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The Philippine Secondary Public-School Teachers Digital Competence Based on the European Framework: A Proposed Training Program

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Abstract

To advance and innovate the 21st-century classroom, a strong determination is required to provide instructors with the opportunity to learn and implement innovative pedagogical practices and digital resources that enhance students' learning experiences. This study intends to assess the master teachers' digital competence based on the DigCompEdu framework of the European Union, which sets international best practices (Redecker, 2017). Twenty master teachers from the AROMAR District of Caloocan City, representing 100% of the total, took part in this quantitative study. The study used a questionnaire that was directly taken from the SELFIE for Teachers of the European Framework for Digital Competence of Educators (European Commission, 2017; Redecker, 2017; European Commission, 2022). The study utilized basic statistics, including mean and percentage, to assess the digital competency of respondents and establish the foundation for an appropriate digital training program for secondary master teachers in public schools. The results showed that most respondents were categorized as "explorers," leading to a notable outcome and a strong need for improving their digital skills (Redecker, 2017; European Commission, 2022).

Keywords: *Teachers' Digital Competence, Innovative Pedagogies, Digital Training Program, Digital Advancement, Digital Resources*

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INTRODUCTION

Educators play a significant part in equipping students with the skills needed for global competitiveness in the 21st century. As education systems evolve to meet the demands of a knowledge-based society, teachers are expected to demonstrate outcome-based performance and foster 21st-century skills in the classroom (Redecker, 2017). Despite various reforms, including the implementation of the Philippine Professional Standards for Teachers (PPST), international assessments such as PISA and TIMSS continue to show the Philippines underperforming compared to other nations (Magambol, 2020; Big Pond Education, 2022). This raises concerns about the adequacy of current teaching strategies and the extent to which digital and critical competencies are effectively integrated into the classroom environment (Caena & Redecker, 2019; Cabero-Almenara et al., 2020).

Research indicates that Filipino teachers often struggle with the conceptual clarity and practical application of 21st-century skills. A study commissioned by UNICEF and conducted by Scoular (2020) revealed that many teachers are unfamiliar with frameworks like the Holistically Developed Filipino and the DepEd-specified seven 21st-century skills. While problem-solving and collaboration were occasionally observed in classrooms, they were not consistently practiced as structured, skill-based approaches. Teachers also reported a lack of in-depth professional development, with workshops failing to provide actionable strategies for skill integration, resulting in calls for evidence-based training and classroom-ready resources.

This study seeks to evaluate the digital competence of secondary master teachers in public schools using the European Framework for the Digital Competence of Educators (DigCompEdu) as a benchmark (European Commission, 2017). The European Commission's Joint Research Centre developed the comprehensive and evidence-based European Framework for the Digital Competence of Educators (DigCompEdu) to guide and support educators at all levels and in diverse educational contexts. It promotes technical expertise and meaningful integration of digital technology into teaching, learning, and professional practice to improve educator effectiveness and student outcomes Redecker, C. (2017).

DigCompEdu's six interconnected areas of competence provide a holistic view of digital competence in education. Professional Engagement emphasizes how educators can use digital platforms for communication, collaboration, reflective practice, and professional advancement. Digital Resources include finding, creating, modifying, and appropriately managing digital content. The third, Teaching and Learning, emphasizes digital tools, effective education, and collaborative and self-directed learning F. Caena & C. Redecker (2019).

Digital technology can be utilized to construct diverse assessment procedures, analyze learning data, and deliver tailored feedback in the fourth category, Assessment. Fifth, Empowering Learners, uses technology to encourage inclusivity, personalization, and active learning. Finally, Facilitating Learners' Digital Competence emphasizes the educator's role in teaching students information literacy, online communication, content production, responsible digital behavior, and problem-solving. The six categories and 22 sub-competences provide a clear and actionable professional growth framework Redecker, C. (2017).

DigCompEdu offers a progression paradigm with six competency levels: A1 Newcomer, A2 Explorer, B1 Integrator, B2 Expert, C1 Leader, and C2 Pioneer to let instructors track their success. This approach helps instructors to self-assess their present stage—from beginning digital tool exploration to leading digital pedagogy innovation—and set clear, achievable goals for growth Caena, F., & Redecker, C. (2019).

SELFIEforTEACHERS, a structured questionnaire that provides educators with feedback on their strengths and weaknesses, helps implement the framework. Teachers can create personalized professional development plans based on the framework's competencies with actionable feedback.

