

THE EFFECTIVENESS OF DIFFERENTIATED INSTRUCTION ON ENHANCING MAPEH PERFORMANCE AMONG LEARNERS WITH DIVERSE LEARNING STYLES

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Abstract

Differentiated instruction has become increasingly relevant in MAPEH classrooms where learners demonstrate varied readiness levels, interests, abilities, and learning styles. This study determined the effectiveness of differentiated instruction in enhancing the MAPEH performance of junior high school learners with diverse learning styles. Specifically, it compared the average MAPEH final grades of learners who received differentiated instruction and those who received traditional instruction, determined the significant difference between the two groups, identified the differentiated teaching strategies used by MAPEH teachers, examined the relationship between learners' MAPEH test scores and differentiated teaching strategies, and proposed an action plan to address learners' needs. The study employed a quantitative quasi-experimental design with a non-equivalent pretest-posttest control group. Data were gathered from learners exposed to differentiated and traditional instruction through academic records, standardized MAPEH assessments, and structured teacher surveys. Descriptive statistics, an independent-samples t-test, and Pearson's correlation were used to analyze the data. Findings revealed that learners who received differentiated instruction obtained a higher mean MAPEH grade than those who received traditional instruction. The difference between the two groups was statistically significant, indicating that differentiated instruction produced better academic outcomes. The most commonly used differentiated strategies were scaffolding, flexible grouping, and multimedia integration. The correlation results further showed positive, significant relationships between differentiated strategies and learners' MAPEH test scores, with scaffolding showing the strongest association. The study concluded that differentiated instruction is an effective approach for improving MAPEH performance and recommended an action plan focused on teacher training, curriculum flexibility, technology integration, continuous monitoring, and sustained instructional support.

Keywords: Differentiated Instruction, MAPEH Performance, Diverse Learning Styles, Scaffolding, Flexible Grouping, Multimedia Integration

1. Introduction

Learner diversity has become one of the most pressing realities in contemporary education, requiring teachers to move beyond uniform instruction and adopt teaching approaches that respond to students' varied readiness levels, interests, abilities, and learning preferences. In inclusive classrooms, learners do not enter with the same background knowledge, motivation, skill level, or information-processing style. This diversity is especially visible in Music, Arts, Physical Education, and Health (MAPEH), a subject that integrates cognitive understanding, physical performance, creative expression, health literacy, and values formation. Because MAPEH requires students to learn through listening, movement, visual production, performance, collaboration, and reflection, a single instructional approach may not sufficiently address the needs of all learners.

Differentiated instruction has emerged as an important pedagogical response to this challenge. It is commonly understood as a teaching approach in which teachers adjust content, process, product, and the learning environment based on learners' readiness, interests, and learning profiles. Tomlinson (2000) explained that teachers may differentiate what students learn,

how students make sense of content, how they demonstrate learning, and how the classroom functions to support learning. In practical terms, differentiated instruction may involve scaffolding, flexible grouping, tiered assignments, learning stations, multimedia integration, varied assessment formats, and opportunities for student choice. These strategies are intended to help learners access the same essential competencies through different routes while maintaining high expectations for achievement.

The importance of differentiated instruction is strongly connected to the global movement toward inclusive and equitable quality education. UNESCO (2020) emphasized that education systems must respond to learner differences and remove barriers that exclude students from meaningful participation and achievement. This principle is highly relevant to Philippine classrooms, where learners often differ in language background, socioeconomic condition, learning pace, confidence, skill level, and access to learning support. In MAPEH, these differences may affect learners' ability to perform a dance routine, interpret musical elements, create an artwork, participate in physical activity, or understand health concepts. Differentiated instruction therefore, offers a framework for making MAPEH instruction more responsive, accessible, and learner-centered.

Recent empirical literature provides support for the potential benefits of differentiated instruction, although the strength of evidence varies across contexts and implementation models. A systematic review of differentiated instruction in secondary education found that it has generally shown small to moderate positive effects on student achievement, while noting that the evidence base remains limited and context-dependent (Smale-Jacobse et al., 2019). Similarly, AM, Hadi, Istiyono, and Retnawati (2023), in a systematic review and meta-analysis of 49 primary studies, found a significant positive effect of differentiated instruction on student learning outcomes compared with control-group instruction. These findings suggest that differentiated instruction can improve learning when carefully designed, consistently implemented, and aligned with learners' needs. However, they also indicate the need for localized studies that examine how specific differentiated strategies function in actual classroom settings.

