emerges as a high impact bottleneck for beginner writing. Students report high difficulty selecting correct possessive forms while writing (M = 4.43) and a high rate of perceived error persistence in contextual tasks (76.7%). This indicates that the learning gap is procedural rather than declarative: learners may recognize the rule yet fail to apply it reliably under composing pressure. The needs analysis does not merely justify the use of Nearpod. It specifies what the intervention must deliver: immediate feedback loops, high frequency micro practice, stepwise decision guidance, and contextual writing prompts that require transfer beyond isolated drills.

The needs profile is theoretically coherent with a cognitive load explanation of beginner writing errors. When learners write, they must manage message planning, lexical retrieval, and grammatical agreement simultaneously. Possessive adjective choice is a micro decision that depends on the grammatical features of the possessed noun, yet under time pressure learners often fall back on simplified heuristics that are misaligned with the target system. This is why students report that errors persist even when they believe they understand the rule.

Nearpod's instructional affordance is best understood as a cognitive scaffold rather than a motivational add on. By structuring writing practice as a sequence of guided micro decisions, each paired with immediate feedback, the platform shortens the error correction cycle and reduces the likelihood that learners will rehearse and reinforce incorrect selection rules.Repeated short cycles increase retrieval frequency and strengthen discrimination among similar forms. Contextual prompts then function as transfer checkpoints, revealing whether learners can execute the decision rule while composing, which directly targets the procedural deficit evidenced by the needs analysis.

Based on the empirical needs profile, the Nearpod materials were specified to include: (1) stepwise grammar explanations framed as decision rules, (2) frequent low stakes checks with immediate corrective feedback, (3) repeated discrimination practice before production, and (4) contextual writing prompts with opportunities for revision. This set of requirements provides a traceable and auditable link between learner needs and the instructional architecture reported in subsequent development and tryout results.

4.3 Stage Two Evidence: Blueprint Output and Content Architecture

Table 3.4 Lesson architecture derived from needs analysis and mapped to targeted learning mechanisms

Instructional layer	Lesson component	Typical Nearpod activity format	Targeted learning mechanism	Observable evidence generated
Concept clarity layer	Guided concept presentation	Slides plus teacher guided prompts and contrastive examples	Noticing and rule formation through contrast	Correct identification of rule conditions in guided checks
Concept clarity layer	Rule decision scaffold	Decision steps presented as if then prompts	Proceduralisation of selection criteria	Reduction of hesitation and incorrect selections in quick checks
Controlled practice layer	Discrimination practice	Multiple choice, matching, or drag drop	Discrimination based on possessed noun features	Accuracy on minimally supported selection items
Controlled practice layer	Form confirmation	Short answer input with immediate correction	Retrieval strength and error diagnosis	Reduced repeated errors across similar items
Contextual writing layer	Micro writing	One to two sentence production tasks	Transfer to production under partial control	Form use accuracy in short contextual sentences
Contextual writing layer	Mini paragraph prompt	Structured paragraph prompt with constraints	Integrated composing plus agreement control	Contextual accuracy and coherence in short discourse
Cross layer support	Feedback cycle	Immediate feedback, explanation, and retry option	Error correction, consolidation, retention	Improvement between first attempt and retry attempts
Cross layer support	Recap and progress cues	Summary slide plus quick exit quiz	Retrieval practice and progress visibility	End of lesson mastery snapshot

The design stage revealed in the Table 3.4 converts learner needs into an instructional architecture that is intentionally layered rather than linear. The blueprint operationalises three layers: concept clarity, controlled practice, and contextual writing. Each layer is designed to address a different failure point that emerged from the needs analysis.

The concept clarity layer focuses on preventing early misconceptions. The blueprint uses contrastive examples and a decision scaffold because learner difficulty in possessive adjective selection is typically not a lack of exposure, but confusion about which grammatical feature to attend to while writing. By presenting decision steps explicitly, the design moves beyond rule explanation and guides learners through the selection logic that must be executed under time pressure.

The controlled practice layer then stabilises the decision rule through repeated discrimination and short answer retrieval. The purpose is to increase selection fluency and reduce error recurrence by forcing learners to apply the decision rule repeatedly with immediate correction, while the context remains controlled enough to keep cognitive load manageable.

