

**Early childhood teachers' competence in multigrade differentiated instruction:
Differentiated instruction plan**

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ABSTRACT

The study assessed the competence of early childhood teachers in multigrade Differentiated Instruction in Borbon District, Borbon, Cebu during the school year 2025–2026, as a basis for developing a differentiated instruction plan. The study was conducted at Borbon Cebu with purposive-random sampling used to over 100 teacher respondents. The questionnaire used in the study was adapted from Bunga (2025). The study employed statistical tools such as the weighted mean, simple percentage, and pearson product-moment correlation r . Findings indicated that the respondents are mostly middle to late career teachers, predominantly female, with many having graduate-level education and participation in professional development activities. They are generally moderately experienced, with fewer at the early and advanced stages of teaching service. Early childhood teachers demonstrate high competence in implementing multigrade differentiated instruction across instructional planning, delivery, and classroom management. They effectively design differentiated lessons, use varied instructional strategies and materials, and maintain active learner engagement while managing diverse classroom interactions. Age, educational attainment, training and seminars, and teaching experience are significantly related to teachers' competence in multigrade differentiated instruction, showing positive associations. In contrast, sex has a low and non-significant relationship, indicating that most profile variables except sex are meaningfully linked to competence. Early childhood teachers experience a high level of challenges in implementing multigrade differentiated instruction, particularly in managing classroom behavior among learners of varying ages and developmental levels. They also find it difficult to allocate sufficient time for individualized instruction for each learner. Based on the findings, the researcher recommends the development and implementation of a differentiated instruction plan.

Keywords: Major in Early Childhood Education, inclusive early childhood, multigrade instruction, descriptive method, differentiated instruction plan, Borbon, Cebu.

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INTRODUCTION

With multigrade classrooms remaining prevalent in many rural and resource-constrained contexts, especially in the Philippines, teacher competence in differentiated instruction (DI) has become a pressing educational concern. This study seeks to examine how well early childhood teachers plan, deliver, and manage instruction that responds to the varied learning needs of pupils across multiple grade levels within a single classroom. Effective multigrade DI is anchored in intentional instructional planning such as learner profiling, curriculum mapping, and flexible pacing coupled with varied instructional delivery strategies and adaptive classroom management practices (Bunga et al., 2025). These core dimensions planning, delivery, and management are interconnected; weaknesses in any one area can compromise overall instructional effectiveness and learner outcomes. Despite this, much of the existing research tends to examine these aspects in isolation or focuses broadly on general multigrade strategies without systematically evaluating teacher competence across all three dimensions (Pedroches, 2025).

Globally, multigrade teaching remains a prevalent and persistent educational practice, especially in rural and resource-constrained settings where small school populations necessitate the combination of multiple grade levels in one classroom. Multigrade preprimary classrooms in Kenya shows that teachers engage in differentiated instructional practices to address diverse learner needs, though competency and implementation vary widely depending on resources and training (Sitabkhan et al., 2022). In the Philippine context, multigrade classrooms are common in rural elementary schools and continue to be a strategic modality for expanding access to quality education. Philippine literature shows that multigrade teachers employ a range of pedagogical strategies including differentiated instruction to manage diverse grade levels and learning needs, yet they face significant challenges related to limited resources, classroom management, and instructional planning (Pedroches, 2025). Within Region VII (Central Visayas), the prevalence of multigrade classrooms and the unique instructional demands they place on teachers, especially in more remote municipalities. While specific published research on differentiated instruction competence in Region VII remains limited, narrative and qualitative inquiries into multigrade reading instruction in the Visayas indicate that teachers must adapt classroom management, remedial education, and instructional approaches to meet diverse learner needs, suggesting that effective DI practices are integral to local classroom success (Alda & Gementiza, 2023).

Despite these contributions, there remains a noticeable gap in the literature regarding competence assessment among early childhood teachers specifically, especially in multigrade DI contexts. Most Philippine studies focus on multigrade instruction broadly or in primary grades without isolating early childhood education, where learners' developmental needs and instructional complexities differ significantly from those in older grade levels. Although tools like the Multigrade Differentiated Instruction Performance Appraisal Tool (MDI-PAT) have been developed and validated, there is limited empirical data on how early childhood teachers score across key competency domains or how these competencies relate to classroom challenges (Bunga, 2025). The present study addresses this gap by centering its investigation on early childhood multigrade contexts, offering empirical evidence that can guide targeted professional development and curriculum support., particularly at Borbon District, Borbon, Cebu.

Finally, this study is significant because it provides practical insights for educational stakeholders in enhancing instructional quality for early childhood learners in multigrade settings. For policymakers and curriculum developers, the findings can inform strategies to strengthen teacher preparation, training programs, and DI implementation frameworks tailored to multigrade classrooms. For school administrators and teachers, the study offers a

benchmarking tool to identify professional development needs and best practices that improve learner engagement and achievement. Moreover, the research contributes to academic knowledge by deepening understanding of how competencies in DI manifest in real classroom settings and by identifying key areas for improvement that future researchers can investigate.