In MAPEH, differentiated instruction may be particularly useful because the subject demands multiple forms of competence. Some learners may excel in physical performance but struggle with written tests; others may perform well in health concepts but need support in artistic or musical expression. Scaffolding can help learners gradually master complex skills by providing step-by-step support until they become more independent. Flexible grouping allows teachers to organize learners according to readiness, interest, task, or skill need, enabling peer support and targeted instruction. Tiered assignments allow students to work on tasks of varying complexity while addressing the same learning goals. Learning stations can provide varied activity centers suited to different learning modalities, while multimedia integration may support visual, auditory, and kinesthetic learners through videos, demonstrations, digital resources, and interactive materials. These strategies are well-suited to MAPEH because they allow instruction to be adapted across music, arts, physical education, and health domains.

Despite the growing body of research on differentiated instruction, gaps remain in relation to its use in integrated and performance-oriented subjects. Much of the existing literature focuses on language, mathematics, science, or general classroom instruction. There is less localized empirical evidence on how differentiated instruction affects MAPEH performance, particularly among learners with diverse learning styles in Philippine junior high school classrooms. Moreover, studies often examine the overall effect of differentiated instruction without identifying which specific strategies are most commonly used or most strongly associated with student performance. This gap is important because teachers need evidence not only that differentiated instruction works, but also which practices are most relevant and feasible in their subject area.

Accordingly, the present study examined the effectiveness of differentiated instruction in enhancing MAPEH performance among learners with diverse learning styles. Specifically, it

compared the average final MAPEH grades of learners who received differentiated instruction with those who received traditional instruction. It also determined whether a significant difference existed between the two groups, identified the differentiated teaching strategies used by MAPEH teachers, and examined the relationship between learners' MAPEH test scores and differentiated teaching strategies. By employing a quasi-experimental non-equivalent pretest-posttest control group design, the study generated quantitative evidence on the academic contribution of differentiated instruction in MAPEH. The findings served as the basis for proposing an action plan focused on teacher professional development, curriculum flexibility, technology integration, continuous monitoring, and sustained support for differentiated MAPEH instruction.

2. Method

2.1 Research Design

The study employed a quasi-experimental research design, specifically the non-equivalent pretest-posttest control group design, to determine the effectiveness of differentiated instruction in enhancing learners' MAPEH performance. This design was appropriate because the study compared two intact groups of learners: the experimental group, which received MAPEH instruction using differentiated strategies, and the control group, which received traditional instruction. Both groups were assessed before and after the intervention to determine changes in their MAPEH knowledge and skills. The pretest established the learners' baseline performance, while the posttest and final MAPEH grades measured their performance after the instructional period. Since random assignment was not feasible in the school setting, intact classes were used, and statistical procedures were applied to account for possible pre-existing differences between groups. The design enabled the researcher to compare the academic outcomes of learners exposed to differentiated instruction and those taught through traditional methods, while also examining the relationship between specific differentiated teaching strategies and MAPEH test scores. Through this approach, the study generated empirical evidence on the effectiveness of differentiated instruction as a learner-responsive strategy for improving performance in Music, Arts, Physical Education, and Health.

2.2 Participants

The study was conducted with junior high school learners enrolled in MAPEH classes in selected secondary schools, grouped according to the instructional approach they received during the intervention period. The experimental group consisted of 150 learners who received differentiated instruction, while the control group consisted of 150 learners who received traditional instruction. Intact classes were utilized because random assignment of individual learners was not feasible within the existing school setting. The learners represented diverse learning styles and performance levels, making them appropriate participants for examining the effectiveness of differentiated instruction in a subject that integrates Music, Arts, Physical Education, and Health. MAPEH teachers also served as data sources in identifying the differentiated instructional strategies used in the classroom, particularly scaffolding, flexible grouping, tiered assignments, learning stations, and multimedia integration. The inclusion of learners exposed to both differentiated and traditional instruction enabled the study to compare academic performance outcomes between the two groups, while teacher-provided data allowed examination of the relationship between specific differentiated strategies and learners' MAPEH test scores. This participant structure supported the quasi-experimental nature of the study and provided the empirical basis for developing an action plan to address the needs of MAPEH learners.