DigCompEdu provides educators and institutions with a strategic roadmap to improving digital competence in a fast-changing educational landscape by combining conceptual clarity with practical direction. It meets the needs of 21st-century teaching and prepares students for a technologically advanced, globalized world José María Fernández-Batanero, M., Montenegro-Rueda, J., Fernández-Cerero, J., & García-Martínez, I. (2020) By assessing current competencies, the research aims to design a targeted training program that enhances digital literacy and global competency among teachers in the AROMAR District of Caloocan City. Findings from this study are expected to contribute to the ongoing efforts of the Department of Education to align teaching practices with international standards and to equip educators with the necessary tools for meaningful, globally competitive instruction (Caena & Redecker, 2019; Redecker, 2017).

A Philosophical Viewpoint

The pragmatic philosophical framework, which emphasizes the practical application of knowledge and the ongoing modification of educational methods to meet changing societal and technological needs, serves as the foundation for this study. This viewpoint, which has its roots in the writings of pragmatists like John Dewey, highlights problem-solving, reflective practice, and experiential learning as crucial elements of successful education. Dewey, J. (1916). According to pragmatic theory, education in the twenty-first century should be dynamic, relevant, and sensitive to the demands of the outside world. The pragmatic principle that educational initiatives must be based on empirical evidence and evaluated through measurable outcomes is reflected in the focus on assessing the digital competency of secondary master teachers using the European Framework for the Digital Competence of Educators (DigCompEdu). This method is consistent with the idea that knowledge reaches its maximum potential when it can be successfully used to further practice. Redecker, C. (2017)

This way of thinking also recognizes that developing practical skills that allow teachers to incorporate digital literacy and critical thinking into their lessons is just as important to teacher professional development as learning theoretical knowledge. By taking this stance, the study supports the need for education to be a dynamic and transformational force that equips educators and students to deal with the challenges of a technologically advanced, globalized world. Alcontin, T. N. (2021)

Objectives

The main purpose of this study was to determine the level of digital competence of Master Teachers in the Philippine Secondary Public Schools based on the standards given in the European Framework as external benchmarking of best practices in various aspects of professional, pedagogic, and learner competence (Redecker, 2017).

Specifically, this study attempted to answer the following questions:

1. What is the level of digital competence of selected secondary master teachers in public schools as revealed by the European Framework Self-reflection Tool, which acts as an external standard in the following areas:

1.1 professional engagement;

1.2 digital resources;

1.3 teaching and learning;

1.4 assessment;

1.5 empowering learners; and

1.6 facilitating learners' digital competence?

2. Which specific competencies under each area necessitate reinforcing or advancing digital training programs?

3. What reinforcing or advancing digital training program can be proposed?

METHODS

The researcher employed the descriptive-survey research method to determine the level of competence of the teachers based on the given standards in the European Framework. An important and well-known instrument for evaluating and improving educators' digital skills is the European Framework for the Digital Competence of Educators (DigCompEdu) Redecker, C. (2017). It is especially useful as a diagnostic tool because of its structured approach, which makes it possible to systematically identify strengths and shortcomings. Studies carried out in a variety of settings, including national adaptations like Spain's Common Framework for Digital Competence of Teachers (CDCFT), have shown that the framework can reveal both the technical proficiency of educators and their ability to effectively incorporate these skills into their teaching practices (Cabero-Almenara et al., 2020; Lázaro-Cantabrana et al., 2019). Results consistently show that although many teachers are proficient in using and managing digital resources, there are still significant gaps in areas such as digital-based evaluation and helping students develop their own digital competency (Instefjord & Munthe, 2017; Claro et al., 2018).

The framework's usefulness in directing professional development programs is further supported by research. For example, self-paced and modular training packages for pre-service and in-service teachers have been designed with input from DigCompEdu Cabero-Almenara, J., Barroso-Osuna, J., Palacios-Rodríguez, A., & Llorente-Cejudo, C. (2020). It has been demonstrated that these programs, which are in line with the six competency areas of the framework, foster advancement in digital communication, pedagogical integration, ethical and responsible technology use, and digital literacy. Although quantifiable increases in competency levels have been noted, the research shows that individual factors—specifically, educators' self-efficacy, attitudes towards technology, and intrinsic motivation—have a significant impact on how effective such interventions are.

