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UTILIZATION OF DIFFERENTIATED INSTRUCTION IN RELATION TO MULTIGRADE TEACHERS AND PUPILS' PERFORMANCE

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MAZEDAN EDU. REVIEWS AND TEACHING METHODS

e-ISSN:

Article id-MERTM0202001

Vol.-2, Issue-2

Received: 23 Apr 2022

Revised: 18 May 2022

Accepted: 22 May 2022

Citation: Dimagnaong, M. J., & Esrael, J. D. (2022). Utilization of Differentiated Instruction in Relation to Multigrade Teachers and Pupils Performance. *Mazedan Educational Reviews and Teaching Methods*, 2(2), 1-5.

Abstract

This study mainly determined the utilization of differentiated instruction in relation to multigrade teachers and pupils' performance. Specifically, it aims to determine the extent of differentiated instruction that deals on strategy and process, the significant influence and relationship between the stated indicators in the independent and dependent variables of the study.

The research design was descriptive correlation methods, 35 respondents, clustering sampling technique was employed. Differentiated instruction which is agreed in dealing strategy in terms of diverse learning backgrounds, experiences, abilities, performances, interests and motivations was agreed in the learning target on designing activity that focuses on the growth and the development of the learners.

Differentiated instruction focused that on the process in terms of learning targets, tasks, activities, and resources they agreed learning target on designing activity that focuses on the growth of the child, planning curriculum across grade level objectives, considering that most of the variables presented has a great contribution and they are considered as best predictors of the study.

The significant influence and relationship between differentiated instruction that deals on a) strategy and b) process on the performance of multi-grade teachers (based on IPCRF) has a high degree of relationship on teaching learning process, pupil's outcome, community involvement, professional growth development. On the differentiated instruction deals on process on the performance of multi-grade teachers focused on learning targets (based on IPCRF) has a high significant relationship on teaching learning process pupil's outcome, community involvement, and professional growth development, considering that most of the variables presented has a great contribution and they are considered as best predictors of the study.

Keywords: differentiated instruction, pupils' performance, IPCRF, correlation, Philippines.

1. INTRODUCTION

Differentiated instruction and assessment (differentiated learning or education) is a framework or philosophy for effective teaching that entails providing students with different avenues to learning (often in the same classroom) in terms of acquiring content, processing, constructing, or making sense of ideas, and developing teaching materials and assessment measures so that all students in a classroom, regardless of differences, can learn effectively.

Teachers must be competent to manage a diverse range of students in multi-grade courses. Culture, social status, language, gender, motivation, ability/disability, personal interest, and other characteristics varies across students, and teachers must account for these variances while constructing curriculum. Teachers may provide individualized instruction for all pupils in the classroom by considering their various learning needs. Multi-grading can be considered as an approach for increasing school quality by introducing fresh teaching and learning techniques (World Bank, 1993).

Differentiation via the environment is important because it creates the conditions for optional learning to occur. Differentiated teaching involves meeting individual needs, whether the instructor distinguishes material, procedure, or the learning environment; the use of continual evaluation and variable grouping makes this an effective instructional technique (Tomlinson, 2014).

The impact of differentiation is shown in "early warning systems" and students' "dashboards," which both aim to track students' individual performance in real time, and also measures in some schools to create and supervise personalised learning plans with students, teachers, and targeted parents. The researcher planned to do study on differentiated instruction in multigrade classes.

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2. STATEMENT OF THE PROBLEM

The study's goal was to describe differentiated instruction and the performance of teachers teaching multigrade courses in four areas of Matalam Municipality, Cotabato Province. It especially addressed the following:

1. What is the amount of differentiated teaching in terms of learning objectives, tasks, activities, and resources that is process-focused?
2. What is the level of performance of multigrade teachers based on IPCRF in terms of teaching learning process, student outcomes, community participation, and professional growth and development?
3. What is the level of pupils' performance in class participation, requirements/project, and experiment?
4. Is there a significant relationship between differentiated instruction that deals on a) strategy and b) process on the performance of multi-grade teachers (based on IPCRF)?
5. Is there a significant influence of the differentiated instruction that deals on strategy and process on the performance of multi-grade teachers (based on IPCRF)?
6. Is there a significant relationship between differentiated instruction that focused on the strategy, and process on the pupils' performance?