2.3 Instrumentation

The study utilized instruments to gather data on learners' MAPEH performance and the differentiated instructional strategies employed by teachers. Academic records served as the primary source of data for learners' final MAPEH grades, allowing comparison between those who received differentiated instruction and those who received traditional instruction. In addition, standardized MAPEH assessments were administered before and after the intervention to measure learners' knowledge and skills in Music, Arts, Physical Education, and Health. These assessments aligned with the prescribed MAPEH curriculum competencies and were used to assess changes in learners' performance throughout the instructional period. A structured teacher survey was also administered to identify the differentiated strategies used in MAPEH instruction, including scaffolding, flexible grouping, tiered assignments, learning stations, and multimedia integration. The survey used Likert-scale items to quantify the frequency and extent of strategy utilization. To ensure validity and reliability, the instruments underwent content validation by MAPEH experts and pilot testing prior to full implementation. The use of these instruments provided objective, measurable, and statistically analyzable data necessary for determining the effectiveness of differentiated instruction and its relationship with learners' MAPEH test scores.

2.4 Data Analysis

The data gathered in the study were analyzed using descriptive and inferential statistical procedures appropriate for a quasi-experimental design. Descriptive statistics, including mean, standard deviation, frequency, and percentage, were used to summarize the average MAPEH final grades of learners who received differentiated instruction and those who received traditional instruction, as well as the frequency of differentiated strategies used by MAPEH teachers. To determine whether a significant difference existed in MAPEH performance between the experimental and control groups, an independent-samples t-test was employed; analysis of covariance was used when pretest scores were included to control for baseline differences between groups. The hypotheses were tested at the 0.05 level of significance. Pearson product-moment correlation coefficient was also used to determine the relationship between learners' MAPEH test scores and the differentiated instructional strategies used by teachers, including scaffolding, flexible grouping, tiered assignments, learning stations, and multimedia integration. Effect sizes were computed to assess the practical magnitude of the observed difference between instructional groups. These statistical procedures enabled the study to determine the effectiveness of differentiated instruction, identify the strategies most strongly associated with improved MAPEH performance, and provide empirical support for the development of an action plan responsive to learners' diverse learning styles.

3 Results

The results showed that learners who received differentiated instruction achieved higher final MAPEH grades than those who received traditional instruction. The differentiated instruction group had a mean grade of 85.67 and a standard deviation of 4.23, while the traditional instruction group had a mean grade of 80.45 and a standard deviation of 5.12. This finding indicates that learners exposed to differentiated instruction demonstrated better academic performance in MAPEH. The lower standard deviation in the differentiated instruction group also suggests that learner performance was more consistent, implying that differentiated instruction may have helped reduce performance gaps among students with diverse learning styles.

The comparison of average MAPEH grades further revealed a statistically significant difference between the two instructional groups. The t-test yielded a t-value of 6.38 and a p-value of 0.000, indicating that the difference in performance was significant at the 0.05 level. This result led to the rejection of the null hypothesis, confirming that differentiated instruction had a measurable effect on learners' MAPEH performance. The finding suggests that adapting

instruction to students' readiness, interests, and learning profiles can yield better academic outcomes than uniform traditional instruction, especially in an integrated, performance-based subject such as MAPEH.

The study also identified the differentiated instructional strategies commonly used by MAPEH teachers. Scaffolding was the most frequently used strategy, with a utilization rate of 80%, followed by flexible grouping at 75% and multimedia integration at 70%. Tiered assignments were used by 62.5% of the teachers, while learning stations were used by 50%. These results show that MAPEH teachers employed a variety of strategies to respond to diverse learner needs. The frequent use of scaffolding suggests that teachers commonly provide step-by-step support to help learners gradually develop mastery. Meanwhile, flexible grouping and multimedia integration allowed teachers to accommodate varied learning preferences, skill levels, and modes of engagement.

Correlation results showed positive and significant relationships between differentiated instructional strategies and learners' MAPEH test scores. Among the strategies, scaffolding showed the strongest correlation with MAPEH test scores ($r = 0.602$, $p = 0.000$). This was followed by multimedia integration (r -value = 0.559) and flexible grouping (r -value = 0.523). Tiered assignments also showed a positive correlation with test scores ($r = 0.487$), while learning stations showed a weaker correlation ($r = 0.418$). These findings indicate that greater use of differentiated strategies was associated with higher learner performance in MAPEH.