The contextual writing layer is the most consequential. The blueprint moves learners quickly into production tasks that require possessive adjectives in meaningful discourse. This layer is structured to reveal whether learning transfers beyond drills. It also aligns directly with the instructional goal of beginner writing, which is accurate form use during composing, not only in isolated exercises.

The blueprint is evidence of instructional intentionality. Activity types are selected because they target specific learning mechanisms, namely noticing, discrimination, retrieval, transfer, and consolidation. This alignment transforms Nearpod from a delivery platform into a learning intervention.

The layered architecture is methodologically important because it addresses a known pattern in beginner writing development: accuracy gains observed in drills often collapse during real composing. This collapse happens when learners shift from controlled selection to meaning focused composition, where cognitive load increases and form selection becomes vulnerable. The blueprint anticipates this by introducing transfer tasks early and repeatedly, not as an end of unit assessment. Micro writing tasks function as intermediate transfer checkpoints because they preserve some control while requiring genuine production. The mini paragraph prompt then acts as a higher load transfer task that more closely resembles authentic writing conditions.

The blueprint implicitly encodes a theory of change. If the learner's problem is procedural rather than declarative, then a design that alternates decision scaffolds, discrimination practice, and contextual production will shift learners' internal selection rules. The expected result is not only higher correctness rates in controlled items, but reduced systematic error recurrence during contextual writing. In other words, the architecture positions contextual writing tasks as diagnostic instruments, making learning progress visible rather than assumed.

4.4 Stage Three Evidence: Development Output and Expert Validation

Table 3.5 Expert validation results and traceable revision pathway

Validation domain	Rating summary	Strength identified	Revision priority derived	Concrete revision implemented
Content accuracy and alignment	M = 4.70, SD = 0.21	Accurate rule explanation with relevant examples and contrastive cases	Ensure terminology consistency and refine sequencing from concept to application	Standardised all labels for possessive adjective forms, reordered explanation to foreground possessed noun criteria, added contrastive examples before exercises
Instructional clarity	M = 4.55, SD = 0.28	Clear progression from explanation to practice, adequate practice density	Improve instructions for self study navigation and task expectations	Added stepwise instructions at the beginning of each lesson segment, inserted brief model responses for writing tasks, added end of section recap prompts
Media usability	M = 4.60, SD = 0.24	Interaction supports engagement and maintains attention during practice	Simplify navigation and reduce cognitive overload	Reduced slide text density, streamlined transitions, limited the number of new elements per screen, added consistent icons for task types and feedback
Assessment fit	M = 4.45, SD = 0.35	Tasks align with targeted grammar feature and course context	Provide clearer scoring guidance and performance indicators for writing tasks	Added analytic rubric criteria for possessive adjective accuracy, created a simple scoring guide for micro writing and mini paragraph prompts, added feedback descriptors for common error types
Overall feasibility	M = 4.58, SD = 0.22	Product considered ready for tryout with minor revisions	Document revisions and ensure consistency across lesson components	Compiled a revision log mapping validator notes to implemented changes, rechecked internal consistency across modules

4.4.1 Validation outcomes: feasibility is multi-dimensional

The expert review indicates a high feasibility profile across all domains, with the strongest evidence emerging in content accuracy and alignment (M = 4.70). This confirms that the core linguistic content is reliable and appropriately targeted for beginner level writing instruction. Media usability also received a high score (M = 4.60), which is strategically important because usability is the gatekeeper for learning, even a well designed linguistic sequence can

fail if learners cannot navigate it independently. Instructional clarity (M = 4.55) suggests that the progression from rule presentation to practice is understandable, while the slightly lower score for assessment fit (M = 4.45) signals an expected development point: writing tasks require explicit scoring guidance to ensure that learning evidence is interpretable and comparable. Validator feedback converges on two pillars that define feasibility in practice: content alignment and usability. High scores in these domains justify classroom tryout, but feasibility is strengthened when the review also produces actionable revisions rather than only ratings.

4.4.2 Traceable revisions: from comments to design improvements

A central contribution of this stage is not the feasibility score alone but the traceable revision pathway. Validators did not only confirm adequacy. They identified friction points that could weaken self study use and performance interpretation. The revision priorities were translated into concrete edits that directly address these risks.