3. THEORETICAL FRAMEWORK

Constructivism's learning theory looks to lend itself to differentiated instruction. Constructivism's key ideas are that knowledge is derived from prior knowledge and that learning is an active rather than passive process (Hoover, 1996).

In a classroom setting, the teacher engages with the pupils rather than standing at the front of the room and feeding information to recipients who have no prior knowledge. Teachers must leave the front of the classroom and join the pupils in "the trenches." Students are observed and instructed to help them discover themselves.

4. METHODS

Research Design

The descriptive-correlative approach was applied in this study. It is descriptive in the sense that the data is given in thorough descriptions to decide differentiated teaching in multigrade classrooms.

Furthermore, it is correlative since it determined the substantial effect and link between the study's independent factors and dependent variables.

Research Instrument

To collect the data for this study, the researcher created a survey questionnaire. The questionnaire has three (3) parts. Part I includes diversified teaching as an approach, as well as a diverse learning background, experiences, talents, performances, interest, and motivation. Part II measures differentiated teaching as a process that includes learning objectives, tasks, activities, resources, and learning support. Part III, contains the performance of multi-grade teachers (based on IPCRF).

Participants of the Study

The teachers and pupils of DepEd elementary Schools at Matalam, Cotabato, served as the respondents of the study. The researcher chose the schools for the study from among the selected DepED primary schools in the Municipality of Matalam, Province of Cotabato, using a clustered sampling approach. The study used comprehensive enumeration of principals/TICS, teacher respondents, and random selection of twenty-five (25%) of the total number of pupil-respondents in each grade level.

Statistical Tools and Data Analysis

The frequency distribution, percentage, mean, and weighted mean were employed in this study to solve the questions being explored (Kaur, Stoltzfus, Yellapu, 2019).

Pearson Product Moment Correlation was used by the researcher to determine the relationship between the study's independent and dependent variables (Pearson, 1948). Multiple Regression analysis was also utilized in the study to assess the significant effect of the variables discovered (Pearson, 1948).

5. RESULTS

Differentiated Instructions of Teachers

Diverse Learning Backgrounds. Classrooms are diversified by offering equitable learning opportunities, analyzing students' differences and similarities, developing multiple possibilities for grouping and monitoring, stimulating students' social development, and fostering greater classroom collaboration. The various learning backgrounds, boosting pro-social conduct, enhancing personal relationships, and personal responsibility are highly valued.

Experiences

To diversify instruction, teachers analyze situations, combine various steps to arrive at an appropriate solution, and that instruction has emerged as a theme to ensure that learners are prepared for the future. On the other hand, they moderately agreed on a number of themes that will assist learners as they move into future leadership roles. Results suggests that the multigrade instructors' attention is on the experiences of learning to assess issues and include several processes to obtain an acceptable answer. Hands-on learning, on the other hand, is an efficient method of interacting with learners by involving them in various tasks.

Abilities

Teachers diversify instruction by handling instructional objectives, tasks, activities, resources, and learning supports to individual learners' needs, promoting ways that increase pupil autonomy, individualized, sensitive, and responsive teaching to both teachers and learners, and providing a multitude of opportunities for learners with varying levels of readiness.

Performances. Differentiated instruction of teachers is enabling students to construct their own product assignment as long as it has needed aspects, allowing students to use modern media and technology, and designing performances that meet the requirements of

students. The findings reveal that teachers facilitate classroom interactions in such a way that students may demonstrate what they can do by applying what they have learned while still having fun. During individual and group work, teachers utilized proximity to check in with students.

Interest and Motivation

To capture interest and motivate, teachers created charts and diagrams to explain ideas; provided emotional safe spaces within the learning environment; established routines to support pupil interest; used reading materials with varying readability levels; and interpreted through multimedia and interacted through group discussion.

In the teaching process, teachers ensure the achievement of:

Learning targets

Teachers develop activities that focus on the child's growth; preparing curriculum across grade level objectives; allowing learners to engage in independent study; and achieving the design curriculum's learning objectives.

