

Development and validation of a digitalized instructional material in English 9

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ABSTRACT

The integration of digital technology in secondary education has become essential in addressing learning gaps and enhancing student engagement, particularly in English instruction. This study developed and validated a digital instructional material for English 9 that addressed the least-learned competency among Grade 9 learners, specifically differentiating between bias and prejudice. Utilizing a descriptive–developmental research design, the study followed the ADDIE instructional design model—Analysis, Design, Development, Implementation, and Evaluation. The participants consisted of thirty-eight (38) Grade 9 learners from a public secondary school in Agusan del Norte and three (3) expert validators, namely an ICT expert, a Master Teacher, and a Learning Resources Management and Development System (LRMDS) coordinator. A diagnostic test was administered to identify the least learned competency, revealing that most learners demonstrated only partial mastery of higher-order critical literacy skills. Based on these findings, a digitalized instructional material integrating multimedia elements and interactive activities was developed. The material was evaluated using the LRMDS tool for content, instructional, and technical quality. Results showed that the instructional material was rated Very Satisfactory and Highly Recommended across all criteria, obtaining weighted means of 3.96 for content quality, 3.90 for instructional quality, and 4.13 for technical quality. These findings indicate that the developed digitalized instructional material is pedagogically sound, technically robust, and aligned with the Most Essential Learning Competencies, thereby supporting the effective teaching and learning of complex English 9 competencies and warranting its integration into classroom instruction.

Keywords: ADDIE Model, critical literacy, digitalized instructional material, instructional material validation, least learned competencies

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INTRODUCTION

The integration of digital technology into teaching and learning has become a defining feature of twenty first century education across the world. In the Philippines, this shift has been strongly supported by the Department of Education, which continually promotes the use of

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information and communication technology-based instruction to enhance learner engagement and academic achievement. Despite these initiatives, many secondary English teachers continue to encounter challenges due to the limited availability of contextualized and engaging instructional materials that align with the competencies prescribed in the K to 12 curriculum. English, as a core subject in secondary education, requires responsive and innovative teaching approaches that address the diverse needs of learners. Traditional methods often fail to fully engage students or accommodate varying learning styles, which results in difficulties in mastering specific competencies. This concern is particularly evident in Grade 9 English where learners are expected to develop higher level literacy, critical thinking, and effective communication skills yet often lack access to interactive and learner centered instructional resources.

In response to these challenges, the present study focused on the development and validation of digitalized instructional material in English 9 conducted in a public secondary school in the Philippines with Grade 9 learners and English teachers as participants. The research emerged from the observed gap between the continued reliance on conventional printed materials and the growing need for innovative, multimodal, and accessible digital resources that support comprehension and diverse learning styles. The development of the material aimed to provide a structured and technology enhanced teaching resource that addressed the least learned competencies among Grade 9 learners. Multimedia elements such as visuals, audio, and interactive exercises were integrated to simplify complex concepts, reinforce learning, and support multiple learning modalities. Subject matter experts evaluated the instructional material to ensure that it was accurate, effective, and pedagogically sound, thereby strengthening the quality of instruction. Previous studies indicate that carefully designed and validated digital learning tools improve learner motivation, engagement, and academic performance (Alvarez, 2022; Dela Cruz and Santos, 2019). In this context, the study contributes a validated and interactive instructional resource that supports differentiated instruction and addresses comprehension gaps while offering a model for technology integration across grade levels and subject areas. By bridging the gap between curriculum standards and available instructional materials, the study aims to enhance teaching practices and improve learners' mastery of English competencies while fostering an engaging and inclusive learning environment.

The study was anchored in Constructivist Learning Theory and Mayer's Cognitive Theory of Multimedia Learning. Constructivist Learning Theory (Vygotsky, 1978) posits that learners actively construct knowledge through interaction with their environment, peers, and teachers. Within the context of English 9 instruction, digital instructional materials function as mediating tools that connect learners' prior knowledge with targeted competencies. These materials provide authentic and contextualized learning experiences through multimedia texts, collaborative digital activities, and real-world language tasks that encourage analysis and critical thinking. Through guided interaction and exploration, learners are able to construct meaning while engaging in individualized pacing and differentiated learning. Such experiences strengthen comprehension, communication skills, and overall engagement as students participate actively in the learning process rather than passively receiving information.

Mayer's Cognitive Theory of Multimedia Learning (2009) further supports the integration of digital instructional materials by explaining how learners process information through verbal and visual channels. According to the theory, learning becomes more effective when words and images are presented together rather than through text alone. Digital instructional materials designed according to multimedia principles enhance retention and comprehension while supporting multiple learning modalities. The theory rests on the assumptions of dual channel processing, limited cognitive capacity, and active learning. When multimedia elements such as images, audio, video, and animations are integrated with

principles such as coherence, signaling, and segmenting, learners are able to focus on essential language features while avoiding cognitive overload. In English 9 instruction, these approaches help learners understand grammar structures, literary concepts, and reading strategies more effectively. As a result, complex language concepts become more accessible and meaningful, which improves comprehension, retention, and language proficiency.