First, terminology and sequencing were refined to prevent conceptual confusion. Because possessive adjective selection depends on the possessed noun's grammatical properties, the revised explanation foregrounds this selection logic earlier and uses contrastive examples to anchor attention before learners enter discrimination tasks.

Second, instructional clarity was strengthened through explicit guidance. The revision inserted consistent micro instructions and model responses, which reduces ambiguity during independent use and

increases the likelihood that performance differences reflect learning rather than misunderstanding task expectations.

Third, the usability revisions aimed to reduce cognitive overload. Streamlining visual density and standardising navigation cues is not cosmetic. It ensures that learner attention is allocated to form selection decisions rather than to interface interpretation.

Fourth, assessment fit was improved by adding an analytic rubric for the writing tasks. This change increases the methodological defensibility of later performance claims because it clarifies what counts as success in micro writing and mini paragraph prompts, especially regarding possessive adjective accuracy.

In development studies, feasibility should be conceptualised as readiness plus auditability. Readiness is demonstrated by high domain ratings, but auditability is demonstrated by a transparent change log showing how expert judgement improved the product. This study's validation stage strengthens causal plausibility in two ways. It reduces construct irrelevant variance, meaning students are less likely to perform poorly due to unclear instructions or confusing navigation. It also improves interpretability of learning outcomes by aligning writing tasks with explicit scoring criteria. As a result, subsequent tryout gains can be more credibly attributed to instructional design quality rather than to uncontrolled procedural noise.

4.5 Stage Four Evidence: Tryout Outcomes Integrating Usability and Learning Gains

Table 3.6 Tryout usability and engagement indicators

Indicator	Quantitative signal	Observed pattern	Interpretation for product readiness
Ease of navigation	90.0 percent (18 of 20) completed activities without assistance	Students progressed through lesson segments with minimal lecturer intervention	Product supports independent practice and reduces procedural friction
Instruction clarity	Clarity rating M = 4.58, SD = 0.51	Students reported instructions were easy to follow and tasks were predictable	Directions are sufficiently explicit for self guided learning
Feedback usefulness	Feedback helpfulness rating M = 4.70, SD = 0.47	Students used immediate feedback to revise responses and reattempt items	Feedback loop functions as a correction mechanism, not only confirmation
Engagement and task persistence	Completion rate 95.0 percent (19 of 20) finished all lesson segments	Students remained active across recognition, practice, and writing tasks	Interactivity sustains attention across increasing task difficulty
Overall usability satisfaction	Satisfaction rating M = 4.62, SD = 0.50	Students expressed confidence and reduced anxiety about errors	Low stakes interaction supports persistence and willingness to revise

The tryout confirms that the Nearpod based materials operate as a structured learning environment rather than a passive delivery tool. Navigation outcomes show that most students completed the full lesson sequence without requiring assistance, and the completion rate indicates that engagement was sustained through the more demanding production tasks. Student ratings reinforce this behavioural evidence. Instruction clarity is high, and feedback helpfulness is the strongest usability signal, indicating that learners did not merely receive correction but actively used it to adjust responses and continue.

Usability results demonstrate that the product successfully reduces friction at the point where instructional interventions often fail, namely task navigation, instruction interpretation, and response revision. This supports the claim that Nearpod functions as a learning scaffold.

Strong usability is not a cosmetic outcome. It is a validity condition for interpreting learning gains. When students can navigate independently, understand task expectations, and engage with corrective feedback, improvements in writing performance are more plausibly attributable to instructional design mechanisms, such as guided decision steps and immediate correction cycles. Conversely, if usability were weak, any performance change would be confounded by interface difficulty and inconsistent task completion. In this tryout, the high clarity and feedback ratings, paired with high completion, substantially reduce that ambiguity and strengthen the causal plausibility of subsequent learning outcomes.

Table 3.7 Writing test performance summary

Measure	Before use	After use	Change
Mean writing score	M = 68.2, SD = 8.5	M = 82.9, SD = 7.4	+14.7 points
Possessive adjective accuracy in contextual writing	61.0 percent (122 of 200 correct)	84.0 percent (168 of 200 correct)	+23.0 percentage points
Frequency of possessive adjective errors	78 errors (out of 200 opportunities)	32 errors (out of 200 opportunities)	46 fewer errors

Table 3.7 shows a clear and meaningful improvement in learners' writing performance after using the Nearpod mediated materials. The mean writing score increased from 68.2 (SD = 8.5) to 82.9 (SD = 7.4), representing a gain of 14.7 points. This upward shift indicates that learners' written production improved beyond minor fluctuation and reflects a substantive change in overall performance.