Tasks

Teachers present relevant, adequate, and updated teaching materials; allowing students to engage in meaningful conversation; encouraging students to investigate large ideas and improve their understanding; and developing assignments that match the requirements of students.

Activities

In terms of activities, teachers employ peer tutoring, arranging instruction to meet all varied learners, teaching using various resources, engaging students in a meaningful activity that leads them ahead, and creating and executing an experiment.

Resources

In terms of resources, teachers provide learners with multiple options for demonstrating mastery at the end of the lesson; provided learners with a variety of strategies for teaching using multimedia; provided learners with multiple assessment options; and designed appropriate materials such as workbooks with self-correction key.

Learning Supports

Provide actual hands-on and written evaluation to measure students' learning; use instructional tools to help teaching; and participate in co-curricular and school activities.

Performance of Multi-Grade Teachers (Based on IPCRF)

Teaching-Learning Process. The teachers' performance in initiating pupil discipline, including classroom rules, guidelines, individual and group tasks, and preparing per subject area lesson plans and daily logs of activities, including appropriate, adequate, and updated instructional materials, is very satisfactory. Additionally, they are very satisfactory in monitoring attendance, diversity appreciation, a safe, positive, and motivating environment, an overall physical atmosphere, classroom cleanliness and orderliness, including daily waste disposal; and facilitating learning in the school through functional lesson plans, daily logs, and innovative teaching activities.

Pupil's Outcome

Teachers performed an excellent job of managing and measuring students' progress, updating students' school records, attaining the required GSA for grade level and learning areas, and delivering remediation/enrichment programs to improve performance markers. The findings show that the outcomes of students' learning aid instructors in obtaining a shared view of the purpose and goals of a course or academic program. Learning objectives are the foundations of course design and evaluation because they help students focus on what is most important. It is well-written, short, and clearly articulated, with sufficient information to be visible and quantifiable, and hence assessable.

Community Involvement

Teachers launched projects/events/activities with external funding/sponsorship within the deadline; contacted parents of learners who needed academic monitoring/follow up during the rating period; and conducted monthly PTA meetings/conferences.

Professional Growth and Development.

The results show that the teachers did exceptionally well in terms of receiving special awards/citations/recognition for outstanding achievement (division/district/school level); engaging in co-curricular/school activities during the rating period; undertaking problem/classroom-based action-research; and producing publications/creative work for school paper/Division publication by the date set.

Pupils' Performance

Class Participation. Pupils performed well by actively participating in and directing group tasks, as well as completing exercises without close monitoring from the teacher and answering questions correctly.

Requirements/Projects

Pupils demonstrate very satisfactory performance in terms of eagerness and cooperation to complete the task; greatly assisting the group in producing subject, on time, clean, and appealing output (project); and submitting presentable output within the time frame specified.

Relationship between Differentiated Instructions that deals on (Process) on the Performance of Multigrade Teachers based on IPCRF

Differentiated instruction (process) and learning targets have a high degree of relationship, especially on teaching-learning process (pr = 0.724**, probability = 0.000); pupil's outcome (pr = 0.728*, probability = 0.000); community involvement (pr = 0.551**, probability = 0.000); and professional growth development (pr = 0.723**, probability = 0.000). The differentiated teaching parameter is concerned with instructors' techniques and strategies for improving their performance. According to the findings, learning is centered on providing activities that encourage children's growth. For Jensen (1998), within the same classroom, diverse teaching is a pedagogical method for educating students with various preparation levels, interests, and learning styles.

Data reveal that the correlation between differentiated instructions (process) and tasks is highly significant, especially in terms of teaching-learning process (pr = 0.619**, probability = 0.000); pupils' outcome (pr = 0.540**, probability = 0.000); community involvement (0.443**, probability = 0.000); and professional growth development (pr = 0.839**, probability = 0.000. Therefore, the hypothesis of the study is rejected due to the reason that the probability value is lesser than 0.01 percent on the level of significance. It also means that adopting differentiated teaching when assigning assignments allows students to engage in meaningful conversation and prepare relevant, adequate, and up-to-date instructional materials for the students. Teachers must ensure that students comprehend the objective of the lessons and the assignments that may have ramifications for life outside of the classroom. As a result, students acquire a sense of relevance between school and the outside world. It improves the effectiveness of learning (Landrum & McDuffie, 2010).