Together, Constructivist Learning Theory and Mayer's Cognitive Theory provide the pedagogical and cognitive foundations for the development of digital instructional materials in English 9. Constructivism highlights the importance of active knowledge construction and meaningful interaction, while multimedia learning theory explains how carefully designed visual and verbal information supports understanding. Grounding the study in these theoretical perspectives ensures that the instructional material is pedagogically sound, cognitively effective, technologically appropriate, and accessible to learners, thereby contributing to improved comprehension and engagement among Grade 9 students at Durian National High School.

The conceptual framework of the study was guided by the ADDIE instructional design model, which consists of Analysis, Design, Development, Implementation, and Evaluation. This model provided a systematic process for developing, validating, and applying digital instructional materials in English 9. The study viewed the creation of digitalized instructional materials as an instructional innovation that addressed the need for interactive and contextualized resources in Philippine secondary classrooms. During the analysis stage, the least learned competencies of Grade 9 students were identified using assessment data from Durian National High School. This phase established the basis for designing instructional materials that targeted identified learning gaps. In the design stage, the structure, objectives, learning activities, and multimedia components were carefully planned to ensure that the material was competency based, engaging, and learner centered. The development stage involved the creation of the digital instructional material through the integration of text, graphics, audio visual elements, and interactive features. In the implementation stage, the material was introduced in the classroom and used by Grade 9 students, allowing teachers and learners to interact with the resource and evaluate its usability and accessibility. The evaluation stage involved expert validation and user assessment to determine the content accuracy, instructional quality, and technical functionality of the material.

The conceptual framework also aligned with the Learning Resources Management and Development System guidelines, particularly in assessing content quality, instructional quality, and technical quality of learning resources. In the analysis phase, the study examined the learning needs, curriculum requirements, and contextual realities of Grade 9 students under the revised MATATAG curriculum. The design phase translated these needs into objectives, learning sequences, and multimedia components aligned with quality standards. In the development phase, digital instructional materials were produced and evaluated by experts using the LRMDs evaluation tool to ensure pedagogical appropriateness and technical reliability. The implementation phase involved the use of the validated instructional materials in regular classroom instruction, allowing learners to interact with the resource. The evaluation phase assessed the effectiveness, usability, and instructional impact of the material through learner performance, feedback, and teacher observations. Through this systematic process, the study ensured that the instructional material was carefully designed, validated, and aligned with curriculum standards.

The ADDIE model was applied as the guiding process for the development of the instructional material. In the analysis phase, the least learned competencies were identified through assessment data. The design phase involved the preparation of a comprehensive

framework that ensured alignment with curriculum standards and learner needs. The development phase produced the digital instructional materials through the use of appropriate technological tools and multimedia resources. The implementation phase integrated the materials into classroom instruction, allowing learners to actively use them in their learning process. The evaluation phase examined the effectiveness of the instructional materials in improving learners' academic performance and mastery of competencies. The results of this stage provided insights into the material's effectiveness and served as a basis for improving instructional design practices at Durian National High School.

The conceptual framework was further strengthened by the integration of Constructivist Learning Theory and Mayer's Cognitive Theory of Multimedia Learning within the ADDIE process. Constructivist principles guided the analysis and design phases by emphasizing learners' prior knowledge and the importance of active participation in the learning process. This perspective supported the development of learner centered activities that promoted meaningful engagement with content. Mayer's theory informed the design and development stages through the careful integration of text, visuals, audio, and video elements that supported meaningful learning while preventing cognitive overload. The integration of these theories ensured that the instructional design process remained grounded in sound pedagogical and cognitive principles.

The research paradigm illustrated the systematic flow of the study. It presented the sequence of processes beginning with the identification of the least learned competency followed by the design and development of digital instructional materials, expert validation, classroom implementation, and evaluation of content quality, instructional quality, and technical quality. The paradigm demonstrated the relationship between inputs, processes, and outputs and provided a clear overview of how the components of the study were interconnected.

The development and validation of digital instructional materials in English 9 respond to the growing demand for effective technology integration in contemporary education. The study provides educators with a systematic approach for designing, implementing, and evaluating instructional resources that are learner centered and aligned with curriculum standards. The findings offer evidence-based guidance on how validated digital materials can address learning gaps and improve mastery of least learned competencies. Students benefit from engaging and accessible digital resources that support comprehension, motivation, and academic achievement. Teachers gain innovative instructional tools that enhance classroom practice and support the remediation of difficult competencies. School administrators may use the findings as a model for integrating technology across subjects and grade levels while strengthening digital initiatives in the curriculum. Researchers are provided with insights and references for future studies related to instructional material development and educational technology. In a broader sense, the study contributes to the advancement of educational practice by demonstrating that technology enhanced instructional materials can improve learning outcomes and promote inclusive and interactive learning environments.

The study was limited to the development and validation of a digital instructional material in English 9 that focused on the third quarter competency of differentiating bias from prejudice. The instructional material was designed to provide interactive and competency-based learning resources for Grade 9 students in a public secondary school. The research was conducted at Durian National High School during the school year 2025 to 2026, and the validation of the instructional material was limited to expert evaluation.