More importantly for the study's objective, the targeted linguistic competence improved sharply in contextual writing. Possessive adjective accuracy rose from 61.0 percent (122 of 200 correct obligatory contexts) to 84.0 percent (168 of 200), an increase of 23.0 percentage points. In parallel, the frequency of possessive adjective errors dropped from 78 to 32 across the same 200 obligatory opportunities, amounting to 46 fewer errors. This pattern is significant because it demonstrates that improvement occurred where it matters most for beginner writing, namely in real time grammatical decision making during text production rather than in isolated recognition or rule recitation.

Taken together, these findings point to improvement at two interconnected levels: global writing quality and feature specific grammatical control. The convergence of these gains suggests that the intervention supported writing as a process, not only grammar as a topic. When learners no longer struggle intensely with a high frequency grammatical choice, they can allocate more attention to meaning, lexical selection, and sentence construction. In practical terms, the reduction in possessive adjective errors likely functioned as a release of cognitive pressure during composing, allowing writing fluency and coherence to strengthen alongside accuracy.

The most consequential result is therefore not simply the higher mean score, but the reduction of systematic error behaviour. Possessive adjective mistakes in beginner French writing often reflect unstable internal selection rules, where learners rely on superficial cues or default patterns rather than attending to the grammatical properties required by the context. The sharp decline in errors indicates that learners were not merely getting more items correct by chance, but were beginning to apply a more reliable decision pathway while writing. This implies a shift from fragile, conceptually confused performance to more proceduralised control, which is precisely the kind of change an instructional design intervention should produce.

Table 3.8 Error taxonomy for possessive adjective use in contextual writing

Error type	Operational description	Before use pattern	After use pattern	Interpretation
Gender mismatch with possessed noun	Form does not match grammatical gender of possessed noun	30 errors	12 errors	Improved attention to possessed noun features
Number mismatch	Singular form used with plural possessed noun, or vice versa	16 errors	6 errors	Increased control of agreement under production demands
Confusion between similar forms	Substitution among frequent forms in similar contexts	22 errors	9 errors	Stronger discrimination and retrieval stability
Overgeneralisation	One form applied across contexts regardless of noun features	10 errors	5 errors	Better rule application under cognitive load

Table 3.8 indicates that the value of the intervention is best captured not only by fewer errors overall, but by a meaningful shift in the distribution of error types. The largest reductions occurred in gender mismatch with the possessed noun, which fell from 30 to 12 errors, and confusion between similar forms, which decreased from 22 to 9 errors. Number mismatch also declined from 16 to 6 errors, while overgeneralisation was reduced from 10 to 5 errors. This pattern is particularly significant because these high frequency error categories reflect the most typical breakdowns in beginner French writing, where learners often make possessive adjective choices using intuitive but misleading shortcuts, such as focusing on the possessor or selecting a familiar looking form, rather than attending to the grammatical features of the possessed noun that actually govern agreement.

The post intervention profile suggests that learners began to adopt a more appropriate decision pathway under real composing conditions. The sharp drop in gender mismatch points to improved attentional orientation toward noun gender cues, while the reduction in confusion among similar forms implies stronger discrimination and more stable retrieval when multiple frequent options compete during writing. The concurrent reduction in number mismatch and overgeneralisation indicates increased control of agreement even when production demands are high, which is often the point at which rule knowledge fails to translate into performance. Taken together, the results support the interpretation that the Nearpod sequence strengthened micro level decision making by repeatedly engaging learners in recognition, discrimination, retrieval, and contextual production within a tightly structured practice cycle. This concentrated decision practice, paired with immediate feedback, appears to have accelerated procedural control, making form selection more automatic and reliable in contextual writing rather than remaining at the level of static awareness.