Statement of the problem

This study assessed the competence of early childhood teachers in implementing multigrade Differentiated Instruction in Borbon District, Borbon, Cebu, during the school year 2025–2026, as a basis for developing a differentiated instruction plan.

Specifically, it answered the following questions:

1. What is the profile of the respondents in terms of age, sex, highest educational attainment, relevant training and seminars attended, and length of teaching experience?
2. What is the level of competence of early childhood teachers in implementing multigrade Differentiated Instruction in terms of instructional planning, instructional delivery, and classroom management?
3. Is there a significant relationship between the respondents' profiles and their level of competence in implementing multigrade Differentiated Instruction?
4. What is the level of challenges encountered by early childhood teachers in implementing multigrade Differentiated Instruction?
5. Based on the findings, what differentiated instruction plan could be developed?

METHODOLOGY

This section presents the methodological process of the study, which includes the following segments: methods and design, the flow of the study, the environment of the study, the sources of data, the instrument, the data collection procedures, the data analysis, and the scoring procedures. The research used a descriptive-correlational approach (Creswell, 2014). This approach was acceptable since it assessed the competence of early childhood teachers in multigrade Differentiated Instruction in Borbon District, Borbon, Cebu during the school year 2025–2026, as a basis for developing a differentiated instruction plan. The use of a descriptive-correlational design was appropriate for the research topic, as it aimed to determine, first, the profile of the respondents; second, the level of competence of the early childhood teachers in the implementation of multigrade DI; third, the significant relationship between the respondents' profiles and their level of competence in implementing multigrade DI; and fourth, the level of challenges encountered by the early childhood teachers in the implementation of multigrade DI.

The study employed the input-process-output strategy, which demonstrated how the study was carried out, from collecting raw data to organizing and analyzing the data to produce findings. This strategy was presented in Figure 2, the flow of the study, which was arranged into three boxes labeled input, process, and output. The first box, the input, contained the variables in the statement of the problem. The first of these dealt with the profile of the respondents, namely age, sex, highest educational attainment, relevant training and seminars attended, and length of teaching experience. The input also included the level of competence of the early childhood teachers in the implementation of multigrade DI, the significant relationship between the respondents' profiles and their level of competence in implementing multigrade DI, and the level of challenges encountered by the early childhood teachers in the implementation of multigrade DI. The second box, the process, showed the steps and

procedures undertaken by the researcher to finish the research work. It included the descriptive method of research, administration of the questionnaire, data gathering, data analysis, data organization, and interpretation of the data of the study. The researcher carefully followed each step to ensure accuracy, reliability, and validity of the results, and emphasis was placed on systematic collection and processing of data to reflect the true perceptions and experiences of the respondents. The third box, the output, indicated that the outcomes of this investigation could lead to the development of a Differentiated Instruction Plan. This plan consisted of the following: areas of concern, objectives, strategies, persons involved, budget, source of budget, time frame, expected outcome, and actual accomplishment.

The study was conducted in Borbon District, Borbon, Cebu, whose location is shown in Figure 3, the location map of the research environment. Borbon District, Borbon, Cebu is particularly suited for the study of assessing the competence of early childhood teachers in multigrade differentiated instruction due to its unique educational context and multigrade classroom settings. Many early childhood classrooms in the district accommodate learners of varying ages and developmental levels in a single classroom, making it an ideal environment to examine teachers' ability to implement differentiated instruction effectively. The district's schools reflect the typical challenges and opportunities of rural and semi-urban public education settings in the Philippines, including limited instructional resources, diverse learner needs, and class size variations, which provide a realistic context for evaluating teacher competence. Additionally, the teachers in Borbon District have access to local and national policies such as the Enhanced Basic Education Act and multigrade education frameworks, making it possible to assess how these policies are operationalized in practice. Conducting the study in this district not only ensures the relevance and applicability of findings to similar educational settings but also provides insights into best practices and challenges that can inform teacher development, curriculum implementation, and instructional improvement for early childhood multigrade classrooms.

The respondents of the study were the kindergarten to grade one to three elementary teachers of Borbon District, and the researcher applied a purposive-random sampling technique in their selection. As presented in Table 1, the distribution profile of the respondents ($n=100$), the respondents were all teachers, with a frequency (f) of 100 and a percent (%) of 100.00, which yielded a total frequency of 100 and a total percent of 100.00.

The study involved a research-based questionnaire adapted from the studies of Bunga (2025), which was composed of three parts. Part I was the profile of the respondents in terms of sex, highest educational attainment, relevant training and seminars attended, and length of teaching experience. Part II was the respondents' level of competence of the early childhood teachers in the implementation of multigrade DI in terms of instructional planning, instructional delivery, and classroom management. It involved a five-point Likert scale with an equal five statements per sub variable. Part III was the respondents' level of challenges encountered by the early childhood teachers in the implementation of multigrade DI. It involved a five-point Likert scale with a total of ten statements.