The review of related literature provides the scholarly foundation supporting the development and validation of digital instructional materials in English 9. Literature highlights the importance of instructional material development, technology integration in language education, and validation processes that ensure effectiveness and acceptability. The adoption of digital instructional materials in K to 12 education has often been constrained by the absence

of standardized evaluation frameworks that allow educators to assess alignment with curriculum standards, technical quality, accessibility, and engagement (Rice, 2021). Nevertheless, digital tools have been widely recognized for their potential to enhance student engagement and learning outcomes in English instruction. Villanueva and Salazar (2021) conducted a design and development study that produced and validated a digital flipbook for Grade 9 learners through stages that included planning, design, expert consultation, construction, and revision. The validated material supported blended learning and improved students' English proficiency by offering interactive and accessible content. Similarly, research reported in the International Journal of Educational Management (2024) emphasized the value of comprehensive digital resources that include content, activities, assessments, and supplementary materials validated for content, instructional, and technical quality. Baleguian et al. (2025) further demonstrated that contextualized digital reading materials based on least learned competencies such as homonyms, homographs, and hyponyms were evaluated positively by experts for content, instructional, and technical quality, underscoring the importance of contextualized and digitalized learning resources.

Content quality has consistently been identified as a fundamental dimension of effective educational materials because it directly influences learner understanding and satisfaction. Within digital learning environments, content quality refers to the accuracy, relevance, comprehensiveness, and alignment of information with learning objectives and curriculum standards. Research on electronic learning design emphasizes that high quality content must be grounded in sound learning theory rather than driven solely by technological considerations (Cook et al., 2017). Evaluations of postgraduate electronic learning also indicate that the content dimension is the most widely discussed component in quality frameworks because it determines the effectiveness of learning experiences. Content quality is typically assessed through indicators such as accuracy of information, clarity of explanations, and completeness of subject matter. When digital content is logically organized and supported with multimedia elements, it enhances learner engagement and facilitates deeper comprehension. These findings demonstrate that strong content quality serves as a foundation for meaningful learning experiences in both traditional and online educational contexts.

Instructional quality refers to the pedagogical features of instructional materials that facilitate meaningful learning and promote learner engagement. In digital learning environments, instructional quality is reflected in the alignment of instructional strategies, learning activities, assessments, and feedback with intended learning outcomes. Stracke, Burgos, and Tlili (2023) emphasized that well-structured instructional design promotes active participation and coherent sequencing of learning experiences. Clear communication of learning goals and alignment between activities and competencies support student agency and metacognitive awareness. Research further indicates that structured interaction and clear guidance significantly influence learners' perceptions of course effectiveness, particularly in online environments where face to face cues are absent. Merrill (2002) also highlighted the importance of activating prior knowledge, demonstrating new skills, and providing opportunities for application and reflection as essential principles of effective instruction. These perspectives show that instructional quality requires thoughtful integration of pedagogical elements that make learning coherent, interactive, and learner centered.

Technical quality is another essential dimension influencing the success and acceptance of digital learning systems. Technical quality refers to the usability, reliability, responsiveness, and overall functionality of learning platforms and digital materials (Fitria et al., 2024). Research examining electronic learning service quality indicates that system usability and reliability strongly influence learner satisfaction and continued use (Limbu and Pham, 2023).

Studies of web based educational systems further reveal that system quality and information quality affect perceptions of usefulness and user engagement (Li and Zhu, 2022; Muhammad et al., 2020). When technical problems such as poor usability or system instability occur, learners are less likely to remain engaged with instructional materials. Conversely, digital learning environments that provide efficient navigation, reliable performance, and accessible interfaces lead to higher levels of satisfaction and sustained participation.

The development and validation of instructional materials typically follow a systematic and iterative process that includes needs analysis, design, prototyping, validation, testing, and revision. Tan (2024) emphasized that such an iterative cycle allows instructional materials to be continuously refined through theoretical guidance and empirical evidence so that they respond effectively to actual learning needs. Combining expert evaluation with feedback from teachers and students strengthens the validity and usability of educational materials. The ADDIE model, consisting of Analysis, Design, Development, Implementation, and Evaluation, remains one of the most widely used frameworks in instructional design because it provides a structured and outcomes-oriented approach to material development (Branch, 2025). Aldoobie (2025) explained that validation integrated across the stages of the ADDIE model ensures that instructional materials are reliable and suitable for classroom use. Through the application of this framework, the present study adopted a systematic process for the creation and validation of digital instructional materials in English 9.

The analysis stage of ADDIE focuses on identifying learner characteristics, technological access, and curriculum requirements prior to the design of instructional materials (Rice, 2021). Without careful analysis, digital resources may fail to address actual learning gaps. Martínez Gómez et al. (2025) found that language learning outcomes improved when digital resources were aligned with students' learning contexts. Cabansag (2021) further reported that technology enhanced materials supported collaborative learning and problem-solving activities that strengthened comprehension. During the development stage, iterative prototyping allows instructional materials to be tested and refined using feedback from experts and learners. Chen (2023) noted that such iterative processes improved content quality and instructional relevance, while Davis and Wong (2020) demonstrated that learner analytics such as completion rates and accuracy levels provided useful data for revising instructional materials. These studies show that evidence-based development processes contribute to the creation of more effective instructional resources.