Furthermore, differentiated instruction (process) and activities has significantly high-correlated especially on teaching-learning process (pr = 0.513**, probability = 0.000); pupils' outcome (pr = 0.726**, probability = 0.000); community involvement (pr = 0.538**, probability = 0.000); and professional growth development (pr = 0.470**, probability = 0.000). Thus, the hypothesis of the study is rejected since the probability value is lesser than 0.01 percent level of significance. Based on the findings, differentiated teaching on strategy increases multigrade instructors' performance (based on IPCRF) on activities such as planning and implementing peer tutoring, and structuring instruction to meet the requirements of all distinct learners. Grouping techniques must be adaptable as groups alter in response to the demand that must be met. One of the cornerstones of differentiated education is the dynamic flow of combining and reorganizing, regardless of whether it is based on learner readiness, interest, or needs. In a differentiated classroom, it is vital to allow certain students to work alone if this is their best mode of operation for a certain task (Nunley, 2006).

The data also reveal that the differentiated instruction (process) and resources have a high degree of relationship specifically in terms of teaching-learning process (pr = 0.708**, probability = 0.000); pupils' outcome (pr = 0.762**, probability = 0.000); community involvement (pr = 0.503**, probability = 0.000); and professional growth development (pr = 0.797**, probability = 0.000). In this part, it was observed that the level of significance is lesser than 0.01 percent; therefore, the hypothesis of the study is rejected. It suggests that it is beneficial to provide learners with different alternatives for demonstrating mastery at the conclusion of the session, as well as a diversity of ways for teaching utilizing multimedia. This is consistent with Bailey and William-Black's (2008) assertion that the method can be diversified depending on how the instructor chose to teach (lecture for auditory learners, center for tactile learners, small group and whole group) and the tools that the teacher has the students use to assist them explore the subject that is being taught.

Moreover, differentiated instruction (process) and learning supports have a high degree of relationship, most especially on teaching learning process (pr = 0.616**, probability = 0.000); pupils' outcome (pr = 0.531**, probability = 0.000); community involvement (pr = 0.373**, probability = 0.000); and professional growth development (pr = 0.706**, probability = 0.000), therefore hypothesis of the study is rejected. It means that tailored teaching on the process in multigrade teachers' learning support performance (based on IPCRF). It allows for both hands-on and written evaluations of pupils' learning. It is ideal to assist each learner in a class by knowing and understanding him or her so that specialized instruction may be provided. Process differentiation is concerned with how a learner grasps and absorbs information, concepts, and abilities (Anderson, 2007).

Influence of the Differentiated Instruction (Strategy and Process) on the Teaching-Learning

Differentiated instruction (strategy) has a high degree of significant influence on the following: diverse learning backgrounds (t = value = -7.397, probability = 0.000**); experiences (t-value = -7812, probability = 0.000**); abilities (t = value = -14.005, probability = 0.000**); performances (t-value = 32.108, probability = 0.000**); and interests and motivation (t-value = -14.180, probability = 0.000**).

Also, the same high degree of significant influence by process is observed with learning targets (t-value = 16.948, probability = 0.000**); tasks (t-value = 20.350, probability = 0.000**); activities (-1.556, probability = 0.122ns); resources (t-value = -15.332, probability = 0.00**); and learning supports (-24.785, probability = 0.000**).

In this study it was observed that there were several indicators that showed negative significant results on strategy, especially in terms of diverse learning backgrounds. This is most probably due to establishment of numerous alternatives ability of grouping and tracking, stimulating pupils' social development, and encouraging greater classroom cooperation; In terms of experiences, I contributed several ideas to help learners transition into future roles as leaders; abilities in designing to provide various learning opportunities for learners with varying levels of readiness; interests and motivation in interpreting through multimedia and interacting through group discussion.

It reflects on differentiated teaching, which has had a detrimental impact on the process in terms of resources in producing appropriate materials, such as workbooks and self-correction keys; learning aids in starting and engaging in co-curricular and school activities.