The data-gathering procedures were designed to address the research questions. They detailed the methods, instruments, and protocols used in the collection process to ensure that the information obtained was valid, reliable, and appropriate for the objectives of the study. In the preliminary stage, the researchers sent a transmittal letter to the public schools district supervisor and/or school principal to ask permission to conduct the study. Once approved, the researcher arranged the schedule for meeting the respondents and conducting the study. In the data gathering stage, on the scheduled day, the researchers facilitated an orientation regarding the research. Salient issues such as the purpose of the study, its procedure, and how the confidentiality of the respondents was protected were discussed. Administration of the survey questionnaires followed right after the orientation, and instructions were given on how to

answer them. Assistance was also provided while the respondents were answering the survey questionnaires, and enough time was given to answer them. Retrieval of the questionnaires followed. In the post data gathering stage, the study tallied, organized, summarized, interpreted, and analyzed the results, and appropriate statistical tools were used in the treatment of data.

Ethical considerations were observed before, during, and after data collection, and these steps also helped the researcher feel safe and confident in the actions she undertook during the study. The principles included, but were not limited to, relevant concepts on voluntary participation, informed consent, anonymity, confidentiality, potential for harm, and ensuring that results communication was free of plagiarism and inaccuracies. With regard to voluntary participation, the study focused on the respondents' engagement and cooperation, and thus the teacher respondents from the aforementioned research context were informed of their voluntary participation in the study. With regard to informed consent, the study was open about the goals and objectives of both the researcher and the respondents. As a result, respondents were provided informed consent to ensure that they understood its purpose and rights. With regard to anonymity, the respondents' profiles and data were kept confidential during the study, and teacher respondents were assured that their privacy was respected with maximum discretion. With regard to confidentiality, the study ensured the confidentiality of the respondents' profiles, answers, and any data obtained. Thus, respondents were guaranteed that any information gathered throughout the procedure was kept private and secure. The study also considered the potential for harm. However, the researcher assured the respondents that there was no risk to their participation and that they could provide only information that they were comfortable sharing, and all disclosed information was kept strictly confidential. Finally, the study assessed the correctness, accuracy, and originality of the data and results presented by the researcher and respondents, so that results communication was free of plagiarism and inaccuracies. Thus, it was ensured that all information provided and required was reasonable, true, factual, and non-biased.

The study's statistical analysis employed a descriptive-correlational design and utilized statistical tools such as the weighted mean, simple percentage, and Pearson product-moment correlation (r) for determining significant relationships and analyzing data. The percentage (P) was used in determining the relevant information of the respondents' profiles. The weighted mean was used to measure the level of competence of early childhood teachers in the implementation of multigrade DI and the level of challenges they encountered in the implementation of multigrade DI. The Pearson product-moment correlation (r) was used to determine the significant relationship between the respondents' profiles and their level of competence in implementing multigrade DI.

For scoring, the researcher required individual participants to respond on their level of competence in the implementation of multigrade DI and their level of challenges encountered in the implementation of multigrade DI by indicating whether very high, high, neutral, low, or very low, using a five-point Likert scale. A rating of 5, corresponding to the scale of 4.20-5.00 and the response Very High, was interpreted for competence as teachers demonstrating excellent skills in planning, organizing, and implementing multigrade differentiated instruction. For challenges, the same rating was interpreted as teachers encountering severe challenges in implementing multigrade DI, such as difficulty managing diverse learners, insufficient resources, and high classroom demands that significantly affect instructional effectiveness. A rating of 4, corresponding to the scale of 3.40-4.19 and the response High, was interpreted for competence as teachers showing strong competence in implementing multigrade DI. For challenges, it was interpreted as teachers facing noticeable challenges in multigrade DI, which occasionally hinder lesson planning, classroom management, or differentiation

strategies, requiring additional support or resources. A rating of 3, corresponding to the scale of 2.60-3.39 and the response Neutral, was interpreted for competence as teachers exhibiting an average level of competence in multigrade DI. For challenges, it was interpreted as teachers experiencing moderate challenges in implementing multigrade DI, where, while some difficulties exist, they are manageable and do not consistently disrupt instruction. A rating of 2, corresponding to the scale of 1.80-2.59 and the response Low, was interpreted for competence as teachers demonstrating limited competence in implementing multigrade DI. For challenges, it was interpreted as teachers facing few challenges in multigrade DI, where problems are minor and infrequent, allowing them to implement differentiated instruction with minimal difficulty. A rating of 1, corresponding to the scale of 1.00-1.79 and the response Very Low, was interpreted for competence as teachers showing minimal ability to implement multigrade DI. For challenges, it was interpreted as teachers experiencing negligible challenges in implementing multigrade DI, indicating that they are able to effectively manage classrooms, differentiate instruction, and address diverse learners' needs without significant obstacles.