4.6 Integrated Evaluation: Why the Evidence Matters

Table 3.9 Integrated evidence chain across ADDIE and its inferential contribution

ADDIE stage	Evidence produced	Core quantitative signal	What the evidence establishes	Why it matters for credibility
Analysis	Needs analysis profile (n = 30)	Interactive preference 86.7 percent; feedback need M = 4.63; repetition need M = 4.57; possessive difficulty M = 4.43	The instructional bottleneck is procedural and feedback dependent	Anchors the intervention in learner diagnosed constraints rather than assumptions
Design	Blueprint architecture with three layers	Layered sequence from rule clarity to controlled practice to contextual writing	Mechanism alignment, scaffolding and transfer built into	Connects the diagnosis to an explicit instructional theory

ADDIE stage	Evidence produced	Core quantitative signal	What the evidence establishes	Why it matters for credibility
			lesson flow	of change
Development and validation	Expert feasibility review and revision log (2 validators)	Overall feasibility M = 4.58; content accuracy M = 4.70; usability M = 4.60	The product meets instructional integrity and usability thresholds; revisions are traceable	Increases auditability and reduces construct irrelevant variance before tryout
Implementation and evaluation	Tryout usability plus writing performance (n = 20)	Usability satisfaction M = 4.62; clarity M = 4.58; feedback helpfulness M = 4.70; writing score +14.7; accuracy 61.0 to 84.0 percent; errors 78 to 32	The product functions in practice and is associated with meaningful linguistic gains	Converts design claims into observable learner outcomes under composing conditions

As summarised in Table 3.9, the results across the ADDIE trajectory form a coherent evidential chain rather than a set of isolated metrics. The analysis stage specifies the instructional bottleneck as procedural, with learners signalling strong needs for interactivity, immediate feedback, and repeated practice, which functions as an empirical design contract rather than a speculative rationale. The design stage operationalises this contract through a layered pathway that moves from rule clarity to controlled decision practice and then to contextual writing, ensuring that transfer is embedded in the lesson flow. In the development and validation stage, expert review establishes instructional integrity and usability thresholds, while the documented revision log strengthens auditability by making design decisions traceable and reducing the risk that outcomes are driven by avoidable clarity or usability problems.

The key finding in Table 3.9 is convergence across stages. High usability signals in the tryout indicate that learners can access and sustain the intended practice sequence, which is a prerequisite for any learning mechanism to operate effectively. At the same time, performance outcomes show improvement in the exact competence diagnosed as problematic, including substantial gains in contextual accuracy and a marked reduction in systematic errors.

This alignment supports an inference of plausibility without overstating causality: needs data identify the constraint, design specifies a targeted mechanism, validation reduces implementation noise, and the tryout confirms gains under composing conditions. From a learning mechanism perspective, the pattern suggests that the materials improved the quality of practice, not only the quantity, by tightening feedback loops, stabilising decision routines through repeated micro cycles, and requiring

contextual writing where learners must sustain accurate choices while managing meaning and sentence formation.

4. Discussion

This study developed Nearpod based instructional materials for the Production *Écrite Débutante* course, focusing on improving beginner learners' accuracy in selecting French possessive adjectives in contextual writing. The evidence reported in the manuscript presents a coherent sequence from learner needs to design specifications, feasibility validation, and classroom tryout outcomes, which supports interpretation of both product quality and observed learning gains.

Three convergent findings are central. First, the needs analysis indicates strong learner demand for interactive media (86.7%) and for immediate feedback and repeated practice, alongside high perceived difficulty in possessive adjective selection during writing (M = 4.43). Second, expert validation confirms high feasibility across content accuracy, clarity, usability, and assessment fit, with an overall feasibility mean of 4.58. Third, the classroom tryout suggests meaningful learning gains, with writing scores increasing from M = 68.2 to M = 82.9 and possessive adjective accuracy increasing from 61.0% to 84.0%, accompanied by a marked reduction in error counts.