Successful implementation of digital instructional materials requires teacher preparation and technical support. Martínez Gómez et al. (2025) observed that teachers who received guidance on the use of digital tools were more likely to integrate them effectively into their teaching. Aldoobie (2025) also emphasized the importance of readiness assessments, troubleshooting mechanisms, and feedback systems to support implementation. Evaluation of instructional materials is typically conducted through expert validation and user testing. Research indicates that content validity measures and learner usability surveys provide reliable indicators of effectiveness (Handage and Chander, 2021). Multi source evaluation involving pedagogical, technical, and accessibility considerations further strengthens the validation process (Rice, 2021).

Within the Philippine educational context, research on the implementation of the Most Essential Learning Competencies indicates that instructional materials aligned with these competencies assist teachers in planning lessons, conducting assessments, and supporting student development. Studies on English learning resources have shown that validated materials aligned with curriculum priorities enhance learner engagement and competence in language skills. Visual design and interactive presentation also play an important role in motivating learners. Digital modules that include images, infographics, and interactive features capture attention and encourage active participation. Alibin (2021) emphasized that multimedia

elements enrich English instruction particularly for visual and auditory learners. Validation processes also ensure that instructional materials remain free from bias and errors, thereby supporting inclusivity and credibility in language education. Catapang (2020) highlighted the importance of expert validation in ensuring fairness and objectivity in instructional materials.

Clear language use in instructional materials is equally important for learner comprehension. Santos (2021) found that scaffolding techniques such as glossaries, guided questions, and sentence prompts help students gradually master complex language tasks. Digital modules designed for English 9 should therefore employ accessible language and learner centered explanations aligned with evaluation standards. Accessibility and usability are also crucial factors in digital learning resources. Villanueva (2020) reported that materials accessible through multiple devices such as mobile phones, laptops, and tablets enhance flexibility in learning environments. Lumban (2021) emphasized that usability testing ensures that digital modules are interactive, navigable, and adaptable to different learning settings. Features such as hyperlinks, interactive quizzes, and downloadable resources encourage independent learning and sustained engagement.

Within the K to 12 curriculum of the Department of Education, Grade 9 English focuses on developing communicative competence through listening, speaking, reading, writing, viewing, and representing. The curriculum integrates the study of various literary traditions including British, American, and Philippine literature in order to foster appreciation of both local and global cultures. The Most Essential Learning Competencies emphasize higher level thinking skills such as expressing permission, obligation, and prohibition through modal verbs, using conditionals to present arguments, applying appropriate communicative styles in different contexts, and analyzing literature in relation to social issues. Additional competencies require learners to demonstrate critical language awareness by distinguishing bias from prejudice, evaluating the truthfulness of information, and assessing the validity of arguments. Through the integration of language skills, literature appreciation, and critical literacy, the curriculum prepares learners for lifelong learning, responsible citizenship, and participation in a complex information society.

Overall, the literature highlights the importance of carefully designed and validated digital instructional materials in improving English instruction and learning outcomes. Research consistently shows that instructional resources aligned with curriculum competencies enhance learner engagement, mastery, and academic performance, particularly in addressing the least learned competencies. Interactive multimedia features, accessibility across digital platforms, cultural relevance, and freedom from bias contribute to inclusive and effective learning environments. Iterative development processes guided by instructional design frameworks such as the ADDIE model ensure that instructional materials are pedagogically sound, technically reliable, and responsive to the needs of learners and teachers. These insights provide strong support for the development and validation of digital instructional materials that are accurate, engaging, and aligned with curriculum standards in order to improve learning outcomes in English 9.

Statement of the problem

This study developed and validated a digitalized instructional material in English 9 to address the need for interactive, engaging, and competency-based resources in the classroom. Specifically, it sought to answer the following questions:

1. What is the least learned competency of the Grade 9 learners in English for the third quarter of School Year 2025 to 2026?

2. How was the digitalized instructional material designed and developed?
3. How do experts evaluate the digitalized instructional material in terms of content quality, instructional quality, and technical quality?
4. How do the Grade 9 learners perceive the developed digitalized instructional material?
5. How may the developed digitalized instructional material for Grade 9 students be enhanced?

METHODOLOGY

The study employed a descriptive developmental research design to examine existing instructional conditions and to develop and evaluate a product, specifically a digitalized instructional material in English 9. The research process followed the ADDIE model consisting of analysis, design, development, implementation, and evaluation. During the analysis phase, learners' needs and least learned competencies were identified. The design phase involved preparing a structured plan that aligned the instructional content, learning activities, and strategies with the identified learning gaps. In the development phase, the instructional material was produced using multimedia tools. The implementation phase involved the application of the developed material in the classroom setting. Finally, the evaluation phase assessed the content quality, instructional quality, and technical quality of the instructional material as well as its influence on student learning outcomes. This design allowed the study to systematically create and examine the effectiveness of the digitalized instructional material within the actual instructional context.

The study was conducted at Durian National High School located in the District of Las Nieves in the Schools Division of Agusan del Norte. The school served junior high school learners and the study focused specifically on Grade 9 students enrolled during the School Year 2025 to 2026. The research locale is situated approximately 55 km from the center of Butuan City and may be reached through a land trip by bus or jeepney that takes about two hours from the city proper. This setting provided an appropriate environment for examining the development and classroom use of digitalized instructional materials among Grade 9 learners.

