# DEVELOPMENT AND ACCEPTABILITY EVALUATION OF DIGITAL COMPETENCY TRAINING MODULE FOR DepEd TEACHERS

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**ABSTRACT**. *This study evaluates the development and acceptability of a digital competency training module designed for Department of Education (DepEd) teachers in Cagayan de Oro City Division. The study examines the perceived content, technical, and instructional quality of the module to determine its effectiveness in enhancing teachers' digital competencies. Data were collected from 33 participants using Likert-scale questionnaires and analyzed using the mean and standard deviation. The findings reveal high acceptability levels across all dimensions of the training module. Specifically, the module received highly acceptable ratings for content quality (M = 4.63), technical quality (M = 4.67), and instructional design quality (M = 4.66). These results indicate that the module effectively addresses teachers' needs, promotes active learning, and aligns with curriculum requirements. The implications of these findings suggest that the module could serve as a valuable resource for enhancing digital literacy and competency among educators nationwide. Recommendations for broader implementation, continuous improvement, and further research are provided to maximize the module's impact on teacher performance and student outcomes.*

Keywords: *Acceptability Evaluation, Digital Competency, Educational Technology, Teacher Development, Training Module*

## 1. INTRODUCTION

The teaching and learning process in the field of education has changed radically over the past century [1] as advancements in technology, shifts in pedagogical approaches, and evolving societal demands have necessitated a reevaluation of traditional educational practices. Teachers have embraced various digital tools to enhance their teaching practices, as highlighted by Christopoulos and Sprangers [2]. Javier [3] further underscores this trend, noting that the Department of Education (DepEd) has mandated educators to cultivate innovation in the classroom to fulfill its vision-mission statement. This mandate involves integrating digital teaching and learning tools seamlessly into the curriculum and instructional methods.

As the ICT coordinator and school head, the researcher personally observed that DepEd teachers in Cagayan de Oro have low levels of digital competence regarding digital technology integration in their teaching-learning practice. This observation is supported by Namoco and Zaharudin's [4] study, which highlights the insufficient utilization of digital technology by many educators. Similarly, Taimur, Sattar, and Dowd [5] concluded that teachers face external challenges in implementing digital technology in education effectively. Both studies emphasize the importance of strategies aimed at improving digital teaching practices, including enhancing student engagement, providing comprehensive training for teachers, students, and parents, ensuring access to necessary digital equipment, establishing flexible school policies, and fostering collaborative environments among educators.

Digital competence has indeed emerged as a prominent focal point in the educational landscape, with Basilotta-Gomez-Pablos et al. [6] highlighting its significant role as one of the key competencies that teachers must master in contemporary education. The concept of digital competence is defined by Duran [7] as a set of knowledge, skills and attitudes necessary for a teacher to make effective use of ICT from its different aspects (technological, informational, multimedia, communicative, collaborative and ethical), assuming pedagogical-didactic criteria for an effective integration of ICT in their educational practice and, in general, in any formal or non-formal situation.

A survey conducted by the researcher during the mid-year In-Service Training (INSET) revealed that a majority of the teachers in the North II district of the Division of Cagayan de Oro fall under the category of B1: Integrator in terms of their level of digital competence. This observation underscores the necessity to address their training needs, particularly focusing on the effective utilization of DepEd Online Productivity Tools as a means to enhance their digital competency.

The researcher advocated for a training module to enhance digital competency among educators in the North II District of the Department of Education. In response to identified concerns about digital proficiency among teachers, this proactive intervention aimed to equip educators with the skills needed to adapt to the rapidly evolving educational landscape. By empowering teachers to integrate technology seamlessly into teaching and learning, the training module addressed the imperative for educators to navigate and leverage modern educational technologies effectively. Through targeted instruction and hands-on practice, educators developed the confidence and proficiency to utilize technology as a facilitator of innovative teaching methodologies.

The proposed training module sought to bridge the digital competency gap by fostering a deeper understanding of digital tools and their application in the classroom. It aimed to create a dynamic learning environment that promoted teacher engagement and achievement while addressing the unique needs and challenges faced by educators in the North II District. By tailoring its content to the local educational context, the training module ensured maximum relevance and impact, ultimately enhancing the overall quality of education for teachers and students alike.