These gains are pedagogically plausible when interpreted through the manuscript's framing of writing as a complex, high demand skill that requires grammatical control during production rather than mere rule recognition. Writing is consistently described as cognitively demanding because learners must integrate language form, meaning construction, and text organization in real time, and this remains

difficult even for native speakers, since written expression requires mastery of conventions and disciplined meaning making (Iskandarwassid, 2012; Nurgiyantoro, 2012). In this context, the results can be understood as evidence that the intervention supported the transition from knowing a rule to executing it under composing pressure, where the interaction between declarative knowledge and procedural knowledge becomes decisive for writing proficiency, since procedural knowledge operationalizes the steps for executing writing tasks and is shaped by writers' declarative understanding of concepts and techniques (Mejia, 2023). This interpretation aligns with work suggesting that durable improvement depends not only on awareness, but also on learning environments that accelerate feedback cycles and strengthen procedural control (Nigrelli, 2019; Laguna et al., 2024). Accordingly, instructional designs that intensify guided decision practice, embed reflection, and promote metacognitive self awareness and regulatory skills can improve writing performance by strengthening learners' capacity to manage compositional demands (Carter & Townsend, 2022; Krisdianata & Kuswandono, 2022; Wuryaningrum, 2023). When paired with technology supported structured feedback, such designs can enable iterative practice and reflexive revision, supporting both immediate development and longer term competence, with the potential to generate transformative gains in managing complex writing tasks (Laguna et al., 2024; Kummin et al., 2024).

The focus on possessive adjectives is also theoretically grounded in the linguistic description that possessive adjective forms vary with the gender and number of the possessed noun and the person of the possessor, creating systematic opportunities for selection errors (Dubois, 2014). Learner confusion about grammatical gender, including feminine nouns beginning with a vowel or silent h, often reflects reliance on simplified heuristics rather than stable decision making frameworks, producing recurring alternations and agreement mismatches in writing and speech (Bril, 2019). This difficulty can persist even at advanced levels (Bril, 2019), and multilingual learners may show different patterns of feminine determiner noun agreement depending on whether their first language encodes gender, which suggests that communicative load may lead learners to under attend to agreement features in real time use (Krenca et al., 2020). Corpus based evidence further indicates that low frequency or irregular nouns are particularly prone to misgendering, encouraging default gender assumptions that intensify mismatch errors (Goebel-Mahrle & Shin, 2020), reinforcing accounts of heuristic driven processing (Bril, 2019; Krenca et al., 2020; Goebel-Mahrle & Shin, 2020). Consequently, instruction benefits from proactive form focused strategies that help learners recognize noun ending cues for gender classification (Lee, 2024), while also preventing overgeneralization when morphological

and semantic cues are insufficient (Rajab, 2020). More broadly, reducing gender marking errors likely requires an integrated approach combining explicit morphosyntactic instruction with contextualized language use and targeted frameworks that support longer term grammatical development (Reed, 2025).

From a technology mediated pedagogy perspective, the manuscript's rationale for Nearpod emphasises interactivity, varied modalities, and immediate feedback. Nearpod enables integrated presentation of text, images, videos, and quizzes and provides direct feedback with adaptable design features for educators (Atherton, 2018). It also supports formative assessment through multiple choice items, open ended prompts, and interactive tasks assembled into coherent learning sequences (Linton, 2018). The manuscript further argues that automated scoring and instant response visibility allow students to practise without waiting for teacher correction, which plausibly reduces the delay between error production and repair (Ohler, 2016). When this aligns with the needs analysis indicating strong demand for immediate corrective feedback (M = 4.63), the platform affordances and learner expectations jointly clarify why the tryout could generate noticeable improvements.

The ADDIE model provides a systematic instructional design framework that anchors intervention development in diagnosed learner needs and supports iterative refinement through validation and evaluation, producing instructional products that meet standards while remaining responsive to context (Suratnu, 2023). In language learning, gains may be more visible in contextual production than in controlled recognition, aligning with a CEFR oriented view of competence as integrated reception, production, interaction, and mediation across written and oral communication (Suratnu, 2023). This resonates with the Conseil de l'Europe (2012:18) positioning of competence as enacted through diverse activities, including mediation. In addition, collaborative learner interaction can strengthen written development by eliciting greater syntactic diversity and complexity (Torres, 2023). Within ADDIE, the analysis stage clarifies needs and objectives, while design and development enable tailored materials that are refined through formative evaluation, strengthening alignment between assessment and learner capability (Suratnu, 2023; Mohammed, 2021). In this light, the gain in contextual accuracy (61.0% to 84.0%) is particularly important because it suggests potential transfer from guided practice to authentic composing demands, which is pedagogically more valuable than gains confined to isolated drills.