DigCompEdu has been recognized by a number of European nations as a strategic resource for promoting digital pedagogy and directing ongoing professional development at the policy level. However, there has been unequal implementation across education systems, with several jurisdictions lacking consistent capacity-building programs and strong monitoring procedures. This shows that even if the framework offers thorough and unambiguous direction, its long-term effects will rely on how well institutional policies, sufficient funding, and continual professional development opportunities integrate it.

Overall, data suggests that DigCompEdu has been a significant influence as a framework for evaluation and development. In addition to offering a road map for incorporating technology into instruction in ways that improve student engagement and results, it has increased educators' understanding of the complex nature of digital competency Instefjord, E. J., & Munthe, E. (2017). However, its revolutionary potential is best realized when combined with focused training, encouraging institutional settings, and a reflective practice culture that enables teachers to advance beyond rudimentary knowledge to leadership and innovation in digital education.

This method is used to gather data about varying subjects and is undertaken when the investigator is after probing or exploring areas where little is known about the research problem (Creswell & Creswell, 2018). In addition, benchmarking was utilized to collect, analyze, and summarize the digital level of competence of secondary master teachers as a result of their best practices based on the European Framework (Redecker, 2017). Thus, the descriptive quantitative research design, which is a quantitative research method, attempts to collect quantifiable information for statistical analysis of the population sample (McCombes, 2023).

The data aimed to determine the extent to which different conditions can be obtained among these subjects (Formplus, 2021). This approach allows for the gathering and collection of information and the statistical analysis of numerical data to assess the level of digital competence of Master Teachers in public schools, with the European Framework serving as an external benchmarking tool for the advancement of educators' digital skills (Redecker, 2017).

A PROPOSED DIGITAL TRAINING PROGRAM FOR MASTER TEACHERS IN THE SECONDARY PUBLIC SCHOOLS OF AROMAR DISTRICT, DIVISION OF CALOOCAN

I. Rationale

The findings of the study have revealed specific competencies that serve as the basis for developing advancement or reinforcement for the teachers' digital training as part of their professional development (Ghomi & Redecker, 2019). The specific competencies identified from each area that are necessitated for advancement or reinforcement were the following:

(1) use digital technologies for communication;

(2) use the internet to find resources for teaching and learning;

(3) determine the process of using digital technologies in self-regulated activities or assignments;

(4) apply ways of how digital technologies can help in providing feedback to learners or adapting it as teaching strategies;

(5) practice the use of digital technologies to motivate or engage learners; and

(6) provide learning tasks that foster learners' digital communication and collaboration.

II. Training Target

Participants: The participants are Secondary Master Teachers in Public Schools.

Number of Hours: The training time will cover eight hours a day in 5 days for a total of 40 hours.

Delivery of Platform: The delivery is a combination of virtual and face-to-face.

III. Program Objectives

To develop the digital enhancement of the teachers' pedagogies and strategies for the betterment of the students which sustain the requirements of the 21st-century teaching and learning processes towards quality education (Redecker, 2017).

Specific goals:

The advancement training will implement the following specific learning objectives:

1) identify the level of digital competence of the participants;

2) equip the participants' digital competence through the advanced use of technologies and digital learning competencies; and

3) apply the digital competences of the participants in their pedagogical strategies.

IV. Time Frame

School-based Midyear In-service Training or during Semestral Break

A Proposed Digital Training Program for Master Teachers in the Secondary Public Schools of the AROMAR District, Division of Caloocan						
CONTENT/TOPIC	**LEARNING COMPETENCIES**	**ACTIVITIES**	**METHODS**	**DURATION**	**PERSONS INVOLVED**	**EXPECTED PERFORMANCE**
Introduction 1. Relevance of the course. 2. Core competency in digital pedagogies. 3. Enhancement of teachers' digital competence.	1. Explain the relevance of the course. 2. Identify the core competency in digital pedagogies. 3. Enhance the teachers' digital skills through the identified competencies.	1. Conduct a self-assessment to recognize the digital abilities that align with 21st-century skills. 2. Make a development plan that identifies the strengths and development needs to improve digital pedagogies.	- Assess the individual digital competence of the participants using the questions taken from the European Digital Competence for Educators. - Prepare an Action Plan for development intervention to be taken based on the results.	Day 1	- Principal as Program Director - Training Facilitators - Program Managers (Head Teachers, and Subject Coordinators) - Technical Working Group (TWG)	The teacher demonstrates an understanding of the core competencies aligned with the European Framework of Digital Competence for Educators (DigCompEdu).