### 1.1 Training Module

Training modules are standalone parts of an overarching course, focusing on a specific topic, skill, or learning objective. These modules are typically interactive, incorporating multimedia elements such as videos, quizzes, and interactive exercises to engage learners and enhance the learning experience [8]. It also is a unit of content designed to

teach a topic in the most organized and coherent way possible. The structure to a course, and maximize its effectiveness. In other words, a training module is a lesson that focuses on teaching a specific skill or piece of knowledge, such as learning how to use a new tool or improving competencies in a particular area.

The development of the Training Module in this study aims to enhance the digital competence of teachers, drawing on insights from Hsu and Lin's [9] study, which highlighted the effectiveness of ICT-based interactive training modules in improving organizational development competencies for ICT-based primary school principals. Their research underscored the validity and practicality of such modules in enhancing skills and competencies among educational professionals.

In line with this, the Training Module for North II Teachers was designed to enhance their Digital Competence, with a focus on four topics: utilization of the DepEd online system and DepEd e-mail, development of learning resources, digitization of learning resources and crafting illustrations.

The training module was assessed using the Department of Education's (DepEd) instrument on three criteria: content quality, instructional quality, and technical quality. Content Quality ensures accurate, relevant, and up-to-date information aligned with digital competence objectives. It covers essential topics and provides valuable insights for effective technology integration. Meanwhile technical quality focuses on user-friendly interface, multimedia elements, and compatibility with devices. It ensures easy navigation and access to resources, enhancing the learning experience. Finally, the instructional quality focuses on the design and delivery of engaging learning experiences, including interactive activities and timely feedback. It promotes active learning and critical thinking, empowering teachers to effectively integrate technology into their teaching practices.

## 1.2 Research Questions

This study seeks to answer the following question: How acceptable is the digital competency training module for education in terms of: (a) the quality of its content, (b) the quality of instruction, and (c) the quality of its technical features?

## 2. METHODOLOGY

The focus of this study lies on the development and acceptability evaluation of the training module. Following a thorough training needs assessment, the researcher developed a comprehensive module tailored to address identified gaps in digital competency among educators. This module underwent evaluation by both DepEd and HEIs ICT experts to assess its acceptability, particularly in terms of content, technical, and instructional quality.

## 2.1 Research Design

The research design employed in this study is descriptive research, which aims to systematically describe phenomena and explore relationships between variables [10]. Descriptive research allows for a detailed examination of the characteristics of a particular population or phenomenon, providing valuable insights into its nature and attributes. In this study, the descriptive research design enables a comprehensive assessment of the acceptability and effectiveness of the digital competency training module among educators.

This study focuses on describing the extent to which the Digital Competency Training Module was deemed acceptable by participants, offering valuable insights into their perceptions and attitudes towards the intervention. By utilizing a descriptive research design, the study aims to provide a comprehensive understanding of the training module under investigation, informing future educational interventions and decision-making processes related to digital competency training.

## 2.2 Respondents

The respondents, who were purposefully selected from both the Department of Education (DepEd) and higher education institutions (HEIs) in Region X, brought diverse expertise in curriculum and digital technology to the study. Employing purposive sampling, the 33 experts were chosen to provide valuable insights into the acceptability evaluation of the Digital Competency Training Module. This method ensured comprehensive feedback while adhering to content validation guidelines. Table 1 presents the demographic profile of the expert respondents enlisted for the evaluation of the training module.

**Table 1. Demographic Profile of the Respondents (n=33)**

| Characteristics | Frequency | Percentage |
|---|---|---|
| **Gender** | | |
| Female | 16 | 48.5 |
| Male | 17 | 51.5 |
| | | |
| **Educational Qualification** | | |
| Bachelor's Degree | 10 | 30.3 |
| Master's Degree | 12 | 36.4 |
| Doctoral Degree | 11 | 33.3 |
| Total | 33 | 100.0 |
| | | |
| **Designation/Academic Rank** | | |
| HEI Instructor/Professor | 5 | 15.2 |
| School Head/Principal | 9 | 27.3 |
| ICT Coordinator | 11 | 33.3 |
| School Teacher | 6 | 18.2 |
| Supervisor/Specialist | 1 | 3.0 |
| | | |
| **Years in Service** | | |
| 1 to 5 years | 22 | 66.7 |
| 6 to 10 years | 8 | 24.2 |
| More than 10 years | 3 | 9.1 |
| | | |
| **Academe/Industry Expertise** | | |
| Content Expert | 18 | 54.5 |
| Curriculum Expert | 7 | 21.2 |
| Technical Expert | 8 | 24.2 |
| | | |
| **School/Agency Affiliation** | | |
| Elementary School | 6 | 18.2 |
| High School | 15 | 45.5 |
| Government HEI | 5 | 15.2 |
| private HEI | 3 | 9.1 |
| TESDA Training Centers | 2 | 6.1 |
| DepEd Administration | 2 | 6.1 |