The terms used in the study were operationally defined based on their use in the study. Classroom management referred to the strategies and practices employed by teachers to create an organized, supportive, and productive learning environment in multigrade classrooms, including seating arrangements, group work organization, and routines. Competence referred to the knowledge, skills, and abilities demonstrated by early childhood teachers in effectively planning, delivering, and managing lessons in multigrade classrooms using differentiated instruction strategies to address diverse learners' needs. A Differentiated Instruction Plan referred to a structured lesson or instructional plan designed by teachers that considers the varying abilities, interests, learning styles, and developmental levels of pupils in multigrade classrooms, including strategies for content delivery. Early childhood teachers referred to educators responsible for facilitating learning and development of children aged 3 to 6 years in preschool or kindergarten classrooms within Borbon District, Borbon, Cebu, who implement multigrade differentiated instruction. Instructional delivery referred to the implementation of planned lessons and learning activities by teachers, including the use of differentiated teaching strategies, learning resources, and engagement techniques to ensure pupils' understanding and participation. Instructional planning referred to the process of designing lessons, activities, and learning experiences that are developmentally appropriate and align with curriculum standards. Multigrade Differentiated Instruction referred to a teaching approach in which a single teacher simultaneously delivers instruction to students of different grades, developmental levels, and learning abilities while adapting content, learning processes, and assessment.

RESULTS AND DISCUSSION

This chapter presents, analyzes, and interprets the data gathered from 100 early childhood teacher respondents in Borbon District, Borbon, Cebu, during the school year 2025-2026. The study used a descriptive-correlational design (Creswell, 2014) and a purposive-random sampling technique to select kindergarten to Grade 1 to 3 teachers. Data were collected with a three-part questionnaire adapted from Bunga (2025), covering the respondents' profile, their level of competence in implementing multigrade differentiated instruction (DI), and the level of challenges they encountered. The competence and challenge sections used five-point Likert scales, with five statements per competence sub-variable and ten statements for challenges. The data were treated with simple percentage for the profile variables, weighted mean for competence and challenges, and the Pearson product-moment correlation (r) for the relationship between profile and competence, tested at the 0.05 level of significance. The discussion is grounded in the data gathered, and every result is interpreted in direct relation to the objectives of the study. These objectives are to describe the respondents' profile in terms

of age, sex, highest educational attainment, relevant training and seminars attended, and length of teaching experience; to determine their level of competence in instructional planning, instructional delivery, and classroom management; to test the relationship between their profile and their competence; and to determine the level of challenges they encountered.

Profile of the respondents

In terms of age, the highest percentages of respondents were in the 31-40 years old and 41-50 years old groups, each with 35 respondents or 35.00%. These were followed by those aged 51-60 years old with 20 respondents or 20.00%, while the least represented group was 21-30 years old with 10 respondents or 10.00%, for a total of 100 respondents or 100.00%. The teaching workforce is therefore predominantly middle-aged, with most respondents in a mature professional stage that likely carries substantial teaching experience and developed instructional competencies. The smaller proportion of younger teachers indicates limited representation of early-career educators. Hernandez and Salazar (2022) observed that teachers in their 30s to 50s tend to show stronger pedagogical decision-making because of accumulated experience and continuous exposure to classroom realities. Brooks et al. (2023) similarly found that mid-career teachers exhibit more refined instructional strategies and more effective classroom management than early-career teachers, who are still developing professional confidence. Wang and Liu (2024) noted that age and experience contribute significantly to instructional adaptability, particularly in diverse settings such as multigrade classrooms. Johnson and Rivera (2021), however, cautioned that the limited presence of younger teachers may raise long-term sustainability concerns for innovation and workforce renewal.

With respect to sex, the majority of respondents were female, with 62 respondents or 62.00%, while 38 respondents or 38.00% were male, for a total of 100 respondents or 100.00%. Female respondents outnumber male respondents, which suggests that female educators are more strongly represented in early childhood and related settings and points to a gender imbalance in the sample. Martinez and Delgado (2022) attributed the continued predominance of female teachers in elementary education to longstanding sociocultural norms that associate caregiving and early childhood instruction with women. Ahmed and Khan (2023) found that gender disparities in teaching staff are more pronounced at foundational levels, where female dominance is linked to perceived nurturing roles and career preferences. Roberts et al. (2024) emphasized that this imbalance has remained consistent across many education systems, although efforts to encourage greater male participation in teaching are under way.