A Proposed Digital Training Program for Master Teachers in the Secondary Public Schools of the AROMAR District Division of Caloocan						
CONTENT/TOPIC	**LEARNING COMPETENCIES**	**ACTIVITIES**	**METHODS**	**DURATION**	**PERSONS INVOLVED**	**EXPECTED PERFORMANCE**
Training Proper 1. **Professional Engagement** 1.1 Organizational communication. 1.2 Online learning environments. 1.3 Professional collaboration. 1.4 Digital Technologies and school-level infrastructure. 1.5 Reflective Practice. 1.6 Digital life. 1.7 Professional learning (through digital technologies). 1.8 Professional learning (about digital technologies). 1.9 Computational thinking.	Lesson 1: Use digital technologies to make administrative procedures more transparent for learners and/or parents and to allow them to make informed choices on future learning priorities. Lesson 2: Use a variety of other sources, e.g., collaborative platforms, official repositories, etc.	Use digital technologies and channels to facilitate innovative practices: 1. create channels for seminars and training using the following platforms: 1.1 Messenger 1.2 Facebook Group/ Page 1.3 Microsoft Teams 1.4 Google Classroom 1.5 Quipper 2. use digital technologies to communicate organizational procedures to learners, parents, and colleagues e.g. rules, appointments, and events.	Communicate via the organization's website or through corporate digital technologies, platforms, or communication services contracted. - Assign a platform to each group where they can create channels for their class, parents, and colleagues. - Conduct an appropriate digital conversation, instructions, or information dissemination in the designated channel for the upcoming events.	Day 1	- Training Facilitators - Program Managers (Master Teachers, Head Teachers, and Subject Coordinators) - Teachers/ Participants	The teacher independently creates channels and contributes to developing a coherent vision or strategy for using digital technologies effectively and responsibly for communication. Target Level of Learning Progression: **Newcomer (A1)**

A Proposed Digital Training Program for Master Teachers in the Secondary Public Schools of the AROMAR District, Division of Caloocan						
CONTENT/TOPIC	**LEARNING COMPETENCIES**	**ACTIVITIES**	**- METHODS**	**DURATION**	**PERSONS INVOLVED**	**EXPECTED PERFORMANCE**
2. **Digital Resources** 2.1 Searching and selecting. 2.2 Creating. 2.3 Modifying. 2.4 Managing and protecting. 2.5 Sharing	Lesson 1: Guide colleagues on effective search strategies and suitable repositories and resources. Lesson 2: Reflect on the appropriateness of digital strategies in fostering self-regulated learning and continuously enhancing my strategies.	Comprehensively apply a variety of strategies in selecting digital resources: 1. formulate appropriate search strategies to identify digital resources for teaching and learning. 2. select suitable digital resources for teaching and learning, considering the specific learning context and learning objective. 3. critically evaluate the credibility and reliability of digital sources and resources.	- Create a lesson plan with learning objectives and learning tasks by applying the effective use of digital resources. - Guide the participants in the selection and use of appropriate digital teaching and learning resources. - Evaluate the reliability of using a variety of other sources, e.g. collaborative platforms, official repositories, etc.	Day 2	- Training Facilitators - Program Managers (Master Teachers, Head Teachers, and Subject Coordinators) - Teachers/ Participants	The teacher demonstrates creativity in identifying and assessing suitable resources, considering all relevant aspects. Target Level of Learning Progression: **Explorer (A2)**