The study included experts in Curriculum and Digital Technology, actively employed in both Department of Education (DepEd) or Higher Education Institutions (HEIs) within Region X, Philippines. These individuals demonstrated willingness to participate and possessed extensive experience in utilizing digital technology within

educational settings. The exclusion criteria encompassed individuals who lacked expertise in ICT and were not affiliated with either the Department of Education (DepEd) or Higher Education Institutions (HEIs) departments.

Through purposive sampling [11], which involves selecting subjects based on the researcher's discretion to fulfill the study's objectives, the 33 experts willingly participated. This sampling technique allowed for the selection of individuals with varied backgrounds and experiences in utilizing digital technology within educational contexts. The selection process aimed to ensure representation from various schools within Region X, thereby offering valuable insights into the acceptability of the Digital Competency Module.

### 2.3 Development of Module
The ADDIE model, representing Analysis, Design, Development, Implementation, and Evaluation, provided the structured approach for crafting the training module.

#### Analysis
The researcher carefully evaluated the training needs assessment of 179 DepEd teachers who responded to the online survey from the North II District. The 179 teachers who responded were the sample size out of the 300 teachers in the district. The data collection was conducted during the mid-year in-service training. This needs analysis phase provided feedback for the development of the customized training module in the design stage, specifically tailored to meet the identified needs and enhance the digital competence of the teachers. In this phase, it was found that the majority of the teachers belong to the B1 level of digital competency in education.

#### Design and Development
In the design phase, the structure and content of the training module were meticulously crafted, outlining the topics to be covered based on the results of the needs analysis and the instructional strategies to be employed. With a clear plan in place, the development phase involved the actual creation of the training materials, incorporating multimedia elements and interactive components to enhance engagement and effectiveness.

In this stage, evaluation focused on crafting a comprehensive structure and content for the training module. This involved assessing the alignment of topics and instructional strategies with identified needs, ensuring that the module effectively addressed the digital competence requirements of the teachers. Feedback from stakeholders and subject matter experts may have been solicited to refine the design further.

The design and development of the training module, guided by the TOGAA framework—theme, overview, goal, activities, and assessment—were instrumental in creating an engaging and effective educational experience. This structured approach ensured a comprehensive delivery of content that enhanced understanding, facilitated skill acquisition, and assessed digital competencies, ultimately empowering educators to effectively integrate digital tools into their teaching practices.

#### Theme
The initial component of a training module, the theme, sets the overarching subject or focus. It equips participants with a clear understanding of the core topics and underscores the importance of the training, thereby setting the foundation for all subsequent learning activities. The significance of having a well-defined theme extends to enhancing learner engagement, as it captures and maintains participants' interest by connecting the content to real-life challenges or experiences, as highlighted by Smith and Ragan [12]. Additionally, a theme promotes contextual learning by providing a consistent backdrop, helping learners see how new knowledge can be applied within their own professional or personal contexts, which enhances the transfer of skills, as noted by Morrison et al. [13].

#### Overview
In the Overview section of the training module, the facilitator presents themselves, provides a detailed agenda for the session, and elaborates on the importance of the digital competencies being developed. This segment is essential as it prepares participants for the upcoming content, ensuring they understand the structure and flow of the module. Furthermore, it clarifies how the training will serve their professional development needs. The necessity of an overview lies in its role in setting clear expectations and objectives, which, according to Dick, Carey, and Carey [14], enhances learner preparedness and motivation by explicitly connecting the learning outcomes to their professional goals. This alignment is crucial for adult learners who value practical applications of new knowledge in their current roles, as supported by Knowles, Holton, and Swanson [15], who emphasize the importance of relevance in adult learning theory.

#### Goal
The third element, Goal, delineates the learning objectives of the module. We express these objectives in quantifiable terms, elucidating the knowledge, skills, or competencies that participants will acquire. Well-defined goals steer the learning trajectory and establish benchmarks for success. Including clear goals in a training module is essential, as it provides learners with a sense of direction and purpose, facilitating focused learning outcomes. According to Smith and Ragan [12], setting specific goals enhances learner motivation and engagement. Moreover, Morrison et al. [16] emphasize that a clearly defined goal enables learners to understand the relevance of the training content to their professional development, fostering deeper engagement and commitment.