On highest educational attainment, the largest group held units in a Master's degree, with 39 respondents or 39.00%. This was followed by Master's degree holders with 20 respondents or 20.00%, Bachelor's degree holders with 16 respondents or 16.00%, those with units in a Doctorate with 15 respondents or 15.00%, and Doctorate degree holders with 10 respondents or 10.00%, for a total of 100 respondents or 100.00%. Most respondents have therefore pursued graduate-level education, which indicates a generally high level of academic preparation and a commitment to continuous professional advancement. The presence of respondents with completed and ongoing doctoral studies reflects a strong culture of lifelong learning, which may contribute to improved instructional practice and more research-informed teaching. Ocampo and Reyes (2022) found that teachers pursuing master's and doctoral degrees show higher instructional effectiveness because of enhanced pedagogical knowledge and research-based practices. Fernandez et al. (2023) emphasized that graduate education significantly strengthens reflective practice and the ability to implement learner-centered

strategies. Alonzo and Cruz (2024) reported that teachers in advanced studies are more committed to lifelong learning, which strengthens instructional decision-making and adaptability. Thompson and Garcia (2021) noted that teachers with ongoing doctoral units reflect a strong culture of professional growth that positively influences teaching quality and school performance.

Regarding relevant training and seminars attended, 45 respondents or 45.00% attended 4-6 times and another 45 respondents or 45.00% attended 1-3 times, while 10 respondents or 10.00% reported never having attended any, for a total of 100 respondents or 100.00%. Most respondents are thus actively engaged in professional development, which suggests exposure to opportunities that may enhance their instructional skills and pedagogical knowledge. The respondents who never attended any training, however, reveal a gap in access or participation and point to the need for more inclusive and equitable programs that could help standardize instructional competence and improve overall teaching quality. Navarro and Esteban (2022) found that teachers who regularly attend professional development activities show improved classroom practices and greater confidence in implementing learner-centered strategies. Bautista et al. (2023) emphasized that continuous participation in seminars significantly enhances teachers' ability to adapt instructional methods to diverse learner needs and educational demands. Castillo and Mendoza (2024) reported that disparities in access and participation persist because of workload, resource limitations, and institutional support. Lee and Santos (2021) noted that gaps in training attendance may lead to inconsistencies in instructional quality, underscoring the need for sustained professional development opportunities.

As to length of teaching experience, the highest proportion of respondents had 11-20 years of experience, with 36 respondents or 36.00%. They were followed by those with 6-10 years with 34 respondents or 34.00%, those with 21 years and beyond with 18 respondents or 18.00%, and those with 1-5 years with 12 respondents or 12.00%, for a total of 100 respondents or 100.00%. The respondents are generally moderately to highly experienced, with most having 6-20 years of service, and are likely to possess substantial practical knowledge of classroom instruction and management. Those with 21 years and beyond form a portion of highly seasoned educators who may serve as mentors to less experienced colleagues, which reflects strong potential for peer learning and suggests stability in the workforce and consistency in instructional practice. Alvarez and Domingo (2022) found that teachers with 6-20 years of experience show higher pedagogical efficiency from prolonged exposure to diverse classroom situations and instructional challenges. Santos and Villanueva (2023) emphasized that experienced teachers apply adaptive strategies and manage heterogeneous learners more effectively. Rodriguez et al. (2024) reported that educators with over two decades of service often serve as instructional mentors and contribute to school-based learning communities. Chen and Morales (2021) noted that teaching experience significantly enhances decision-making and classroom management proficiency, which are essential in implementing complex approaches such as differentiated instruction.

Level of competence in implementing multigrade DI

Competence was interpreted using the scale 1.0-1.8 very low, 1.81-2.6 low, 2.61-3.4 neutral, 3.41-4.2 high, and 4.21-5.0 very high. In instructional planning, the statement on developing differentiated learning plans for each grade level, taking into account pupils' learning needs, abilities, interests, and learning styles, both individually and in groups, obtained the highest mean of 4.08, described as high. This indicates strong competence in designing flexible and responsive plans that are being integrated into classroom practice and support inclusive, learner-centered instruction. Valdez and Romero (2022) found that flexible lesson

plans aligned with learners' abilities and interests promote inclusive and engaging environments. Ortega and Pineda (2023) noted that differentiated planning enhances the capacity to address diverse needs through varied strategies, activities, and assessments. Navarro et al. (2024) reported that early childhood educators with strong planning competence better implement learner-centered instruction for individual and group outcomes. Lim and Bautista (2021) emphasized that planning in multigrade settings requires adaptability and responsiveness, which are key indicators of high competence. The second highest was the statement on preparing multigrade daily lesson plans that incorporate a variety of performance tasks and activities to assess understanding of lesson content, with a mean of 3.76, described as high. Teachers can therefore design assessments that measure understanding across grade levels and abilities, and continued enhancement of assessment design skills may further strengthen planning. Dela Peña and Santos (2022) found that diverse performance tasks make the assessment of learners across ability levels more effective. Cruz and Herrera (2023) noted that plans incorporating multiple assessment strategies promote deeper engagement in early childhood settings. Ramirez et al. (2024) reported that strong assessment design skills help align activities with differentiated objectives and ensure fair, holistic evaluation. Gonzales and Aquino (2021) emphasized that growth in assessment literacy supports performance-based evaluation aligned with learner-centered instruction. The remaining indicators were also described as high. Differentiating learning plans by adjusting content, process, and product obtained a mean of 3.67. Aligning lesson objectives with the K to 12 curriculum while considering pupils' context and learning needs, and including performance indicators such as tiered assessments and choice of culminating products, obtained 3.50. Consistently using individual pupils' formative assessment data to plan differentiated instruction for content mastery, pacing, and transitions obtained 3.40. The overall mean for instructional planning was 3.68, described as high. Teachers thus generally design structured, responsive plans that cater to the varied needs of learners and have developed adequate skills in organizing activities and assessments aligned with differentiated goals. This agrees with Reyes and Dizon (2022), who found that strong planners accommodate diverse needs in heterogeneous classrooms. Bautista and Mercado (2023) noted that effective planning improves the organization of activities and assessments aligned with differentiated objectives. Flores et al. (2024) reported that high planning competence is associated with inclusive, engaging, learner-centered strategies, and Navarro and Castillo (2021) emphasized its link to adapting instruction to learners' varying abilities in multigrade settings.