A Proposed Digital Training Program for Master Teachers in the Secondary Public Schools of the AROMAR District, Division of Caloocan						
CONTENT/TOPIC	**LEARNING COMPETENCIES**	**ACTIVITIES**	**METHODS**	**DURATION**	**PERSONS INVOLVED**	**EXPECTED PERFORMANCE**
3. **Teaching and Learning** 3.1 Teaching. 3.2 Guidance. 3.3 Collaborative Learning. 3.4 Self-regulated learning. 3.5 Emerging technologies.	Lesson 1: Reflect on the appropriateness of digital strategies in fostering self-regulated learning and continuously enhancing strategies. Lesson 2: Develop new digital formats and/or pedagogical approaches to foster self-directed learning.	Facilitate learning that can happen through digital technologies: 1. create (e.g. blogs, diaries, planning tools) to allow learners to plan their learning. 2. collect evidence and record progress, e.g. audio or video recordings, photos. 3. record and showcase their work through e-Portfolios and learners' blogs. 4. reflect on and self-assess their learning process.	Prepare learning activity sheets that would develop the student's creativity through the following techniques: - blogs - diaries - infomercial - audio or video recording - e-Portfolio	Day 3	- Training Facilitators - Program Managers (Master Teachers, Head Teachers, and Subject Coordinators) - Teachers/ Participants	The teacher demonstrates digital skills that develop new digital formats and/or pedagogical approaches to foster self-directed learning. Target Level of Learning Progression: **Integrator (B1)**

A Proposed Digital Training Program for Master Teachers in the Secondary Public Schools of the AROMAR District, Division of Caloocan						
CONTENT/TOPIC	**LEARNING COMPETENCIES**	**ACTIVITIES**	**METHODS**	**DURATION**	**PERSONS INVOLVED**	**EXPECTED PERFORMANCE**
4. **Assessment** 4.1 Assessment strategies. 4.2 Analyzing evidence. 4.3 Feedback and planning.	Lesson 1: Use the data generated by digital technologies to reflect on which teaching strategies work well for which kind of learners and adapt teaching strategies accordingly. Lesson 2: Reflect on, discuss, re-design, and innovate teaching strategies in response to the digital evidence for the effectiveness of different teaching interventions and learning formats.	Provide learning experience among the learners using the following learning tasks: 1. use digital technology to grade and give feedback on electronically submitted assignments. 2. provide personal feedback and offer differentiated support to learners, based on the data generated by the digital technologies used. 3. enable learners to evaluate and interpret the results of formative, summative, self and peer assessments.	Utilize generated digital data for the following purposes: - personalize feedback and support. - evaluate and improve teaching.	Day 4	- Training Facilitators - Program Managers (Master Teachers, Head Teachers, and Subject Coordinators) - Teachers/ Participants	The teacher will reflect on, discuss, re-design, and innovate teaching strategies in response to the digital evidence found, as concerns learners' preferences and needs as well as the effectiveness of different teaching interventions and learning formats. Target Level of Learning Progression: **Expert (B2)**

A Proposed Digital Training Program for Master Teachers in the Secondary Public Schools of the AROMAR District, Division of Caloocan						
CONTENT/TOPIC	**LEARNING COMPETENCIES**	**ACTIVITIES**	**METHODS**	**DURATION**	**PERSONS INVOLVED**	**EXPECTED PERFORMANCE**
5. **Empowering Learners** 5.1 Accessibility and inclusion. 5.2 Differentiation and personalization. 5.3 Actively engaging learners. 5.4 Blended learning.	Lesson 1: Reflect on how suitable the different digital technologies are in increasing learners' active learning and adapt the strategies and choices accordingly. Lesson 2: Reflect on, discuss, re-design, and innovate pedagogical strategies for actively engaging learners.	Encourage active participation of the students to improve learning outcomes: 1. visualize and explain new concepts in a motivating and engaging way, e.g. by employing animations or videos. 2. employ digital learning environments or activities that are motivating and engaging, e.g. games, and quizzes. 3. use different senses, manipulating virtual objects, varying the problem set up to enquire into its structure, etc. to actively engage the learners with the subject matters at hand.	Critically implement the appropriate tool to the digital strategies to gamify learning task for fostering learner active engagement in each learning context or for a specific learning objective. - Group Discussion - Demonstration - Gamified learning tasks	Day 5	- Training Facilitators - Program Managers (Master Teachers, Head Teachers, and Subject Coordinators) - Teachers/ Participants	The teacher demonstrates skills in selecting, designing, employing suitable digital technologies to increase learners' active learning. Target Level of Learning Progression: **Leader (C1)**

