

DIFFERENTIATED INSTRUCTIONAL STRATEGY TO THE PERFORMANCE OF GRADE 9 STUDENTS IN COOKERY

JAMAICA O. ELARCO

elarcojamaicao@gmail.com

Laguna State Polytechnic University, Philippines

ABSTRACT

This research was entitled “Differentiated Instructional Strategy to the Performance of Grade 9 Students in Cookery”. The study aimed to determine the effect of differentiated instructional strategy to the performance of students. Specifically, the researcher attempted to determine the level of differentiated instructional strategy of Technology and Livelihood Education teacher in terms of mastery of the subject matter, communication skills, learning assessment skills, and classroom management skills. Moreover, the researcher determined the level of performance of grade 9 students in cookery in terms of practical test and summative test. It was also identified the significant difference in the summative test of the Grade 9 students in Cookery who grouped according to their level of ability. Lastly, the researcher established a significant effect between the differentiated instructional strategy to the practical test and summative test.

An experimental quantitative research design was employed by the researcher to obtain the necessary data. The research respondents were thirty-eight (38) Grade 9 students in Cookery from Adela S. Torres National High School at Sampaloc, Quezon. Purposive sampling was utilized in selecting the respondents. The research instrument of this study is the development of a self-made questionnaire suited for the problems in this study.

Salient findings revealed that the level of differentiated instructional strategy of TLE teacher in terms of mastery of the subject matter, communication skills, learning assessment skills, and classroom management skills was very high. Similarly, the level of performance of Grade 9 students in Group A and Group B in terms of practical test in Cookery was outstanding which implies that respondents performed very well in their practical test. However, the level of performance of Grade 9 students in Group A in terms of the summative test was very satisfactory, and Group B has an interpretation of outstanding.

On the other hand, the differentiated instructional strategy showed a significant effect on practical test in terms of communication skills and classroom management skills. In contrast, the differentiated instructional strategy was no significant effect on the summative test of grade 9 students in Cookery in terms of mastery of the subject matter, communication skills, learning assessment skills, and classroom management skills.

It was concluded that the level of the differentiated instructional strategy employed by the Technology and Livelihood Education teacher plays a vital role to meet the needs of every learner, it also promotes positive inclusivity. Respondents highly agreed on the positive effects brought by the differentiated instructional strategy applied by the teacher. Setting the objectives, activities, and strategies that are applicable to students' level is strongly advised. Thus, the hypothesis is accepted. It is recommended to explore teachers in implementing differentiated instructional strategy depending on the learning styles and needs of the students. Trainings and seminars can be applied to enhance the teacher's strategy.

Keywords:

classroom management skills, communication skills, cookery, differentiated instructional strategy, learning assessment skills, mastery of the subject matter, performance

INTRODUCTION

Every individual's education is vital; it is our most effective means of overcoming all the individual and social challenges we are currently dealing with. The educational institution seeks strategies to support learning and adapt to the changing environment. The presence of highly qualified teachers in every classroom is the best way to ensure all learners receive instruction and that no one is left behind.

The current focus on essential competencies is one particular reaction to the necessity for such change. Instead, an accumulation of knowledge and advancements in the field of education is highlighting the significance of putting knowledge to use. As a result, the main objective of a curriculum should be to move away from the traditional method approaches and instead emphasize giving students the skills they need to choose and apply their knowledge.

These days, it might be very difficult to teach the subject of Technology and Livelihood Education (TLE). It calls for a wide grasp of the material, familiarity with the curriculum and standards, enthusiasm, compassion, creativity, passion for learning, and an aspiration to improve the students' lives in some way. Additionally, it calls for high-quality training in terms of competence in obtaining the necessary skills in each TLE field of expertise to generate National Certificate holders.

To cope with this, the Most Essential Learning Competencies (MELCS) have been released by the Department of Education for implementation across the country. Under some conditions, this MELCS can be considered a tool to assure educational continuity. It will also allow the department to concentrate instruction on the most essential competencies.

Every student is envisioned to possess sufficiency in most essential learning competencies and be adequately prepared for the world of work. Technology and Livelihood Education is one of the learning areas in the K-12 basic education curriculum in the Philippines. Its main goal is to expose every learner to real-life scenarios that helps them develop a critical, logical, and creative way of thinking and acquire essential problem-solving skills. (Bunga & Serrano, 2016).

However, teaching is teaching if learners learn. Learning is measured by its outcome. Whatever approach to teaching is used, the intent should focus on learning rather than teaching. Subjects do not exist in isolation, but links between them should be made. It is important that students learn how to learn, hence teachers should be innovative. (Catapang, R.G., & Tuiza, A.V. 2022)

In response, the researcher attempted to study the differentiated instructional strategy of a Technology and Livelihood Education teacher to the performance of grade 9 students in cookery subject. Primarily, this study seek out the level of practice and expertise of a TLE teacher in delivering differentiated instructional strategy. The researcher observed that there is limited information and research determining the differentiated instructional strategy of a TLE teacher after the pandemic scenario. This study is strongly motivated to evaluate and explain the advantages it will contribute to the educational pedagogies considering this.

