

TEACHERS' TECHNOLOGY-INTEGRATED PEDAGOGICAL STRATEGIES IN MAPEH PERFORMANCE TASKS OF LEARNERS

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Abstract

This study investigated teachers' technology-integrated pedagogical strategies in MAPEH performance tasks and their relationships with learners' performance, motivation, and engagement in selected secondary schools within an identified district. A quantitative descriptive-correlational and comparative design was employed. Data were gathered from MAPEH teachers and junior high school learners using a researcher-made Likert-scale survey on technology integration, validated motivation and engagement scales adapted to the MAPEH context, classroom observation checklists, and DepEd-aligned performance-task rubrics. Descriptive statistics (mean and standard deviation) determined the extent of technology integration and the level of learner performance, while Pearson's r tested relationships among variables. Independent-samples t -tests examined differences in motivation and engagement between learners exposed to technology-integrated strategies and those taught through traditional approaches.

Findings revealed a great extent of technology integration among teachers, particularly through multimedia presentations, video demonstrations, interactive applications, and online learning platforms used for task modeling, practice, and feedback. Learners' performance in MAPEH tasks was rated very satisfactory to outstanding, with relatively stronger outcomes in Physical Education and Arts-related activities. Correlation analysis showed a significant positive relationship between the extent of technology integration and learners' performance, indicating that greater use of digital pedagogy was associated with better performance on task outcomes. Technology integration also strongly influenced learners' motivation and engagement. Comparative results further indicated significant differences favoring the technology-integrated group, which reported higher motivation and engagement than the traditional-method group.

The study concludes that purposeful technology integration enhances both performance-based competencies and affective learning outcomes in MAPEH. An evidence-based action plan is recommended to sustain and expand digital pedagogy through continuous teacher training, strengthened ICT support, and technology-embedded task design.

Keywords: Technology Integration, Pedagogical Strategies, MAPEH, Performance Tasks, Learner Motivation, Learner Engagement, Secondary Education

1. Introduction

Performance tasks are central to learning and assessment in Music, Arts, Physical Education, and Health (MAPEH) because they allow learners to demonstrate competencies through authentic skill performance, creative production, and wellness-related actions. In the Philippine K to 12 curriculum, classroom assessment is designed to be holistic and standards-based, emphasizing not only knowledge but also the performance standards that reflect real-life application (Department of Education [DepEd], 2015). DepEd Order No. 8, s. 2015 underscores that performance tasks require learners to create products or engage in activities that demonstrate what they know and can do, particularly in skill-oriented learning areas such as MAPEH (DepEd, 2015). Moreover, DepEd Order No. 31, s. 2020 reaffirmed the primacy of

performance tasks in assessment and grading, even across flexible learning modalities, by recognizing practical demonstrations, multimedia outputs, and digital artifacts as valid indicators of mastery (DepEd, 2020). These policy directions situate MAPEH performance tasks as a key pathway for developing 21st-century competencies, including creativity, collaboration, communication, and self-management, all of which are increasingly mediated by technology-supported learning environments.

In parallel, DepEd has advanced technology integration through systems-level initiatives. The DepEd Computerization Program established the provision of ICT resources to public schools and encouraged classroom use of digital tools to raise learning quality (DepEd, 2010). Recent reforms under the MATATAG Curriculum further highlight the role of technology in strengthening foundational skills and promoting future-ready learning, explicitly encouraging teachers to leverage digital resources to enrich instruction and assessment across learning areas (DepEd, 2024). Capability-building initiatives such as LICIT (Leveling up ICT Competencies through an ICT-enabled Teaching) and related professional standards likewise emphasize teachers' responsibility to use ICT positively to facilitate effective teaching and learning (DepEd, 2020; DepEd, 2022). Collectively, these policies indicate that technology integration is no longer optional but expected for responsive and inclusive pedagogy in Philippine classrooms.