#### Activities
The fourth component involves incorporating interactive elements into the module to actively engage participants. These elements encompass a range of dynamic teaching methods, including group discussions, simulations, and practical exercises. These activities serve to reinforce the material presented and encourage participants to apply what they've learned in real-world scenarios, fostering deeper engagement with the content. Including activities in the training module is essential for promoting active learning and enhancing participant understanding and retention of the material. Research by Mayer [17] emphasizes the importance of active learning techniques, stating that they can lead to better learning outcomes compared to passive learning methods. Additionally, Bonwell and Eison [18] found that activities such as group discussions and practical exercises promote critical thinking and problem-solving skills among

learners. Therefore, incorporating activities into the training module not only enhances participant engagement but also facilitates meaningful learning experiences.

*Assessment*

The assessment segment plays a critical role in determining the effectiveness of the training. It encompasses a variety of evaluation methods, including quizzes, practical assignments, and peer reviews, aimed at assessing participants' comprehension and application of the skills taught. These assessments not only validate the attainment of learning objectives but also offer valuable feedback for both participants and trainers regarding the efficacy of the training. Including assessment in the training module is essential for ensuring that learning objectives are met and for gauging the overall effectiveness of the training program. Research by Black and Wiliam [19] highlights the importance of formative assessment in improving learning outcomes, stating that it provides ongoing feedback to learners and helps identify areas for improvement. Additionally, Hattie and Timperley [20] emphasize the role of assessment in enhancing student engagement and motivation, as it offers opportunities for self-reflection and growth. Therefore, incorporating assessment into the training module not only validates learning but also promotes continuous improvement and enhances the overall effectiveness of the training.

A cohesive framework that supports active learning and ensures that the training module meets its intended educational goals. The framework offers a concise overview of the identified needs of teachers, corresponding topics, and effective strategies to address these needs. Through a comprehensive exploration of relevant literature, this aims to provide insights into the effectiveness of various strategies and topics in meeting the diverse needs of educators. By aligning specific topics with corresponding strategies supported by empirical evidence, this resource serves as a valuable guide for educators and educational institutions seeking to enhance teacher development and effectiveness.

Evaluation during the development stage aimed to ensure the effective translation of design concepts into tangible training materials. This involved assessing the incorporation of multimedia elements, interactivity, and accessibility features within the module. Iterative feedback loops may have been employed to refine the materials and enhance their effectiveness in meeting the desired learning outcomes.

*Implementation*

Following development, the implementation phase saw the deployment of the training module to the target audience, ensuring accessibility and usability. Spanning a duration of three days, the training module was specifically designed to align with the schedule of the Learning Action Cells (LACs) for teachers. Each session of the module was tailored to last between eight and 12 hours per day, accommodating four hours of lecture and eight hours of hands-on activities to facilitate practical learning experiences. Research by Phillips and Phillips [21] suggests that a 40-hour training program can already yield significant results in terms of the variables being studied.

Before initiating data collection, the researcher secured the necessary permissions from experts in digital technology at

both the Department of Education (DepEd) and higher education institutions (HEIs). This step was taken in strict adherence to the Data Privacy Act of 2012, ensuring that all participants provided informed consent to willingly participate in the evaluation of the training module. This process emphasizes the commitment to ethical standards and the protection of participant data throughout the research study.

The data collection procedure consisted of several stages, as outlined in Table 2, which summarized the activities to be undertaken at each stage of the study.

**Table 2. Data Collection Procedure**

| Activities | Data Collection |
|---|---|
| Obtain permissions | Region X experts willingly participate the study |
| Answering the Online Survey | Send thru messenger the link of the online survey |
| Analyse and Interpretations of Data | Analyses and Interpretation of Data using SPSS |

During the implementation stage, the evaluation focused on the deployment and delivery of the training module to the target audience. This involved assessing the module's usability, relevance, and impact on participants' digital competence. Feedback mechanisms such as participant surveys, observations, and performance assessments may have been utilized to gauge the effectiveness of the module in real-world teaching environments.

*Evaluation*

In the evaluation phase, the acceptability of the training module was gauged through online surveys administered to experts from both the Department of Education (DepEd) and higher education institutions (HEIs) in Region X. Utilizing the five-point Likert scale. The survey provided valuable insights into the perceptions and experiences of the respondents regarding the impact of the training module on enhancing digital competency among educators.