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CONTENT/TOPIC	**LEARNING COMPETENCIES**	**ACTIVITIES**	**METHODS**	**DURATION**	**PERSONS INVOLVED**	**EXPECTED PERFORMANCE**
6. **Facilitating Learners' Digital Competence** 6.1 Information and data literacy. 6.2 Communication and collaboration. 6.3 Content creation. 6.4 Safety and wellbeing. 6.5 Responsible use. 6.6 Problem solving.	Lesson 1: Incorporate assignments and learning activities that require learners to use digital technologies effectively and responsibly for communication, collaboration, knowledge co-creation, and civic participation. Lesson 2: Reflect on, discuss, re-design, and innovate pedagogical strategies for fostering learners' digital communication and collaboration.	Incorporate learning activities, assignments, and assessments that encourage and require learners: 1. share data, information, and digital content with others through appropriate digital technologies. 2. know about referencing and attribution practices. 3. be aware of behavioral norms and know-how while using digital technologies and interacting in digital environments.	Integrate assignments and learning activities that require learners to use digital technologies effectively and responsibly for communication, collaboration, knowledge, co-creation, and civic-participation.	Day 6	-Training Facilitators -Program Managers (Master Teachers, Head Teachers, and Subject Coordinators) -Teachers/ Participants	The teacher confidently uses innovative formats to foster learners' digital communication and collaboration. Target Level of Learning Progression: **Pioneer (C2)**

V. Program Overview

A unique training program called Digital Competence aims to equip master teachers in secondary public schools with innovative digital skills and techniques. This initiative provides them with the knowledge, skills, and resources needed to effectively integrate technology into teaching practices and lead digital advancement within their school communities, recognizing their crucial role in coaching and mentoring co-teachers (Redecker, 2017; DO_s2016_035, 2016; Ilomäki, Kantosalo, & Lakkala, 2011). It is designed to give educators the essential digital skills for 21st-century teaching and learning, strengthening their abilities, confidence, and efficacy in incorporating technology while advancing their levels of digital proficiency (Caena & Redecker, 2019; Mattar, Santos, & Cuque, 2022; José María Fernández-Batanero et al., 2020; Mazariegos, 2020).

VI. Selection Criteria

The training program may apply these selection criteria, the digital training program can identify master teachers who have the motivation, capacity, and potential to become catalysts for digital innovation and educational transformation within secondary public schools. The participants who wish to enter the course should possess the following requirements:

1. obtained expertise in a secondary school as a master teacher.
2. must have a rudimentary understanding of how to use technology and digital tools for teaching (Redecker, 2017).
3. devoted to lifelong learning and professional development.
4. capable of sharing best practices, resources, and expertise with peers with a positive attitude, and taking part in peer mentorship and learning.

5. can recognize possibilities and difficulties in digital teaching and learning and create plans of action to successfully handle them.

VII. Program Tools

To support the proposed digital competence training program for master teachers in secondary public schools, a range of tools and resources are important to facilitate learning, collaboration, and the effective integration of technology into teaching practices (Redecker, 2017). Here are some key program tools:

1. Maximize some online platforms, such as Google Classroom, to provide training materials, tools, and assignments in a methodical and well-organized way.
2. For in-person seminars, group discussions, and synchronous training sessions, use video consultation platforms such as Zoom, Microsoft Teams, or Google Meet.
3. Establish a centralized digital library or online repository with carefully chosen resources, guides, lesson plans, and best practices for teaching online.
4. To facilitate continuous contact and cooperation among master teachers, provide them access to platforms and communication tools like Slack, Google Workspace (previously G Suite), and Microsoft Teams.
5. Give users access to digital content creation resources like Canva, Adobe Creative Cloud, or Sway so they can create captivating presentations and multimedia content.
6. To evaluate master teachers' learning progress and obtain feedback, create interactive polls, surveys, and quizzes using online assessment tools like Quizizz, Kahoot, or Google Forms.

VIII. Methods of Assessment

The digital training program will implement a comprehensive assessment framework that can effectively evaluate master teachers' progress, learning outcomes, and the overall effectiveness of the program in enhancing digital teaching practices and advancing educational goals in secondary public schools (Redecker, 2017). The program will implement the processes below:

1. Determine the master teacher level of digital competency and proficiency by using the European Framework's online self-assessment instrument.
2. Throughout the training program, use formative evaluation techniques to gauge participants' competence levels and track their learning, engagement, and progress.
3. Create assignments or projects that are performance-based and call for master teachers to use their digital expertise in real-world classroom settings.
4. Mandate the master teachers to create a digital teaching portfolio that highlights their accomplishments, projects, and proof of growing their digital competencies.
5. Examine assessment results to determine whether the program met its goals overall and to guide future training program versions.
6. Observe classes at regular intervals following the training program's conclusion to conduct follow-up evaluations and gauge the program's long-term effects on participants' teaching strategies and student outcomes.