STATEMENT OF THE PROBLEM

The main purpose of this study is to determine the effect of differentiated instructional strategy of TLE teacher to the performance of Grade 9 students in Cookery.

Specifically, the study will seek answers to the following questions:

1. What is the level of differentiated instructional strategy of TLE teacher with regards to:
 - 1.1. mastery of the subject;
 - 1.2. communication skills;
 - 1.3. learning assessment skills;
 - 1.4. classroom management skills?
2. What is the level of performance of Grade 9 students in Cookery in terms of:
 - 2.1. practical test;
 - 2.2. summative test?
3. Is there a significant difference in the summative test of the Grade 9 students in Cookery who grouped according to their level of ability?

4. Does the differentiated instructional strategy of TLE teacher have a significant effect on the performance in practical test of Grade 9 students in Cookery?
5. Does the differentiated instructional strategy of TLE teacher have significant effect to the performance in summative test of Grade 9 students in Cookery?

REVIEW OF RELATED LITERATURE

Kapur (2022) concluded that educational institutions of all levels, the utilization of different types of instructional strategies are fundamental to promote student learning, achieve educational goals and promote enrichment of the overall system of education. Hence, throughout the job duties of educators, they need to put emphasis on leading to up-gradation of instructional strategies. This is a complicated task, but when the educators are wholeheartedly focused towards putting into operation their job duties in a well-ordered manner and generation of desired outcomes, they need to be determined towards putting into operation this task in a well-ordered and disciplined manner. Furthermore, it is necessary to be well-informed in terms of objectives of instructional strategies. Generating information in terms of objectives will be facilitating in promoting enrichment of instructional strategies. These are stated as follows: 1. honing communication skills; 2. enabling students to understand the concepts better; 3. leading to effective growth and development of students; 4. making wise and productive decisions; 5. augmenting analytical and critical-thinking skills; 6. utilizing technologies in a moral and diligent manner; 7. utilizing teaching-learning materials in an effective manner; 8. conducting research on regular basis; 9. possessing adequate knowledge of subject matter; 10. implementing modern, scientific and innovative methods; 11. in higher education, field-work should be promoted; 11. promoting teamwork; 12; organizing seminars and workshops; 13. generating information regarding educational goals; and leading to up-gradation of overall system of education.

To supervise and control the educational process in the school, teachers must complete professional training and receive certification. Through their skills, potential, and professional competence related to their specialization, teachers are the fundamental component that has the greatest impact on the teaching-learning environment.

. Modern society expects teachers to deliver high-quality instruction and learning. In order to satisfy those requirements and standards of quality education, teachers must have a wealth of knowledge and expertise in both teaching and assessment techniques (Ksenia, 2017). Furthermore, according to Sword (2020), Since teaching itself entails communication, it is vital to have these abilities when interacting with students. Teachers job requires them to understand and deconstruct difficult knowledge, communicate it to their pupils in a way that keeps their attention (both vocally and through written resources), and listen to and address any questions or issues they may have.

The primary objective of instructional strategies is, teachers need to ensure, students not only acquire an efficient understanding of the lesson plans and academic concepts, but they are also to hone their competencies, abilities and aptitude. The instructional strategies should be organized in such manner that these would be beneficial to the individuals to a major extent. The students need to inculcate the traits of diligence, resourcefulness and conscientiousness to do well in their jobs and generate the desired outcomes. When the teachers make provision of information to the students in terms of various factors, the students need to understand them and clear their doubts. When the lesson plans are complicated, the instructional strategies need to be put into operation in an adequate manner to help the students clear their concepts. It is the job duty of the teachers to make use of modern, scientific and innovative methods in instructional strategies. Furthermore, they need to ensure, they are compatible to the academic requirements of students. Therefore, importance of instructional strategies is understood, when these contribute significantly in achieving educational goals and leading to enrichment of the overall system of education (Kapur, 2021).

Modern, scientific, and innovative techniques must be applied in order to effectively deploy instructional strategies in fostering student learning, assisting them in reaching their academic objectives, and improving the entire educational system. The different varieties of these methods make use of projects, reports, projects, charts, diagrams, models, structures, and a variety of technologies. These are

crucial in ensuring that teaching strategies are reinforced. It is important to make sure that they are appropriate for the students' grade levels and learning styles before the teachers employ them. Help must be given to students when they run into issues. For instance, students who receive computer training will apply their technical talents in both their professional and personal lives. Teachers and students must also instill the qualities of diligence, resourcefulness, and conscientiousness in them and help them get over their fears. Therefore, when students are able to improve their competencies and abilities in terms of numerous disciplines and concepts, the significance of instructional methodologies is understood.

METHODOLOGY

This chapter presents the research design and statistical treatment used in this study. It also explains the respondents and sampling techniques used. Validation techniques for the instrument and data gathering complete the procedure utilized.

Research Design

This study utilized a quantitative research design that aimed to determine the differentiated instructional strategy of TLE teacher to the performance of grade 9 students in Cookery. This research method is experimental since it sets methods that enabled the researcher to apply a hypothesis to the test and to analyze causal relationships systematically and accurately among variables.