Overall, the systematic approach of the ADDIE model facilitated the comprehensive development and successful implementation of the training module, ultimately contributing to the enhancement of teacher digital competence.

**2.4 Research Instrument**

The research instrument utilized in this study is structured into two main sections. The initial section pertains to the demographic profile of participants, encompassing variables such as sex, educational background, professional designation, years of service, expertise in academia, and affiliation with schools or agencies.

The second section of the research instrument is intended to measure the content quality, technical quality, and instructional quality of the training module, aiming to gather comprehensive data on these variables for analysis and evaluation.

In this study, a research instrument adapted from Vigor, Namoco, and Mohd Isa [22] was used to evaluate the training module's acceptability. The survey questionnaire assesses content quality, technical quality, and instructional quality using a 5-point Likert scale.

Utilizing the proven validity and reliability analysis techniques developed by Vigor, Namoco, and Mohd Isa [23] and Calibara, Namoco, and Mohd Hasan [24], the research tool used in this study ensures accurate measurement and credibility of the results. Thoroughly examined for validity and reliability, the tool received input from experts in northern Mindanao, as shown in Table 3, which displays the outcomes of reliability and validity assessments, confirming its ability to accurately measure the intended variables. Furthermore, the consistency in findings can be attributed to the shared respondent pool utilized in both studies, which comes from the same population. Therefore, in this current study, separate assessments for reliability and validity were not conducted due to the overlapping respondent pool. The reliability analysis of the research instrument was also conducted using Cronbach's Alpha. The lowest value is 0.840 and the highest value is 0.903 as indicated in table 3. This means that the parameters for assessing the acceptability of the module satisfied the reliability criteria.

**Table 3. Reliability Analysis [23]**

| Criteria | Cronbach Alpha |
|---|---|
| Content Quality | 0.903 |
| Technical Quality | 0.840 |
| Instructional Quality | 0.872 |

In assessing the reliability of the study, the Cronbach's Alpha coefficient is a commonly used measure. According to Hair et al. [25] [26], the acceptable values for Cronbach's Alpha typically range from 0.70 to 0.90, although the specific threshold may vary depending on the context of the study and the nature of the constructs being measured. A Cronbach's Alpha value above 0.70 indicates good internal consistency reliability, suggesting that the items in the scale are measuring the same underlying construct consistently. However, values closer to 0.90 are preferable as they indicate stronger reliability. Therefore, in this study, having a Cronbach's Alpha coefficient between 0.70 and 0.90 would be considered satisfactory, indicating a dependable measurement tool. The results from the study carried out by Vigor *et al*. [23] and Calibara *et al*. [24] showed that no factor scored less than 0.70, and none exceeded the 0.90 level. As a result, all factors met the reliability standards, guaranteeing the strength of the measurement tool.

### 2.4.1 Content Quality of the Training Module
Content quality serves as a cornerstone for gauging the acceptability of the training module, as it directly impacts the effectiveness of knowledge and skill transfer to teachers [27]. The significance of content knowledge in teacher learning cannot be overstated. Content validity, a critical aspect, is defined as the extent to which items in an instrument accurately represent the content universe to which the instrument will be applied [28]. Drawing from the study of Mercado [29], the researcher employed an adapted version to evaluate the content quality of the training module, as outlined in Table 3.

### 2.4.2 Technical Quality of the Training Module
Technical quality encompasses the precision and clarity of instructions, procedures, and data collection methods presented within the training module, crucial for its effectiveness as an instructional tool. This criterion scrutinizes whether the module facilitates active learning, critical thinking, and problem-solving among teachers. Scholarly research underscores that learning material quality is heightened when tailored to accommodate individual learner preferences and styles [30].

Each section of the survey featured question items evaluated on a five-point Likert scale, which ranged from not applicable to strongly agree. Table 4 outlines the Likert scale, providing detailed descriptions for each level of the scale to ensure clarity and uniform understanding among respondents. This instrument was designed to assess various dimensions of the Digital Competency Training Module, providing a comprehensive evaluation of its effectiveness and usability.

### 2.4.3 Instructional Quality of the Training Module
Instructional quality serves to evaluate the clarity of explanations, illustrations, and guidance provided within the Training Module, aiming to enhance the overall learning experience. This criterion scrutinizes whether the module effectively promotes active learning, critical thinking, and problem-solving among learners. Moreover, instructional quality refers to the extent to which an assessment is systematically sensitive to the nature of instruction offered. A valid test in this context is one that accurately reflects differences in the amount and type of instruction to which teachers have been exposed. Drawing from the study of Mercado [29], the researcher adapted a set of instructional quality standards to assess the training module.