VIII. Target Levels

The European Framework for Digital Competence for Educators will be used to evaluate the participants' target levels of competence following the suggested digital training program (Redecker, 2017). This will be used to assess how well

the participants have used digital technology in a responsible manner in accordance with accepted digital competencies. Completion of the following requirements is required:

Newcomer (A1): They are aware of the potential of digital technologies for enhancing pedagogical and professional practice. need guidance and encouragement to expand their repertoire and to apply their existing digital competence in the pedagogical realm (Redecker, 2017).

Explorer (A2): They are aware of the potential of digital technologies and are interested in exploring them to enhance pedagogical and professional practice. They have started using digital technologies in some areas of digital competence, without, however, following a comprehensive or consistent approach (Redecker, 2017).

Integrator (B1): They do experiment with digital technologies in a variety of contexts and for a range of purposes, integrating them into many of their practices. They creatively use them to enhance diverse aspects of their professional engagement. They are eager to expand their repertoire of practices (Redecker, 2017).

Expert (B2): They use a range of digital technologies confidently, creatively, and critically to enhance their professional activities. They purposefully select digital technologies for particular situations and try to understand the benefits and drawbacks of different digital strategies (Redecker, 2017).

Leader (C1): They have a consistent and comprehensive approach to using digital technologies to enhance pedagogic and professional practices. They rely on a broad repertoire of digital strategies from which they know how to choose the most appropriate for any given situation. They continuously reflect on and further develop their practices (Redecker, 2017).

Pioneer (C2): They are concerned about the constraints or drawbacks of these practices and are driven by the impulse to innovate education even further. Pioneers experiment with highly innovative and complex digital technologies and/or develop novel pedagogical approaches. They lead innovation and are role models for younger teachers (Redecker, 2017).

Results and Discussion

Based on the results of the study, the findings were summarized below:

1. The information indicates that among the six competency areas assessed, professional engagement achieved the highest performance points of 61, characterized by a competence level of 18–33 percent and proficiency level A2 (Explorer). This result suggests that participants have begun integrating digital tools into their professional practices, albeit at a basic level (Basilotta-Gómez-Pablos et al., 2022). Following closely are Empowering Learners with performance points of 60, Facilitating Learners' Digital Competence with 59 points, Assessment with 58 points, and Teaching and Learning with 57 points. These areas share the same competence level of 18–33 percent and A2 proficiency, reflecting the participants' exploratory use of technology in the teaching process (Benali & Mak, 2022). The lowest performance points, 56, were observed in Digital Resources, which indicates a limited ability to select, create, or adapt digital content for teaching purposes (Cabezas-González et al., 2021). Overall, the participants have an average of 59 performance points, within the 18–33 percent competence range and A2 proficiency level, highlighting the need for structured and targeted digital competence training (Centeno, 2021).

2. The data shows that with a proficiency level of A2 Explorer, participants have attempted to use digital technologies in their professional activities, but their skills remain at the basic or introductory level. This

aligns with the description in the European Framework of Digital Competence for Educators (DigCompEdu) that Stage 1 represents the lowest degree of digital proficiency (Benali & Mak, 2022). Most indicators across the six areas—professional engagement, digital resources, teaching and learning, assessment, empowerment of learners, and facilitating learners' digital competence—were rated at this lower range. This implies a gap in both the pedagogical application of digital tools and the integration of innovative technologies into daily teaching (Basilotta-Gómez-Pablos et al., 2022; Chinkes et al., 2023). Studies have shown that many Filipino teachers share similar challenges in adopting higher levels of digital integration, especially in post-pandemic recovery where online and blended learning remain relevant (Alcontin, 2021; Alvarez, 2020). These areas thus require reinforcement through well-designed professional development programs to improve not only technical skills but also pedagogical strategies in a technology-enriched learning environment (Caluza, 2018).