In instructional delivery, the statement on effectively using differentiated instructional strategies that let pupils easily access and understand lesson content, for example through audio, video, visuals, guide notes, or technology-assisted instruction, obtained the highest mean of 4.07, described as high. Teachers appear to integrate varied materials to accommodate diverse learning styles, which makes delivery more inclusive and responsive and improves comprehension and engagement. Mendoza and Villaflor (2022) found that multimodal strategies significantly improve comprehension and engagement. Estrella and Cruz (2023) noted that differentiated delivery enhances accessibility for learners with varying abilities in multigrade classrooms. Salonga et al. (2024) reported that varied instructional materials promote inclusive environments with higher participation and understanding. Dominguez and Reyes (2021) emphasized that adapting strategies to diverse needs improves learning outcomes. The second highest was the statement on engaging pupils and maintaining their active participation throughout lessons, with a mean of 4.01, described as high. Instruction is therefore interactive and learner-centered despite diverse learning levels, which supports understanding and retention. Santiago and Delos Reyes (2022) found that interactive and

participatory strategies sustain attention across diverse learner groups. Fernandez and Mercado (2023) noted that participation rises when learner-centered approaches accommodate varying abilities and developmental levels. Bautista et al. (2024) reported that engagement in multigrade classrooms requires intentional strategies such as collaborative learning and differentiated tasks, and Lopez and Ramirez (2021) emphasized that competence in managing engagement contributes to effective delivery and improved academic outcomes. The other indicators were likewise described as high. Prioritizing essential content over incidental facts or enrichment materials obtained 3.91. Providing collaborative and learner-centered opportunities for pupils to work individually, in pairs, in small groups, and as a whole class obtained 3.90. Consistently reinforcing learning objectives throughout the lesson obtained 3.87. The overall mean for instructional delivery was 3.95, described as high, which shows that teachers generally present lessons with appropriate strategies and sustain meaningful, engaging experiences that support pupil understanding. This agrees with Villanueva and Ramos (2022), who found that high delivery competence enables adapting presentations to diverse abilities and developmental levels. Padilla and Soriano (2023) noted that varied strategies sustain meaningful learning in heterogeneous classrooms, and Cruz et al. (2024) reported that competent delivery in multigrade settings is associated with better understanding and active participation.

In classroom management, the statement as reported in the original text, "I engage pupils and maintain their active participation throughout lessons," obtained the highest mean of 4.09, described as high. This indicates strong competence in sustaining engagement and creating an environment that encourages involvement despite the challenges of multigrade settings, with positive classroom dynamics supporting learning focus and interaction. Herrera and Domingo (2022) found that teachers who manage routines and behavior effectively sustain participation across diverse age groups, and Navarro and Estacio (2023) noted that effective management strategies improve engagement and reduce disruptions in multigrade environments. The second highest was the statement on effectively practicing the role of both facilitator and participant in the teaching-learning process, maximizing instructional time by giving equal attention to individual, small group, and whole-class interactions, with a mean of 3.83, described as high. Teachers therefore balance their roles and structure classroom management to ensure equitable attention and participation among pupils with varying needs. De Guzman and Alvarado (2022) found that teachers who shift strategically between facilitator and instructional roles maximize instructional time and address diverse needs. Santos and Villamor (2023) noted that structured interaction patterns such as individual, small group, and whole-class engagement enhance equitable participation and learning outcomes in multigrade settings. Reyes et al. (2024) reported that strong management and time allocation ensure balanced attention across learners with varying abilities, and Cruz and Bautista (2021) emphasized that effective facilitation promotes inclusivity and differentiated learning experiences. The remaining indicators were described as high as well. Developing and following systematic schedules for lesson activities and using learning centers as pupils' workstations organized according to their interests, needs, or choices obtained 4.09. Utilizing grouping strategies in various ways, such as whole class, small groups, pairs, and heterogeneous and homogeneous groups, and designing tasks that enable pupils to acquire the skills intended for each group activity obtained 3.76. Establishing clear classroom rules, procedures, expectations, and routines, enforcing them consistently and fairly, monitoring group participation, and providing timely feedback obtained 3.58. Arranging tables and seats to meet pupils' learning needs and interact effectively with all groups obtained 3.51. The overall mean for classroom management was 3.75, described as high, indicating that teachers are generally effective in organizing classroom activities, maintaining order, and facilitating learning among learners of diverse ages and abilities. Castillo and Manalo (2022) found that