### 2.7 Data Analysis
In the data analysis phase, the study utilized mean and standard deviation to evaluate participant responses. The mean provided an average response level, indicating the general perception of the training module's acceptability and effectiveness, while the standard deviation revealed the consistency of the responses. High means indicated positive evaluations, and lower means suggested areas for improvement. Small standard deviations showed agreement among participants, whereas larger ones highlighted varied opinions. This method aligns with common practices in educational research for summarizing and interpreting data [31, 32], facilitating a clear assessment of the impact of the module.

The data analysis process focuses on evaluating the acceptability of the Training Module among participants. This analysis involves interpreting responses based on a predefined scale ranging from Strongly Agree to Not Applicable. By categorizing participant responses according to this scale, insights into the perceived effectiveness and alignment of the Training Module with DepEd guidelines are derived. The data analysis aims to identify trends and patterns in participant perceptions, providing valuable insights into the overall effectiveness of the Training Module in enhancing digital competency among educators.

**Table 4. Five-Point Likert Scale**

| Scale | Range | Description | Interpretations |
|-------|-------|-------------|-----------------|
| 5 | 4.21-5.00 | Strongly Agree | The Training Module is highly acceptable and exceeds the required standard. |
| 4 | 3.41-4.20 | Agree | The Training Module is acceptable and meets the required standard. |
| 3 | 2.61-3.40 | Neutral | The Training Module meets the established standards. |
| 2 | 1.81-2.60 | Disagree | The Training Module does not fully meet the standard. |
| 1 | 1.01-1.80 | Strongly Disagree | The Training Module falls significantly short of meeting the standard. |

The data analysis involved tabulating and summarizing the responses within each scale to provide insights into the perceived acceptability of the Training Module among participants. This process facilitated the identification of trends and patterns in participants' perceptions, which contributed to the overall evaluation of the Training Module's effectiveness and alignment with DepEd guidelines.

## 3. FINDINGS
### 3.1 Content Quality of the Training Module
The content quality in educational training modules is crucial as it directly impacts the effectiveness and engagement of the learning process. In the context of the digital competency training module designed for Department of Education (DepEd) teachers in Cagayan de Oro City Division, content quality encompasses several key elements. These include the scientific adequacy and accuracy of the material, the use of active learning strategies, and the relevance of activities to the stated objectives. Furthermore, the organization of the module facilitates learning and comprehension, while evaluation methods align with objectives to measure teacher outcomes effectively. The module also supports the development of multiple intelligences and includes diverse, engaging illustrations and tasks. It adheres to curriculum requirements and maintains inclusivity by avoiding stereotypes. Each of these aspects is vital as it ensure the training module not only delivers content effectively but also resonates well with the teachers, enhancing their overall learning experience and competency in digital skills.

The results from the data analysis, using a (M=4.63, SD=0.558) indicate that the digital competency training module is highly acceptable among the DepEd teachers as shown in Table 5. The mean score falling in the highly acceptable range suggests that the teachers found the module's content quality to be excellent across various dimensions, from its scientific accuracy to its inclusive and engaging nature. This high level of acceptability likely

contributes to the observed increase in digital competency among the teachers. Such outcomes underscore the effectiveness of well-designed training materials in not only meeting educational standards but also in significantly enhancing teacher competencies in a targeted domain.

**Table 5. Level of Acceptability in Terms of Content Quality**

| Content Quality Items | Mean | SD | Description |
|-----------------------|------|-----|-------------|
| 1. The training module is scientifically adequate and accurate. | 4.70 | 0.529 | SA |
| 2. The training module emphasizes active learning strategies to enhance digital competency. | 4.52 | 0.508 | SA |
| 3. Each activity within the training module is directly relevant to the stated objectives. | 4.55 | 0.506 | SA |
| 4. The training module is well-organized, facilitating effective learning and comprehension. | 4.76 | 0.502 | SA |
| 5. The training module effectively evaluates teachers' learning outcomes in alignment with the stated objectives. | 4.64 | 0.489 | SA |
| 6. The training module allows for the development of multiple intelligences among participating teachers. | 4.52 | 0.795 | SA |
| 7. Topics within the training module are supported by illustrations and tasks that are suitable and engaging for teachers. | 4.55 | 0.711 | SA |
| 8. The training module is aligned with the curriculum requirements and educational standards. | 4.76 | 0.502 | SA |
| 9. The training module are inclusive and free from ethnic, gender, and other stereotypes. | 4.67 | 0.479 | SA |
| Overall Mean | 4.63 | 0.558 | SA |