3. The proposed digital training program is based on the participants identified levels of digital competency in each area that necessitated reinforcement, as measured by the DigCompEdu self-assessment tool. Grounded in established competency frameworks, the training program aims to address weaknesses in digital resource development, technology-based assessment, and learner empowerment strategies (Benali & Mak, 2022). Research indicates that targeted training aligned with recognized frameworks significantly improves educators' confidence, skill level, and willingness to integrate technology into teaching practices (Basilotta-Gómez-Pablos et al., 2022; Centeno, 2021). By focusing on the areas where participants scored lowest, the program seeks to elevate their competence from exploratory use toward integrative and innovative application, enabling them to meet the demands of 21st-century education and better support student learning outcomes (Chinkes et al., 2023).

Conclusions

Based on the findings of the study, the following conclusions are presented:

1. According to the European Framework of Digital Competence for Educators (DigCompEdu), the master teachers at the secondary public schools of the AROMAR District in the Division of Caloocan identified as explorers, meaning they are at the A2 competency level (Redecker, 2017). According to this classification, they have not yet completely included digital technology into their professional practices, but they are starting to experiment with them in their teaching tactics. At this point, teachers usually utilize digital tools for routine classroom duties like creating presentations, finding internet resources, or leading easy interactive exercises. Although this shows receptivity to new ideas, it also shows that to optimize technology's influence on student learning, pedagogical integration must be strengthened. According to their self-perception as explorers, these Master Teachers see the value of technology in education in the twenty-first century, but to advance to higher levels of competency, like Integrator or Expert, they need more structured direction, technical know-how, and pedagogical techniques.
2. All six of DigCompEdu's competencies—professional engagement, digital resources, teaching and learning, assessment, empowering learners, and facilitating learners' digital competency (Redecker, 2017), need thorough training for master teachers. Together, these fields tackle the educational and technical aspects of digital literacy. Using digital technologies for communication, teamwork, and ongoing professional growth is the main goal of professional engagement. The ability to locate, assess, produce, and distribute digital

content in an ethical manner is covered by digital resources. While assessment focusses on using digital technologies for formative and summative evaluation, teaching and learning include creating and putting into practice digitally enabled teaching strategies. In technology-enhanced learning environments, Empowering Learners places a strong emphasis on inclusion, accessibility, and personalization. Finally, fostering learners' digital competency guarantees that pupils acquire the abilities required to successfully and ethically traverse the digital environment. By addressing all six categories, Master Teachers may be sure they are pedagogically and technically competent in utilizing technology in a variety of teaching scenarios.

3. The suggested digital training program is meant to meet the specific needs that were found in the competency assessment of the public schools' Secondary School Master Teachers. The program would be set up to help students build their skills from basic exploration to sophisticated integration, in line with DigCompEdu requirements. Workshops on making and curating digital resources, adding interactive tools to lesson plans, building assessments that use technology, and using digital tactics that work for all kinds of learners may be part of the training modules. To create a culture of innovation, the program should also promote peer mentoring, working together to solve problems, and regular self-evaluation. The program aims to raise the overall digital skills of Master Teachers by focusing on the areas where they are doing the worst, especially in Digital Resources and technology-based Assessment. This will allow them to become technology leaders in their schools. In turn, this can have a cascade effect, making their coworkers more ready for technology and helping students learn better in a school system that uses a lot of technology.

Recommendations

Based on the significant findings and conclusions, this study sets forth the following recommendations:

It is highly recommended that the teachers upskill themselves to the next level of the progression model through a proposed training program aligned with the European Framework for the Digital Competence of Educators (DigCompEdu). This framework has been recognized internationally as both a diagnostic and developmental tool for teachers' digital competence (Redecker, 2017; Caena & Redecker, 2019; Benali & Mak, 2022). The researcher intends to submit this proposed digital program to the Public Schools District Supervisor (PSDS) through the School Head for appropriate action and implementation. Similar initiatives have highlighted the importance of continuous professional development in digital pedagogy to ensure teachers remain equipped for 21st-century educational challenges (Centeno, 2021; Basilotta-Gómez-Pablos et al., 2022; Fernández-Batanero et al., 2020).

Similarly, educational institutions and policymakers may review the digital competencies outlined in the Curriculum Guide and Teaching Guide to incorporate specific digital learning tasks that can enhance teachers' digital competence in ways that are responsive to the needs of students in the Philippines. In this regard, the provision of necessary ICT tools and infrastructure is essential for advancing teachers' digital pedagogical strategies and ensuring alignment with the demands of 21st-century skills (Benali & Mak, 2022; Caena & Redecker, 2019; Centeno, 2021).

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