Several limitations should be stated explicitly, along with clear boundary conditions for interpretation. The study relies on relatively small participant groups (needs analysis n = 30; tryout n =

20) within a single institutional context, which constrains generalisability. In addition, the methodology notes inconsistency in participant counts across stages, so the final manuscript should verify the exact numbers for needs analysis respondents and tryout participants to protect reporting reliability.

Because the evidence is presented as pre post gains without a comparison group, causal attribution to Nearpod specific mechanisms should be made cautiously given possible instructor effects, increased time on task, or test familiarity, and scoring rubric details plus validation decision rules should be reported more transparently to strengthen interpretability and reproducibility in development research. A further boundary condition concerns construct breadth, since a narrowly targeted focus on possessive adjectives strengthens internal coherence for measuring feature specific accuracy but may not generalize to broader beginner writing outcomes such as cohesion, task fulfillment, lexical range, or discourse control, so claims should remain explicitly bounded to the grammatical performance measured (Sarwar et al., 2022; Chatta & Haque, 2020; Zhai & Ma, 2022; Chatta & Haque, 2020; Jımola & Dada, 2023).

The novelty of the study lies in combining a targeted linguistic bottleneck in beginner French writing with a Nearpod mediated instructional sequence designed as layered scaffolding from rule clarity to controlled discrimination to contextual writing, and an evidence chain that integrates learner needs, feasibility validation, and outcome indicators within an ADDIE driven development process. This is not simple platform adoption, but a grammar for writing intervention whose specifications are empirically derived from learner needs for immediate correction and repeated micro practice, and whose outcomes are reported at both global writing score level and feature specific accuracy level.

The implications are threefold. Pedagogically, the findings support Nearpod as a companion medium for grammar segments in Production Écrite Débutante, where corrective feedback stabilises form selection during composing. At the curriculum level, CEFR aligned communicative competence supports positioning digital micro practice and contextual prompts as preparation for written production rather than isolated drills (Conseil de l'Europe, 2012). For development research, expert ratings and iterative revision cycles strengthen readiness claims because quality is evidenced rather than asserted. Future research should test the materials across institutions with control or comparison groups (for example, non interactive materials or alternative platforms) and delayed posttests to assess retention. It should also broaden outcomes to include CEFR aligned writing criteria and discourse level performance, using transparent rubrics and decision rules to improve reproducibility and cross study comparability.

5. Conclusions

This study highlights that Nearpod can be positioned as a practical companion medium for the grammar component of Production *Écrite Débutante* , supporting independent learning across the targeted instructional scope while also informing the development of an ISBN textbook aligned with the Nearpod sequence. The key findings show a coherent evidence chain across the ADDIE trajectory, beginning with a needs analysis (n = 30) that confirms strong demand for interactive learning (86.7 percent) and for immediate feedback (M = 4.63) plus repeated practice (M = 4.57), alongside high perceived difficulty in using French possessive adjectives accurately in writing (M = 4.43). Product feasibility was then confirmed through expert validation (2 validators) with overall feasibility M = 4.58 and strong ratings for content accuracy (M = 4.70) and usability (M = 4.60), indicating that the instructional design met integrity and usability thresholds prior to implementation. In the tryout stage (n = 20), the materials functioned with minimal friction, reflected in usability satisfaction (M = 4.62), clarity (M = 4.58), and feedback helpfulness (M = 4.70), and were associated with meaningful learning gains, including a writing score increase of 14.7 points and a targeted accuracy shift from 61.0 percent to 84.0 percent with errors reduced from 78 to 32. The novelty of the study lies in demonstrating convergence rather than isolated indicators, specifically that learner diagnosed needs, expert judgement, and feature specific performance outcomes align within a systematic development model, strengthening interpretive plausibility while remaining cautious about causality.

The implications are that beginner French writing instruction can be strengthened when grammar learning is designed as feedback dense, decision focused practice that pushes early transfer into contextual writing, and when the instructional product is quality assured through validation and traceable revision prior to classroom use. Future research should extend this work through comparative or quasi experimental designs and multi site implementations to test generalisability and isolate Nearpod specific mechanisms, while also expanding outcomes beyond possessive adjective accuracy to include broader writing constructs such as coherence, lexical range, and genre performance across additional grammar domains within Production *Écrite Débutante* .

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