The implications of these findings are profound. Acceptability of the training module correlates strongly with its effectiveness as a tool for enhancing digital competency among teachers. Previous studies have shown that high-quality training modules can significantly improve teaching skills and adaptability to new technologies [33]. As such, the positive reception of the module among Cagayan de Oro teachers suggests it could serve as a valuable resource for broader educational reforms aimed at integrating digital technologies into teaching practices. This scenario aligns with the broader educational goals of increasing digital literacy and competency, essential in today's technology-driven world [34]. Therefore, scaling such training modules

across different regions could potentially uplift the standard of education and digital fluency among educators nationwide.

**3.2 Technical quality of the Training Module**
Technical quality in educational materials is critical for ensuring that content is not only accessible but also engaging and effective in achieving learning objectives. For the digital competency training module designed for DepEd Teachers in Cagayan de Oro City Division, technical quality was assessed through various aspects: ease of understanding, user control over learning pace, graphic quality, layout attractiveness, user independence, clarity and motivational quality of language, aesthetic appeal of the manual, definition of symbols, and logical sequence of topics. High technical quality in these areas helps mitigate cognitive overload, enhances user interaction, and facilitates a smoother learning experience by aligning the design and functionality of the module with the needs of its users [35].

The analysis of acceptability of the module yielded a mean score of (*M=4.67, SD=0.494*), which categorizes it as highly acceptable among the teachers as shown in Table 6. This high level of acceptability likely contributes to the observed improvement in the digital competency levels of the teachers. The effective technical design, characterized by clear language, high-quality graphics, and a user-friendly interface, allows teachers to engage with the digital content more effectively, promoting better learning outcomes. These results underscore the critical role of well-designed technical features in educational technology, which support and enhance the pedagogical goals of the programs [36].

quality of training modules significantly affects learning efficiency and user satisfaction, which in turn impacts the overall effectiveness of the training [37]. Given the positive reception and the high level of technical execution of the module, it is likely to be an effective tool in the professional development of teachers, fostering not only individual competency but also enhancing the collective digital capability within the educational institution. This aligns with educational strategies aiming to integrate more digital resources into teaching, a critical move in modern education systems looking to keep pace with global digital advancements [38].

**3.3 Instructional quality of the training module**
The design quality in educational resources is a fundamental aspect that influences the effectiveness of learning by ensuring that materials are not only instructional but also engaging and responsive to learner needs. In the digital competency training module designed for DepEd Teachers in Cagayan de Oro City Division, several elements of design quality were assessed, including feedback mechanisms on answers, educational value, curriculum supplementation, relevance to teachers' concerns, support for collaborative and interactive learning, integration of teachers' previous experiences, utility of the manual for answering follow-up questions, reflection of current technological trends, and the appropriateness of graphics and colors for instructional objectives. Each of these components plays a vital role in making the training module an effective tool for teacher development by aligning the design with the cognitive and professional needs of the educators [37].

**Table 6. Level of Acceptability in Terms of Technical Quality**

| Technical Quality Items | Mean | SD | Description |
|---|---|---|---|
| 1. The module is easy to understand. | 4.73 | 0.452 | SA |
| 2. The module allows the teachers to control the pace of learning. | 4.52 | 0.566 | SA |
| 3. The graphics included in the module are of excellent quality. | 4.67 | 0.479 | SA |
| 4. The layout and design are attractive | 4.73 | 0.452 | SA |
| 5. Intend users can easily and independently use the training module | 4.64 | 0.549 | SA |
| 6. The language used is clear, concise and motivating | 4.67 | 0.479 | SA |
| 7. The manual is aesthetically pleasing | 4.73 | 0.452 | SA |
| 8. The symbols are well-define | 4.70 | 0.529 | SA |
| 9. Topics are presented in a logical and sequential order | 4.64 | 0.489 | SA |
| Overall Mean | 4.67 | 0.494 | SA |

The strong acceptability of the training module suggests it is a valuable resource for enhancing teacher digital competency. Previous research indicates that the technical