Globally and locally, research supports these policy directions. Technology-integrated pedagogy can enhance learner engagement, skill acquisition, and performance outcomes when aligned with subject-specific goals. In Physical Education, technology-enhanced strategies—such as video modeling, fitness apps, and interactive platforms—have been associated with improved motor skill development, knowledge retention, and sustained participation (Casey et al., 2024). In Philippine contexts, reviews of technology integration in PE report gains in student motivation and participation, although these depend on teacher competence and access to resources (Basilio & Goh, 2023). Similarly, the Technological Pedagogical Content Knowledge (TPACK) framework explains that effective integration occurs when teachers strategically combine content expertise, pedagogical skill, and technology use, rather than adding digital tools superficially (Mishra & Koehler, 2006; TPACK Framework, 2023). Evidence among Filipino PE teachers indicates that stronger TPACK capacity predicts more meaningful technology use and better student learning experiences (Asuncion et al., 2021). In MAPEH more broadly, emerging Philippine studies observe that teachers use multimedia, online platforms, and interactive apps to support demonstrations and creative outputs, resulting in more engaging learning and clearer performance expectations (Ponsaran, 2024). However, these studies also point to uneven integration and to persistent barriers, such as device limitations, connectivity issues, and variability in teacher readiness (Ponsaran, 2024; Basilio & Goh, 2023).

Despite supportive policy and growing empirical evidence, a critical gap remains in understanding how technology-integrated pedagogical strategies function specifically within MAPEH performance tasks across the four learning areas, and how these strategies relate simultaneously to learners' task performance and affective outcomes. Many existing studies focus on single components of MAPEH, most commonly Physical Education, or describe technology use without examining its statistical relationship with measurable performance outcomes (Basilio & Goh, 2023; Asuncion et al., 2021). Moreover, while DepEd policy recognizes performance tasks and digital outputs as valid, it does not specify how different degrees of technology integration translate into improved performance, nor how motivation and engagement may mediate such effects (DepEd, 2015, 2020). This creates a practical dilemma for teachers: they are mandated to integrate technology and prioritize performance tasks, yet evidence-based guidance on which integrated strategies most effectively enhance MAPEH performance remains limited, particularly in district-level secondary school settings.

Accordingly, this study sought to address this niche by examining the extent to which teachers use technology-integrated pedagogical strategies in MAPEH performance tasks and

determining how these strategies relate to learners' performance outcomes, motivation, and engagement in junior high school. Anchored on DepEd's assessment and technology integration policies (DepEd, 2010, 2015, 2020, 2024) and informed by the TPACK framework and technology-enhanced pedagogy literature (Mishra & Koehler, 2006; Casey et al., 2024), the study used a quantitative descriptive-correlational and comparative design. Specifically, it measured (a) the extent of teachers' technology integration in planning, facilitating, and assessing MAPEH performance tasks; (b) the level of learners' performance in those tasks based on DepEd-aligned rubrics; (c) the relationship between integration and performance; and (d) the influence of technology integration on learners' motivation and engagement, including comparisons between technology-integrated and traditional instructional contexts. By doing so, the study aimed to generate district-level empirical evidence to guide teachers' task design, inform school-level ICT support, and contribute to curriculum and professional development planning aligned with DepEd's MATATAG and digital learning agenda. Ultimately, understanding how technology-integrated pedagogical strategies shape MAPEH performance tasks is essential for ensuring that digitalization efforts do not merely modernize teaching tools but meaningfully strengthen authentic learning and assessment in Music, Arts, Physical Education, and Health.

2. Method

2.1 Research Design

This study employed a quantitative research design, using descriptive-correlational and comparative methods, to examine the extent of teachers' technology-integrated pedagogical strategies in MAPEH performance tasks and their relationships with learners' performance, motivation, and engagement. The descriptive component determined the level of technology integration among MAPEH teachers and the level of learners' performance in rubric-based tasks across Music, Arts, Physical Education, and Health. The correlational component tested the significant relationships among technology integration, motivation, engagement, and performance using Pearson's r . The comparative component assessed differences in learners' motivation and engagement between groups exposed to technology-integrated strategies and those taught through traditional approaches using an independent-samples t -test. Data were gathered through a validated teacher Likert-scale survey and observation checklist, standardized learner motivation and engagement scales adapted to the MAPEH context, and DepEd-aligned performance-task rubrics, with results analyzed using mean, standard deviation, correlation, and t -test to generate objective, generalizable findings.