The probability value is lesser than the set level of significance; hence, the hypothesis of the study is rejected. The results presented that 96.5% of the variation is attributed by differentiated instruction and the remaining 3.5% is attributed by the variables not found in the context of the study. It suggests differentiated education in the classroom, which focuses on approach and process. The indicators of the study contributed considerably to the fairness of learning opportunities and numerous ideas to support earners as they move into future responsibilities as leaders. The students focus on developing curriculum that address grade level requirements.

Per the National Center for Education Statistics, differentiated instruction is the method of "guaranteeing that what a pupil understands, how he or she learns it, and how the pupil exemplifies what he or she has learned is a match for that student's proficiency level, interest, and preferred method of learning" (Tomlinson, 2004).

Influence of the Differentiated Instruction (Strategy and Process) on the Pupil's Outcome

Differentiated instruction in terms of strategy has a high degree of significant influence on diverse learning backgrounds (t = value = -6.973, probability = 0.000**); experiences (t-value = -4.816, probability = 0.000**); abilities (t = value = -10.810, probability = 0.000**); performances (t-value = 10.361, probability = 0.000**); and interests and motivation (t-value = -2.080, probability = 0.040**). Moreover, process significantly influenced the following: learning targets (t-value = 4.237, probability = 0.000**); tasks (t-value = 8.682, probability = 0.000**); activities (t-value = 7.876, probability = 0.00**); resources (t-value = -6.497, probability = 0.00**); and learning supports (-7.973, probability = 0.000**). Therefore, the hypothesis of the study is rejected as the probability value is lesser than 0.01 percent level of significance. The results indicate that 87.5% of the variation could be attributed to differentiated instruction that included strategy (diverse learning backgrounds, experiences, abilities, performances, and interests and motivation) and process (learning targets, tasks, activities, resources, and learning supports). The remaining 12.5% could be due to other variables not found in the context of the study. However, some variables were discovered to be negatively influenced by differentiated instruction, such as: diverse learning backgrounds to understand the differences and similarities among pupils, experiences to learning analyze situations, incorporating multiple steps to reach appropriate solution, abilities need to be designed in order to provide various learning opportunities for learners, interests and motivation using reading materials of varying readability. Differentiated instruction that focuses on the process in terms of resources and learning supports has a negative substantial effect because it allows learners to demonstrate mastery at the conclusion of the sessions and provides teaching help via the use of instructional materials.

6. CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Based on the study's findings and analyses, the researcher comes to the following conclusions:

That was agreed in the learning aim on developing activity that focuses on the growth and development of the learners on differentiated instruction, which deals with strategy in terms of varied learning backgrounds, experiences, abilities, performances, interests, and motivations.

Differentiated education centered on the process in terms of agreed-upon learning objectives, tasks, activities, and resources. Devising activities that concentrate on the child's growth, preparing curricula across grade level goals.

The significant influence and relationship between differentiated instruction that addresses a) strategy and b) process on multi-grade teachers' performance (based on IPCRF) has a high degree of relationship on the teaching learning process, pupil outcomes, community involvement, and professional growth development. Differentiated instruction has a high significant relationship with the teaching learning process, child outcomes, community involvement, and professional development (based on IPCRF).

As a result, most of the factors offered have a significant contribution and are regarded as the best predictors of the research.

Recommendations

Based on the findings and conclusions, the following recommendations are made:

1. Teachers are encouraged to embrace differentiated instruction that deals with strategy in terms of diverse learning backgrounds, experiences, abilities, performances, interests, and motivations; and on the process in terms of learning targets, tasks, activities, and resources.
2. The level of teachers' performance in the multigrade teaching based in IPCRF is needs to be appreciated knowingly that they performed very satisfactory in terms of teaching learning process, pupils' outcome, community involvement, and professional growth and development.
3. Pupils' performance in class participation, requirements/project, and experiment must be improved higher ratings; teachers must have to employ more blended learning strategy to catch the interest and attention of the learners.
4. Teachers must be given the opportunity to start conducting research and be able to put their research output into actual application, which may start in classroom situations.
5. Further research study on this aspect is encouraged to be conducted.

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