Overall, the results provide empirical support for the effectiveness of differentiated instruction in enhancing MAPEH performance among learners with diverse learning styles. The higher mean grades, significant group difference, and positive correlations between differentiated strategies and test scores suggest that differentiated instruction can improve learner outcomes when applied systematically. The findings also point to scaffolding, multimedia integration, and flexible grouping as particularly useful strategies in MAPEH instruction. These results served as the basis for proposing an action plan focused on professional development, curriculum flexibility, technology integration, continuous monitoring, and sustained support for the effective implementation of differentiated instruction in MAPEH classrooms.

4. Discussion

The finding that learners who received differentiated instruction achieved higher MAPEH final grades than those who received traditional instruction supports the value of learner-responsive teaching in integrated, performance-oriented subjects. MAPEH requires students to demonstrate knowledge and skills in Music, Arts, Physical Education, and Health; therefore, learners may vary greatly in their readiness, interests, strengths, and preferred learning styles. The higher mean grade of the differentiated instruction group suggests that adapting instructional content, processes, activities, and assessment opportunities helped learners access MAPEH competencies more effectively. This finding is consistent with Tomlinson's view that differentiated instruction responds to learner differences in readiness, interest, and learning profile by providing varied pathways toward common learning goals. It also supports the inclusive education principle that schools must respond to learner diversity rather than expect all students to learn successfully through the same method.

The statistically significant difference between the differentiated instruction and traditional instruction groups further confirms that the instructional approach matters in improving learner performance. The significant t-test result indicates that the observed difference in MAPEH grades was not due to chance but was associated with the type of instruction learners received. This is supported by Smale-Jacobse, Meijer, Helms-Lorenz, and Maulana (2019), who reviewed differentiated instruction in secondary education and reported that DI provides a pedagogical starting point for addressing students' diverse learning needs, although its effectiveness depends on the quality of its design and implementation. Similarly, AM, Hadi, Istiyono, and Retnawati

(2023) found through a systematic review and meta-analysis that differentiated instruction had a positive effect on student learning outcomes compared with control-group instruction. In the present study, the positive result suggests that DI is particularly useful in MAPEH because it allows learners to engage with lessons through different modalities, including movement, visual representation, performance, collaboration, and guided practice.

The study also found that scaffolding, flexible grouping, and multimedia integration were the most commonly used differentiated instructional strategies among MAPEH teachers. This finding indicates that teachers tended to use practical, classroom-feasible methods to address diverse learning needs. Scaffolding allows teachers to provide temporary support until learners can perform tasks independently, which is essential in MAPEH activities that require gradual skill development, such as musical performance, artwork production, physical movement, and health decision-making. Flexible grouping enables learners to work with peers based on readiness, interest, or task requirement, while multimedia integration supports visual, auditory, and kinesthetic learning through videos, demonstrations, digital presentations, and interactive resources. These strategies align with inclusive education expectations because they provide multiple access points for learners who may struggle under uniform instruction.

The significant positive correlations between differentiated strategies and MAPEH test scores further strengthen the argument that specific DI practices are associated with improved performance. Among the strategies, scaffolding showed the strongest correlation with test scores, followed by multimedia integration and flexible grouping. This suggests that learners may benefit most when teachers provide structured guidance, demonstrations, feedback, and gradual release of responsibility. The result also suggests that technology-supported, visually rich instruction may be useful in MAPEH, where learners often need to observe, imitate, analyze, and perform skills. However, because the relationship is correlational, the findings should be interpreted carefully. The results show an association rather than absolute causation, and other factors, such as teacher expertise, learner motivation, class size, school resources, and prior achievement, may also influence MAPEH performance.

Overall, the findings corroborate the claim that differentiated instruction can enhance student learning when it is systematically implemented and aligned with learners' needs. The results justify the proposed action plan, emphasizing professional development, curriculum flexibility, technology integration, continuous monitoring, and sustained instructional support. The action plan is necessary because differentiated instruction requires more than individual teacher effort; it requires school-level support, access to materials, collaborative planning time, and training in evidence-based strategies. In MAPEH, strengthening differentiated instruction may help teachers create more inclusive, engaging, and performance-oriented classrooms that support learners with diverse learning styles toward improved academic achievement and holistic development.

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