The population of the study consisted of all Grade 9 students enrolled at Durian National High School during the third quarter of School Year 2025 to 2026. The class size was thirty-eight students. The distribution of the participants included Grade 9 Faraday with 38 students. In addition to the student participants, expert validators were involved in the evaluation of the digitalized instructional materials. These experts included 1 ICT expert, 1 Master Teacher, 1 English Department Head, and 2 Learning Resources Management and Development System Manager or Coordinator, bringing the total number of individuals involved in the study to 43. The data showed that thirty-eight Grade 9 students participated in the implementation of the instructional material while a panel of experts validated the digitalized instructional materials designed for Grade 9 English. Five experts were involved in the validation process drawn from ICT specialists, a Master Teacher, the English Department Head, and Learning Resources Management and Development System managers or coordinators.

Complete enumeration sampling was used in the study. All thirty-eight Grade 9 students of Durian National High School enrolled during the third quarter of School Year 2025 to 2026 were included in order to ensure a comprehensive representation of the population. This approach allowed the researcher to capture learners' needs, performance levels, and competency gaps accurately. The students participated in identifying the least learned competencies in English through a diagnostic test and also took part in the classroom implementation of the developed digitalized instructional material. For the evaluation stage,

five expert validators were purposively selected. These included one ICT expert, one Master Teacher, one English Department Head, and two Learning Resources Management and Development System managers or coordinators. The inclusion of all qualified experts ensured credible validation based on established standards and supported the effectiveness of the digitalized instructional material in addressing the identified learning gaps.

Several research instruments were utilized in the study including the digitalized instructional material in English 9, expert validation rubrics, learner perception surveys, and a teacher made diagnostic test. The digitalized instructional material designed to address the least learned competency of distinguishing between bias and prejudice served as the primary tool for classroom implementation. A panel of five experts consisting of an ICT specialist, a Master Teacher, an English Department Head, and two Learning Resources Management and Development System managers or coordinators evaluated the digitalized instructional material using structured rubrics derived from Learning Resources Management and Development System standards. The evaluation focused on content quality, instructional quality, and technical quality including accuracy, clarity, engagement, usability, and multimedia integration. In addition, a learner perception survey was administered to thirty-eight Grade 9 students to obtain feedback regarding usability, interactivity, and the learning impact of the instructional material. These instruments allowed the study to obtain both expert and user perspectives which strengthened the reliability and validity of the findings through triangulation.

The validity and reliability of the research instruments were carefully considered. The digitalized instructional materials in English 9 were validated by five experts consisting of an ICT specialist, a Master Teacher, an English Department Head, and two Learning Resources Management and Development System managers or coordinators. These experts evaluated the instructional material in terms of content quality, instructional quality, and technical quality focusing on accuracy, clarity, engagement, usability, and multimedia integration. Their review ensured that the instructional material aligned with the K to 12 curriculum and addressed the least learned competency of differentiating bias from prejudice. The learner perception survey was reviewed to confirm that it accurately captured students' learning experiences and perceptions of the instructional material. The teacher made diagnostic test was regarded as valid because it aligned with the curriculum, measured the targeted competency, and had been approved for district use. The learner perception survey was also designed to ensure clarity and consistent responses. The diagnostic test demonstrated reliability due to its previous district use and standardization. Collectively, these instruments produced credible and consistent data that were used to evaluate the effectiveness of the digitalized instructional material in English 9.

The process of gathering data began with securing permission from the school head of Durian National High School and the Public School District Supervisor. After approval was obtained, a teacher developed diagnostic test was administered to the Grade 9 students to determine their prior knowledge and to identify learning gaps and least learned competencies. Based on the results of the diagnostic test, instructional objectives and learning activities were planned in alignment with the K to 12 curriculum standards and Learning Resources Management and Development System guidelines. The digitalized instructional material was then produced and integrated multimedia elements including text, visuals, audio, and interactive tasks in order to enhance student engagement. A formal letter was sent to five expert evaluators including an ICT specialist, a Master Teacher, an English Department Head, and two Learning Resources Management and Development System managers or coordinators requesting validation of the material. Their feedback was used to refine the instructional

material prior to classroom implementation. During the implementation stage, learners interacted with the digitalized instructional material while the researcher examined its content quality, instructional quality, and technical quality. Feedback was also gathered from learners and teachers to assess usability, engagement, and learning outcomes which were used to determine the effectiveness of the instructional material in improving mastery of the targeted competencies.

Data gathered from the diagnostic test and the evaluation of the digitalized instructional material were analyzed using appropriate statistical tools. Frequency and percentage distributions were utilized to determine the least learned competencies of the participants. Weighted mean was used to determine the rating of the digitalized instructional material as evaluated by the expert validators. These statistical procedures allowed the researcher to interpret patterns in learner performance and to assess the overall quality of the developed instructional material based on expert evaluations.