high management skills produce orderly yet flexible environments that accommodate diverse learners. Dela Peña and Fajardo (2023) noted that effective practices improve engagement and participation in classrooms with mixed age and ability levels, and Ramos et al. (2024) reported that structured environments foster better academic focus and social interaction in multigrade settings.

Relationship between the respondents' profiles and their level of competence

The relationship between the respondents' profiles and their level of competence in implementing multigrade DI was tested using the Pearson product-moment correlation (r), with each computed t -value compared against a critical t -value of 1.984 at 98 degrees of freedom and an alpha level of 0.05. Age showed a moderate positive correlation with competence ($r = 0.32$), with a computed t -value of 3.36 that is greater than the critical t -value of 1.984, so the null hypothesis was rejected. Highest educational attainment ($r = 0.41$; $t = 4.45$) showed a moderate positive and significant relationship, and the null hypothesis was rejected. Training and seminars attended obtained the highest correlation coefficient ($r = 0.56$) with a computed t -value of 6.62, also higher than the critical value, and the null hypothesis was rejected. Length of teaching experience yielded a moderate positive correlation ($r = 0.48$; $t = 5.36$), which is statistically significant, and the null hypothesis was rejected. Sex obtained a low correlation ($r = 0.18$) with a computed t -value of 1.83, which is lower than the critical value of 1.984, so the null hypothesis was accepted. Exact p values were not reported in the source analysis, and the decisions rest on the comparison of computed and critical t -values at the 0.05 level. Competence in implementing multigrade DI is therefore significantly and positively associated with age, educational attainment, training, and teaching experience, which suggests that continuous professional development and advanced qualifications contribute to higher instructional competence. Sex has no significant relationship with competence, indicating that male and female teachers implement differentiated instruction similarly. García and López (2022) found that continuous professional development yields significantly higher competence in differentiated strategies in multigrade and diverse classrooms by enhancing pedagogical knowledge and adaptability. Kim and Park (2023) emphasized that higher academic qualifications are strongly associated with better instructional decision-making and use of learner-centered approaches. Miller et al. (2021) reported that years of teaching experience contribute meaningfully to competence through more refined management skills and adaptive strategies. Nguyen, Tran, and Pham (2024) confirmed that sex does not significantly influence instructional competence.

Level of challenges encountered in implementing multigrade DI

Challenges were interpreted with the same verbal scale. The statement that managing classroom behavior is challenging when students of different ages and developmental levels are in the same class obtained the highest mean of 3.92, described as high. Behavior management is thus the most critical challenge, which suggests that teachers struggle to address diverse developmental and age-related behavioral needs in one classroom and need targeted training and practical interventions suited to multigrade and early childhood contexts. Rivera and De Leon (2022) found that teachers struggle with diverse behavioral patterns in mixed-age classrooms because of varying developmental needs and limited instructional support. Navarro and Santiago (2023) showed that disruptions are more frequent in multigrade environments and call for specialized strategies not always covered in pre-service training. Mendoza et al. (2024)

reported that insufficient training in behavior management significantly affects the ability to maintain structured environments, and Castillo and Ramos (2021) emphasized the need for targeted professional development and continuous coaching. The second highest was the statement on difficulty allocating sufficient time for individualized instruction for each learner, with a mean of 3.77, described as high. Time limitations constrain teachers in addressing diverse needs, which suggests a need for structured planning strategies, time-management interventions, flexible grouping, and teaching assistants. Lopez and Manabat (2022) found that limited time and wide variation in abilities hinder individualized attention. Garcia and Mendoza (2023) showed that time management challenges reduce the capacity to implement personalized strategies in early childhood multigrade settings. Reyes et al. (2024) reported that insufficient time allocation lowers the quality of differentiated instruction, and Santos and Dela Cruz (2021) emphasized structured planning and support mechanisms. The other indicators were also described as high. Difficulty planning lessons that address the needs of multiple grade levels simultaneously obtained 3.73. Difficulty adapting instructional strategies to accommodate diverse learning styles obtained 3.72. Difficulty assessing learners' progress fairly and accurately across different grades obtained 3.65. Limited availability of learning materials and resources obtained 3.54, as did classroom size and student-to-teacher ratio, and difficulty maintaining student engagement and motivation across varying developmental levels. Lack of sufficient professional development and training on multigrade teaching obtained 3.52. Difficulty integrating the curriculum content of different grade levels into a coherent lesson plan obtained 3.39. The overall mean was 3.63, described as high, showing that despite efforts to apply differentiated strategies, instructional, behavioral, and time-related constraints continue to hinder effective delivery, which underscores the need for stronger institutional support, targeted training, and adequate resources. Torres and Llamas (2022) found that teachers struggle to balance diverse needs with limited resources. Villafuerte and Domingo (2023) showed that multigrade complexities significantly increase perceived workload and difficulty in lesson delivery. Cruz et al. (2024) reported that insufficient institutional support and materials hinder implementation, and Alonzo and Reyes (2021) emphasized sustained professional development and administrative support.