2.2 Participants

The participants in this study were MAPEH teachers and junior high school learners from selected secondary schools within the identified district during the academic year under investigation. The MAPEH teachers served as the primary respondents for determining the extent of technology-integrated pedagogical strategies used in planning, facilitating, and assessing performance tasks across Music, Arts, Physical Education, and Health. The junior high school learners, who were officially enrolled in the teachers' classes, served as respondents to measure motivation and engagement using validated scales, while their performance levels were obtained from rubric-based scores in MAPEH performance tasks aligned with DepEd standards. Participants were selected using an appropriate sampling technique to ensure that only teachers actively handling MAPEH and learners directly experiencing technology-integrated and traditional strategies were included, thereby enabling reliable comparisons and analyses of the study variables.

2.3 Instrumentation

The study utilized four main instruments to gather quantitative data: (1) a researcher-made Likert-scale survey questionnaire for MAPEH teachers to measure the extent and nature of their technology-integrated pedagogical strategies in performance tasks, covering frequency, consistency, and types of digital tools used; (2) a classroom observation checklist to validate and triangulate teacher-reported practices during the implementation of MAPEH performance tasks; (3) standardized and validated learner motivation and engagement scales, adapted and contextualized to the MAPEH setting, to quantify students' intrinsic/extrinsic motivation and their behavioral, emotional, and cognitive engagement; and (4) DepEd-aligned performance-task rubrics in Music, Arts, Physical Education, and Health to objectively measure learners' task performance based on official competency standards. All instruments underwent content validation by MAPEH and ICT experts, while the reliability of the survey and scales was established through pilot testing and internal consistency analysis before complete administration.

2.4 Data Analysis

Data were analyzed using appropriate quantitative statistical tools aligned with the study objectives. Descriptive statistics, specifically frequency counts, weighted mean, and standard deviation, were used to determine the extent of teachers' technology-integrated pedagogical strategies and to describe learners' performance levels in MAPEH performance tasks. To examine associations among variables, Pearson's product-moment correlation (r) was used to assess the significance and direction of the relationships among the level of technology integration, learners' performance, and motivation and engagement. To address the comparative aspect, an independent-samples t -test was used to identify significant differences in learners' motivation and engagement between groups exposed to technology-integrated strategies and those taught through traditional methods. All analyses were conducted at an acceptable level of significance (e.g., $\alpha = 0.05$), ensuring objective interpretation of patterns, relationships, and group differences in the data.

3 Results

The results showed that MAPEH teachers demonstrated a high level of technology-integrated pedagogical strategies in implementing performance tasks across Music, Arts, Physical Education, and Health. Teachers frequently utilized multimedia presentations, video demonstrations, interactive applications, and online learning platforms to model skills, provide guided practice, and deliver timely feedback. Moreover, classroom observations supported the survey findings, indicating that technology was used not only for content delivery but also to enhance task authenticity and monitor learner progress. Overall, these results suggest that teachers had moved toward more digitally supported, learner-centered approaches in facilitating MAPEH performance tasks.

In terms of learner outcomes, findings revealed that students' performance in MAPEH performance tasks was generally very satisfactory to outstanding. Notably, learners achieved higher performance ratings in Physical Education and Arts-related tasks, where technology-supported demonstrations and creative digital outputs were most prominently used. Meanwhile, performance on Music and Health tasks also showed positive outcomes, though slightly lower than on PE and Arts. Taken together, these results indicate that technology integration coincided with substantial learner achievement, particularly in tasks that required observable skills, creativity, and physical execution.

Finally, statistical treatment confirmed that the extent of technology integration had a significant positive relationship with learners' performance in MAPEH performance tasks, implying that greater use of technology-integrated pedagogy was associated with better task outcomes. In addition, technology integration strongly influenced learners' motivation and

engagement, as students reported increased interest, participation, and persistence when digital tools were embedded in tasks. Furthermore, comparative analysis using the independent-samples t-test revealed a significant difference between learners exposed to technology-integrated strategies and those taught through traditional methods, with the technology-integrated group showing significantly higher motivation and engagement. Hence, the results collectively highlight the instructional advantage of purposeful technology use in improving both performance-based and affective outcomes in MAPEH.