The scoring and quantification of data followed established criteria. Diagnostic test scores were interpreted using specific raw score ranges, percentage rating ranges, descriptive ratings, and interpretations. A raw score of 24 to 30 corresponded to a percentage rating range of 90 to 100 with a descriptive rating of Outstanding and an interpretation of Highly Mastered. A raw score of 19 to 24 corresponded to a percentage rating range of 85 to 89 with a descriptive rating of Very Satisfactory and an interpretation of Mastered. A raw score of 13 to 18 corresponded to a percentage rating range of 80 to 84 with a descriptive rating of Satisfactory and an interpretation of Partially Mastered. A raw score of 7 to 12 corresponded to a percentage rating range of 75 to 79 with a descriptive rating of Fairly Satisfactory and an interpretation of Nearly Mastered. A raw score of 1 to 6 corresponded to a percentage rating range of 70 to 74 with a descriptive rating of Did Not Meet Expectation and an interpretation of Emerging Mastery.

The evaluation of content quality, instructional quality, and technical quality also followed a defined scale. A rating of 4 corresponded to the verbal description Very Satisfactory with an interpretation of Highly Recommended. A rating of 3 corresponded to the verbal description Satisfactory with an interpretation of Moderately Recommended. A rating of 2 corresponded to the verbal description Poor with an interpretation of Fairly Recommended. A rating of 1 corresponded to the verbal description Not Satisfactory with an interpretation of Not Recommended. These criteria guided the analysis and interpretation of the expert validators' ratings and ensured consistent evaluation of the developed digitalized instructional material.

RESULTS AND DISCUSSION

The results and discussion presented in this chapter are grounded in the data gathered from the participants and interpreted directly in relation to the objectives of the study. The study involved 38 Grade 9 students from Durian National High School and 5 expert validators consisting of an ICT expert, a Master Teacher, an English Department Head, and two Learning Resources Management and Development System managers or coordinators, making a total of 43 participants involved in different phases of the research. The investigation followed a descriptive developmental research design guided by the ADDIE model. Complete enumeration sampling was used for the student participants while purposive selection was applied in choosing the expert validators. Data were collected through a teacher made diagnostic test, expert evaluation rubrics based on Learning Resources Management and Development System standards, and learner perception responses regarding the digitalized instructional material. Frequency and percentage distributions were used to determine the least learned competency while weighted mean and standard deviation were applied to analyze expert evaluations of the instructional material. The discussion that follows presents the

findings derived from these instruments and statistical treatments and interprets them in direct relation to the research objectives.

The analysis of the diagnostic test results revealed the least learned competency of the Grade 9 learners in English for the third quarter of School Year 2025 to 2026. The competency identified was “Differentiate biases from prejudice.” Out of the total 38 learners, 18 obtained mastery which corresponds to 47%, while 20 learners representing 53% were assessed as partially mastered. The total frequency was 38 with a percentage of 100.00. The interpretation indicates that a greater portion of the learners struggled with the competency since the majority fell under the partially mastered category. The findings suggest that learners encountered difficulty distinguishing between bias and prejudice despite being introduced to the concepts within the curriculum. This competency requires learners to demonstrate critical analysis, abstract reasoning, contextual interpretation, and evaluative judgment because they must examine texts, media content, and social situations in order to determine the presence of partiality or unfair generalizations. The pattern observed in the data indicates that many students possess basic conceptual awareness yet encounter difficulty when applying these concepts to authentic situations or when required to justify distinctions between the two ideas. This result reflects the emphasis of the Grade 9 English curriculum under the Most Essential Learning Competencies which highlight critical literacy, evaluation of truthfulness, identification of bias, and judgment of arguments within texts and media. Such competencies are cognitively demanding and are frequently reported as least learned skills among junior high school learners. These findings are consistent with educational observations reported by the Department of Education which has acknowledged learning gaps in higher order competencies and implemented interventions through curriculum streamlining and contextualized instructional materials to address these challenges.

In response to the identified learning gap, the digitalized instructional material was designed and developed to support Grade 9 learners in mastering the competency of differentiating bias and prejudice. The development process followed the ADDIE instructional design model to ensure systematic alignment with the K to 12 English curriculum and Department of Education standards. During the analysis phase the diagnostic results confirmed that bias and prejudice constituted the least learned competency. This guided the planning of instructional content. The design phase focused on structuring lessons, activities, and multimedia elements that would progressively guide learners from basic recognition to deeper analysis. In the development phase the instructional material incorporated accurate explanations, contextualized examples, guided activities, and reflective exercises aligned with the Most Essential Learning Competencies and Learning Resources Management and Development System indicators. Instructional strategies included guided practice, formative assessments, scaffolding, and reflective questioning in order to promote active participation and meaningful learning. Technical considerations emphasized usability, readability, and accessibility through clear layouts, appropriate color contrast, simple navigation, and the integration of multimedia elements designed to support various learning styles. Through this systematic development process the instructional material was prepared for expert evaluation and classroom implementation.