**Table 7. Level of Acceptability in Terms of Instructional Quality**

| Design Quality Items | Mean | SD | Description |
|---|---|---|---|
| 1. The module provides feedback on the accuracy of the teachers' answers. | 4.61 | 0.556 | SA |
| 2. The module offers high educational value. | 4.64 | 0.489 | SA |
| 3. It is good supplement of the curriculum | 4.64 | 0.549 | SA |
| 4. It addresses the needs and concern of the teachers | 4.76 | 0.502 | SA |
| 5. The training module facilitates collaborative and interactive learning | 4.67 | 0.479 | SA |
| 6. It integrates teachers previous experience | 4.61 | 0.609 | SA |
| 7. The manual introduction helps answering follow-up questions | 4.61 | 0.556 | SA |
| 8. It reflects current trends in technology instruction and experiments | 4.64 | 0.653 | SA |
| 9. The graphics, and colors used are appropriate for instructional objectives | 4.76 | 0.502 | SA |
| Overall Mean | 4.66 | 0.544 | SA |

Table 7 presents the analysis of acceptability of the training module in terms of Instructional Quality having a *(M=4.66, SD=0.544)*, classifying it within the highly acceptable range as shown in Table 8. This high acceptability score indicates that the module's design effectively meets the specific needs of the teachers, which is a critical factor in their professional development and the enhancement of their digital competencies. The success of the module in addressing these key design aspects can be seen as a direct contributor to the observed improvement in teachers' digital skills, as it provides a robust framework for learning that is both comprehensive and contextually relevant. This strong alignment with educational and professional standards supports the integration of new technologies and methodologies into everyday teaching practices [35].

The favorable evaluation of the training module suggests its substantial value as a resource for enhancing digital competency among teachers. According to previous studies, the quality and design of training modules significantly influence the acquisition of new skills and knowledge, particularly in fields requiring high levels of technical and pedagogical integration like digital education [39].

The high design quality of the module ensures that it not only supports but also advances the pedagogical capabilities of teachers, aligning with ongoing efforts to equip educators with the necessary tools to navigate and implement digital solutions in the classroom effectively. This finding underscores the need for continuous investment in and refinement of educational technologies to keep pace with evolving digital standards and learning environments [40].

## 4. CONCLUSION
This study comprehensively evaluated a digital competency training module designed for Department of Education (DepEd) teachers in Cagayan de Oro City Division, focusing on content, technical, and design quality. The evaluation results demonstrate that the module is highly acceptable across all three dimensions, indicating a robust and effective tool for enhancing digital competencies among teachers.

*Key Findings:*

Content Quality: The module scored an overall mean of 4.63, reflecting its high acceptability in terms of scientific accuracy, relevance, and engagement. Teachers appreciated the module's alignment with educational standards and its emphasis on active learning, which likely contributes to the enhanced digital competencies observed among participants [33].

Technical Quality: With an overall mean of 4.67, the module excels in ease of understanding, user-friendliness, and quality of graphics. These aspects ensure that the module is not only accessible but also engaging, enhancing the learning experience and supporting the effective adoption of new digital skills [36].

Design Quality: Scoring an overall mean of 4.66, the module effectively addresses teachers' needs, integrates current technological trends, and supports interactive learning. This reflects a high level of design sophistication, which is crucial for fostering an environment conducive to professional development and the practical application of new knowledge [41].

*Implications*

The success of the training module suggests that it could serve as a model for future educational materials aimed at enhancing teacher competencies, particularly in the realm of digital literacy and technology integration. The high acceptability and effectiveness of the module underscore the importance of a meticulous approach to designing educational resources that consider content accuracy, technical ease, and pedagogical relevance.

In conclusion, the digital competency training module for DepEd teachers in Cagayan de Oro City Division exemplifies a high standard in educational material design and implementation, with significant potential for contributing to national educational goals. Its development and execution provide valuable insights into the creation of effective digital educational tools, which can significantly enhance the digital literacy and competency of educators, ultimately benefiting the broader educational landscape.

## 5. RECOMMENDATIONS
To leverage its success, several recommendations can be considered. Firstly, based on its demonstrated effectiveness, broader implementation is warranted. Adapting and scaling the module across other divisions or regions while tailoring content to meet local needs and conditions could extend its impact. Secondly, continuous improvement is essential. Regular updates and refinements should be made to the module to incorporate the latest technological advancements and pedagogical strategies, ensuring that the training remains current and effective. Lastly, further research is needed to explore the long-term impacts of the module on teacher performance and student outcomes, providing deeper insights into the efficacy of digital competency training in educational settings. By addressing these recommendations, the module can continue to serve as a cornerstone in enhancing teacher competencies and advancing digital education initiatives nationwide.

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