Synthesis

Taken together, the findings from the 100 respondents describe a mature, predominantly female, academically advanced, and experienced teaching workforce with considerable exposure to training, although 10 respondents or 10.00% never attended any. This group demonstrated high competence in instructional planning (overall mean 3.68), instructional delivery (overall mean 3.95), and classroom management (overall mean 3.75). Age ($r = 0.32$), highest educational attainment ($r = 0.41$), training and seminars attended ($r = 0.56$), and length of teaching experience ($r = 0.48$) were significantly and positively related to competence at the 0.05 level, with training showing the strongest relationship, while sex was not significantly related ($r = 0.18$). The null hypothesis was therefore rejected for four profile variables and accepted for sex. The respondents also reported a high level of challenges (overall mean 3.63), led by classroom behavior management (3.92) and time for individualized instruction (3.77). These results answer each objective of the study and add to the literature on multigrade differentiated instruction in early childhood education by showing that high competence and high challenges coexist, and that sustained professional development and institutional support are central to bridging them. The next chapter builds on these findings to present the summary, conclusions, and recommendations.

CONCLUSION

This study assessed the competence of early childhood teachers in multigrade differentiated instruction in Borbon District, Borbon, Cebu, during the school year 2025-2026, as a basis for developing a differentiated instruction plan. Using purposive-random sampling among more than one hundred teacher respondents, and a questionnaire adapted from Bunga (2025), the study analyzed the data through the weighted mean, simple percentage, and Pearson product-moment correlation r . The respondents were predominantly female and mostly belonged to the middle to late career age groups, with a smaller portion of younger teachers. Many had pursued graduate studies, including units or completed master's and doctoral degrees, while fewer held only a bachelor's degree. Most had participated in professional development activities, although a small number had not attended any training or seminar, and the majority were moderately experienced teachers, with a smaller proportion having either very limited or extensive years of service.

Against this background, the findings led to the conclusion that early childhood teachers demonstrate high competence in implementing multigrade differentiated instruction across instructional planning, instructional delivery, and classroom management. In instructional planning, teachers showed a strong ability to develop differentiated learning plans that address learners' varying needs, abilities, interests, and learning styles, and to prepare daily lesson plans that incorporate varied performance tasks and activities. In instructional delivery, they effectively used differentiated strategies and learning materials, such as audio, visual aids, and technology-based resources, to facilitate understanding while maintaining active learner participation throughout lessons. In classroom management, they sustained pupil engagement and balanced their roles as facilitators and active participants, thereby ensuring effective interaction across individual, small-group, and whole-class activities.

Furthermore, the study concluded that teachers' competence is significantly related to age, highest educational attainment, training and seminars attended, and length of teaching experience. These profile variables showed positive relationships with competence, with varying degrees of association, whereas sex showed a low and non-significant relationship. Taken together, most of the respondents' profile variables, except sex, are meaningfully associated with their level of competence in multigrade differentiated instruction. These results support the Constructivist Learning Theory (Qamar & Khan, 2015), which emphasizes learning through experience; the Differentiated Instruction Framework (Tomlinson, 2017), which highlights teachers' ability to address diverse learner needs; and the Multiple Intelligences Theory (Chen et al., 2019), which recognizes the need for varied teaching strategies to accommodate different learner strengths. Overall, continuous professional development and accumulated teaching experience enhance teachers' competence in multigrade differentiated instruction.

Despite this high level of competence, the findings also showed that early childhood teachers experience a high level of challenges in implementing multigrade differentiated instruction. Managing classroom behavior among learners of different ages and developmental levels emerged as the most prominent concern, followed closely by the difficulty of allocating sufficient time for individualized instruction for each learner. These challenges indicate that strong competence does not fully remove the practical demands of multigrade settings.

In light of these conclusions, it is recommended that the output of the study, the differentiated instruction plan, be implemented. The plan was designed to introduce and sustain varied teaching strategies, learning activities, and assessment methods that respond to the diverse needs, readiness levels, interests, and learning profiles of learners, in order to enhance their engagement, participation, and academic achievement in an inclusive classroom

environment. By addressing the identified challenges while building on teachers' existing competence, the plan offers a practical means of strengthening multigrade differentiated instruction in the district.

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