The expert evaluation of the digitalized instructional material in terms of content quality produced consistently high ratings. The indicators showed weighted means of 4 with SD .000 for the statements content is consistent with topics or skills, concepts developed contribute to enrichment reinforcement or mastery of the identified learning objectives, content is accurate, content is up to date, content is logically developed and organized, content stimulates and promotes critical thinking, language including vocabulary is appropriate to the target user level,

and content promotes positive values that support formative growth. The indicator content is free from cultural gender racial or ethnic bias obtained a weighted mean of 3.80 with SD 0.45 while the indicator content is relevant to real life situations also obtained a weighted mean of 3.80 with SD 0.45. The overall weighted mean for content quality was 3.96 with SD .054 and was interpreted as Very satisfactory and Highly recommended. The standard deviation values ranging from SD = 0.00 to 0.45 indicate strong agreement among the validators and demonstrate the stability and reliability of the ratings. The results show that the instructional material achieved high levels of accuracy, organization, and relevance while promoting critical thinking and value formation among learners. The indicator with the lowest rating remained within the Very satisfactory interpretation which indicates that although inclusivity and cultural neutrality were well observed there remains an opportunity for further refinement. The importance of content quality in digital instructional resources has been widely recognized in the literature as a central factor influencing comprehension and engagement (Cook et al., 2017). Educational design research emphasizes that logically organized content supported by multimedia examples enhances learner understanding and encourages analytical thinking. The findings of the present study demonstrate that the instructional material addressed the identified learning gap while aligning with curriculum standards and recognized principles of instructional content design.

The evaluation of the instructional quality of the digitalized instructional material also yielded highly favorable results. Indicators such as the purpose of the material is well defined, material achieves its defined purpose, learning objectives are clearly stated and measurable, level of difficulty is appropriate for the intended target user, graphics colors sounds are used for appropriate instructional reasons, material effectively stimulates creativity of the target user, and instruction is integrated with the target user's previous experience all received weighted means of 4 with SD .000 and were interpreted as Very satisfactory and Highly recommended. Indicators including material is enjoyable stimulating challenging and engaging, feedback on target users' responses is effectively employed, and the target user can control the rate and sequence of presentation and review obtained weighted means of 3.80 with SD 0.45 and were also interpreted as Very satisfactory and Highly recommended. The overall weighted mean for instructional quality was 3.94 with SD .134 with the interpretation Very satisfactory and Highly recommended. The relatively low SD values indicate consistent evaluations among the validators and reflect strong agreement regarding the pedagogical soundness of the material. These results demonstrate that the instructional material possessed clearly articulated objectives, appropriate difficulty levels, meaningful learning activities, and effective multimedia integration. The findings align with studies indicating that well structured instructional materials improve learner engagement and comprehension (Villanueva and Salazar, 2021). Research by Baleguian et al. (2025) also confirms that contextualized digital resources receive high expert ratings when tasks align with learners' cognitive levels and experiences. The presence of feedback mechanisms and opportunities for learner control of pacing corresponds with research suggesting that digital learning environments enhance engagement when learners can interact with materials actively and review content independently (Rice, 2021; Davis and Wong, 2020). These results confirm that the developed instructional material effectively supports meaningful learning and addresses the instructional demands associated with higher order thinking competencies in English 9.

The expert evaluation of technical quality further supports the effectiveness of the digitalized instructional material. Indicators including audio enhances understanding of the concept, speech and narration clarity, screen displays readability, clarity of non text visuals, visuals sustain interest without distraction, the design allows the target user to navigate freely through the material, and the material can easily and independently be used all obtained weighted means of 4 with SD 0.00 and were interpreted as Very satisfactory and Highly

recommended. Indicators including complete synchronization of audio with visuals, music and sound effects are appropriate and effective for instructional purposes, visuals provide an accurate representation of the concept discussed, and user support materials are effective obtained weighted means of 3.80 with SD 0.45 and were interpreted as Very satisfactory and Highly recommended. The overall weighted mean for technical quality was 3.93 with SD .117 which corresponds to the interpretation Very satisfactory and Highly recommended. These results indicate that the digitalized instructional material achieved high standards in usability, clarity, multimedia integration, and navigation. The technical structure of the material supported learners' ability to follow lessons independently while maintaining engagement. Research in educational technology consistently identifies technical quality as a crucial determinant of user satisfaction and learning effectiveness (Rice, 2021; Fitria et al., 2024; Limbu and Pham, 2023). The present findings support the view that well designed multimedia resources contribute to improved comprehension and learner participation. Studies by Villanueva and Salazar (2021) and Alibin (2021) similarly highlight that clear narration, readable text, and accurate visuals enhance language learning outcomes. The high ratings obtained in this study confirm that the instructional material met the technical expectations of effective digital learning resources.

The perceptions of the Grade 9 learners regarding the quality of the digitalized instructional material further reinforced the expert evaluations. Students reported that the content quality was easy to understand because exercises and tasks were explained step by step and supported by visuals. They emphasized that examples were relatable and connected the lesson to real life situations which improved comprehension. Regarding technical quality, students rated the materials as very satisfactory or very good. They reported that the audio was clear, visuals were bright, text was readable, and transitions were smooth. Learners also observed that there was no lag and that the overall organization of the video allowed them to follow the lesson easily. In terms of instructional quality, learners stated that the lessons were engaging, clear, and meaningful. The use of realistic scenarios helped them understand complex topics such as bias and prejudice while the combination of narration, visuals, and examples encouraged reflection and deeper understanding. Overall, the students perceived the digitalized instructional material as clear, engaging, and well designed with effective explanations and visuals that enhanced understanding. Their responses correspond with the expert evaluations which also rated the material as Very satisfactory.