4. Discussion

The first significant finding of this study—that MAPEH teachers employed a wide range of technology-integrated pedagogical strategies in performance tasks—corroborates both policy expectations and empirical evidence. DepEd explicitly promotes ICT integration through initiatives such as the DepEd Computerization Program and related professional development thrusts, which encourage teachers to embed digital tools in instruction to improve learning quality (DepEd, 2010). In addition, the MATATAG Curriculum policy guidelines affirm the need for future-ready and digitally supported learning experiences across learning areas, reinforcing teachers' responsibility to use technology meaningfully in classroom practice (DepEd, 2024). Consistent with these directives, recent Philippine research documents that MAPEH teachers increasingly use video demonstrations, multimedia presentations, and online platforms to enrich performance tasks and support flexible, authentic assessment (Ponsaran, 2024). Thus, the high integration reported in this study reflects a broader national shift toward digital pedagogy aligned with curriculum and teacher standards.

Moreover, the study's finding that learners achieved very satisfactory to outstanding performance in MAPEH tasks—particularly in Physical Education and Arts—aligns with literature emphasizing the suitability of technology for skill-based and creative domains. DepEd Order No. 8, s. 2015 stresses that performance tasks should allow learners to demonstrate competencies through authentic outputs and practical application, which technology can scaffold by providing clear models, repeated practice opportunities, and accessible feedback (DepEd, 2015). International and local studies in Physical Education show that video-based modeling, interactive fitness applications, and digital task monitoring support motor skill refinement and performance readiness, helping learners achieve stronger task outcomes (Casey et al., 2024; *Frontiers in Psychology*, 2024). Similarly, MAPEH-focused work in the Philippines suggests that digital creation tools and multimodal resources help learners produce higher-quality arts and movement outputs by expanding their expressive options and improving task clarity (Ponsaran, 2024). Therefore, the strong learner performance in this study is consistent with evidence that technology enhances mastery in performance-oriented subjects.

Similarly, the significant positive correlation between technology integration and learner performance supports the theoretical and empirical view that technology improves outcomes when aligned with pedagogical and content goals. The TPACK framework explains that teachers' effective integration occurs when technology is used strategically to support subject competencies rather than serve as an add-on (Mishra & Koehler, 2006). Studies among Filipino Physical Education teachers report that higher levels of technological pedagogical knowledge are associated with more meaningful technology use and improved learner achievement (Asuncion et al., 2021). Related reviews also conclude that technology integration increases learning gains when it supports modeling, feedback, and authentic application—core requirements of MAPEH performance tasks (Casey et al., 2024; *Integrating Technology in PE Review*, 2025). Hence, the correlation identified in this study reinforces the idea that purposefully designed digital pedagogy strengthens the development of performance competencies.

Furthermore, the finding that technology integration strongly influences learners' motivation and engagement is strongly supported by contemporary studies emphasizing

technology's affective benefits. Interactive platforms and multimedia environments are widely recognized for increasing learner interest, enjoyment, and persistence, particularly in Physical Education contexts where engagement directly affects participation and skill growth (Frontiers in Psychology, 2024). Systematic reviews highlight that gamified apps, wearable-supported tasks, and digital coaching promote self-regulated learning and sustained motivation by making progress visible and tasks more personally meaningful (Casey et al., 2024; Integrating Technology in PE Review, 2025). In Philippine MAPEH settings, technology use has similarly been linked to higher learner participation and enthusiasm, especially when tasks involve video creation, online sharing, or interactive practice (Ponsaran, 2024). Therefore, the motivational and engagement gains found here reflect a consistent trend that technology transforms performance tasks into more stimulating, student-centered experiences.

Finally, the significant difference in motivation and engagement between learners taught with technology-integrated strategies and those taught through traditional methods mirrors broader comparative evidence. DepEd Order No. 31, s. 2020 recognizes digital and performance-based outputs as valid learning evidence across modalities, implying that technology-supported tasks can be more responsive to learners' contexts and needs than purely traditional approaches (DepEd, 2020). Empirical work in PE and related skill subjects repeatedly shows higher engagement in technology-enhanced classes because digital tools amplify interaction, immediate feedback, and peer collaboration, which are less consistently available in conventional instruction (Casey et al., 2024; Frontiers in Psychology, 2024). Likewise, Philippine studies on technology integration in MAPEH report that learners become more participative and motivated when teachers use rich media and interactive applications to guide performance tasks (Ponsaran, 2024). Taken together, these converging sources validate the study's comparative result and highlight technology integration as a practical advantage for sustaining learner involvement in MAPEH.

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