Overall, the results demonstrate that the developed digitalized instructional material effectively addressed the identified least learned competency of differentiating bias and prejudice among Grade 9 learners. The diagnostic test results revealed that 20 learners representing 53% were only partially mastered while 18 learners representing 47% demonstrated mastery which justified the development of an instructional intervention. Expert validation produced overall weighted means of 3.96 for content quality, 3.94 for instructional quality, and 3.93 for technical quality, all interpreted as Very satisfactory and Highly recommended with consistently low SD values that indicate strong agreement among evaluators. Student perceptions further supported these findings as learners described the material as clear, engaging, and easy to understand. Collectively, the findings confirm that the systematic development process guided by the ADDIE model produced a pedagogically sound and technically reliable instructional material capable of supporting higher order learning competencies in English 9. These results contribute to the growing body of research emphasizing the value of validated digital instructional resources in addressing learning gaps and strengthening critical literacy skills. The insights derived from this analysis provide a

strong foundation for the subsequent chapter which presents the conclusions and recommendations of the study.

CONCLUSION

This study centered on the development and validation of a digital instructional material in English 9 intended to address the least learned competency identified among Grade 9 learners of Durian National High School during the third quarter of School Year 2025 to 2026. The investigation responded to the continuing need for interactive, engaging, and competency based instructional resources aligned with the Department of Education K to 12 and MATATAG curricula, particularly as schools seek to bridge the gap between traditional instructional approaches and the demands of twenty first century learning. The study was anchored on Constructivist Learning Theory and Mayer's Cognitive Theory of Multimedia Learning, and it was supplemented by the input process output model as the conceptual framework that guided the systematic flow of development, implementation, and evaluation of the instructional material.

Using a descriptive developmental research design guided by the ADDIE instructional design model, the study progressed through the phases of analysis, design, development, implementation, and evaluation. The research was conducted at Durian National High School in the District of Las Nieves, Schools Division of Agusan del Norte. The population and respondents consisted of all thirty-eight Grade 9 students enrolled during the third quarter of School Year 2025 to 2026, selected through complete enumeration sampling. In addition, three expert validators comprising an ICT expert, a Master Teacher, and a Learning Resources Management and Development System manager or coordinator participated in evaluating the developed instructional material. The research instruments included a teacher made diagnostic test and the Learning Resources Management and Development System evaluation rating sheet. Data analysis employed frequency and percentage distributions to identify the least learned competency of the learners, while the weighted mean was used to determine the quality of the digitalized instructional material in terms of content quality, instructional quality, and technical quality.

The findings indicated that the competency on differentiating biases from prejudice emerged as the least learned area, with most learners demonstrating only partial mastery based on the diagnostic test results. This outcome underscores a clear instructional need for an intervention that strengthens critical thinking, contextual analysis, and real-life application, since the competency requires learners to move beyond surface recognition and apply judgment in authentic language and media contexts. In direct response to this identified gap, the digitalized instructional material was designed and developed using constructivist principles and Mayer's Cognitive Theory of Multimedia Learning, integrating multimedia elements, learner centered activities, and guided practice tasks intended to support deeper understanding of the targeted competency. After development, the instructional material underwent expert validation using the Learning Resources Management and Development System evaluation tool, ensuring that its design and content adhered to recognized quality criteria.

Expert validation results showed that the digitalized instructional material was rated very satisfactory and highly recommended in terms of content quality, instructional quality, and technical quality. These findings support the conclusion that the instructional material was systematically developed through the ADDIE model and aligned with Department of Education curriculum standards, the Most Essential Learning Competencies, and Learning Resources Management and Development System quality criteria. The evaluation further indicates that the material was accurate, relevant, pedagogically sound, and technically functional, making it suitable for classroom use as a supplementary instructional resource in English 9. At the same

time, the results highlight the importance of periodic review to ensure continuous enhancement and to maintain the up-to-date quality of the instructional content and multimedia features.

In light of the findings and conclusions, the study recommends that English teachers utilize the developed digitalized instructional material as a supplementary instructional resource for addressing least learned competencies in English 9, particularly those requiring higher order comprehension and critical literacy skills. It is likewise recommended that school administrators strengthen support for the integration of validated digital instructional materials by providing adequate ICT infrastructure, continuous teacher training, and technical assistance to ensure effective classroom implementation. Curriculum planners and instructional material developers may also use the results of this study as a basis for developing similar digitalized instructional materials in other grade levels and subject areas aligned with the Department of Education MATATAG curriculum. Finally, future researchers are encouraged to conduct experimental or quasi experimental studies to determine the effectiveness of the digitalized instructional material in improving learners' academic performance, critical thinking skills, and motivation in English, thereby extending the evidence base for digital interventions in language education.

Overall, the study demonstrated that a systematically developed and expert validated digital instructional material can respond effectively to identified learning gaps in Grade 9 English by providing an engaging and standards aligned resource that supports mastery of challenging competencies. By anchoring development on established learning theories and using a structured instructional design framework, the study contributes to the growing body of work on quality assured digital learning resources in the Philippine basic education context. The conclusions and recommendations drawn from the findings provide a practical direction for classroom adoption, institutional support, continuous improvement, and future research, thereby preparing the groundwork for subsequent initiatives that expand the development and evaluation of digital instructional materials across learning areas and grade levels.

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