As cited in the study of Eduarte (2022), experimental research is a quantitative research approach that seeks to gather numerical data for the analysis of data. The goal of experimental research is to explain phenomena and the traits that underlie them. In this instance, it will make use of experimental quantitative analysis to highlight respondents' performances through data gathering and analysis.

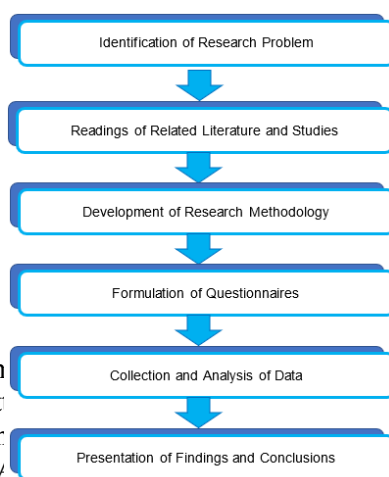
Respondents of the Study

In this study, the respondents are total of thirty-eight (38) grade 9 students who are from a public school in Sampaloc, Quezon. They are students of Adela National High School in the school year 2022-2023.

The sampling design of this study used purposive sampling. It is a non-probability sample that is selected based on the characteristics of a population and the objective of the study. In connection, the researcher provides a 30-item diagnostic test about salad and salad dressings to her respondents on the first day of the second quarter. The test results were the basis to have group categories that shows their learning abilities.

Research Procedure

The researcher will follow the procedures which are important to the conclusion of this study.



Figure

Identification of the problem related readings and studies for a better appropriate and feasible research method based on the needs of this study. The researcher developed a set of questionnaires that will deal with the required needs from the problems of the study. Findings and conclusions were formed lastly based on the data gathering process.

Before gathering the data, the researcher asked permission through a letter of request from various offices such as for the Schools Division Superintendent of Division of Quezon, experts for the

validation of questionnaire, and the School Head of Adela S. Torres National High School for the conduct of the study. All the letter of request were signed by the researcher and her research adviser.

The researcher oriented the thirty-eight (38) respondents about her study. Before applying a differentiated instructional strategy, the researcher conducted a diagnostic test to categorize the respondents according to their learning abilities. The test results were given to the internal statistician to have the sets of respondents. It was equally divided into two groups which are both composed of nineteen (19) learners.

Differentiated Instructional Strategy was applied to respondents for four (4) weeks in their second quarter. The researcher prepared and utilized the two sets of lesson exemplars on Salad and Salad Dressings in the Cookery subject. To get the needed data, she conducted a summative and practical test for her respondents using a standardized analytic rubric. Afterward, she seeks some help from her co-TLE teacher to supervise the respondents while answering the Likert-scale questionnaire for the differentiated instructional strategy of the researcher. The results were treated with the proper statistical tools, to come up with the findings that will be the basis for the conclusions and recommendations.

Research Instrument

For the purpose of the accomplishments of this study, the researcher utilized a self-made Likert scale questionnaire, a standardized multiple-choice type of test for the diagnostic assessment, and a standardized analytic rubric for the evaluation of practical test to collect and analyze necessary data.

The researcher prepared a self-made Likert-scale questionnaire which determine the level of differentiated strategy of the TLE teacher with regard to: mastery of the subject matter, communication skills, learning assessment skills, and classroom management skills. Each category is composed of 10 statements written in English and Filipino language to easily understand by the respondents. The questionnaire was validated by the four experts: two of them were a Head Teacher III and Master Teacher I in TLE Department at Paaralang Sekundarya ng Lucban Integrated School in Lucban, Quezon. The other two experts were School Principal II and Master Teacher I at Sampaloc National High School in Sampaloc, Quezon. All the comments and suggestions of the experts were humbly accepted by the researcher for the improvement of the questionnaire and the study.

The second instrument of this study is a standardized 30-item in the form of multiple-choice and identification type of test for the diagnostic assessment of the respondents. Adela S. Torres National High School always uses this instrument for the diagnostic test to evaluate the strengths and weaknesses of the learners in salad and salad dressings. The result of the diagnostic test will be the basis for the categories of the respondents. The same instrument was used for the summative test in the independent variable of the study. The researcher requested permission from her School Head to use the content of the test.

The last instrument used in this study is the standardized analytic rubric for practical tests in the Cookery subject. It is composed of five categories: use of tools and equipment, application of procedures, safety work habits, completeness of tasks, and time management.

The three instruments help the researcher to gather the data she needed to show the significant effect of differentiated instructional strategy to the performance of grade 9 students in Cookery.

Statistical Treatment

In measuring the statistical data, the researcher used weighted-mean and standard deviation for determining the level of differentiated instructional strategy of TLE teacher in terms of mastery of the subject matter, communication skills, learning assessment skills, and classroom management skills. It was also used to show the level of performance of grade 9 students in cookery in terms of practical and summative tests.

Whereas the paired t-test was used to assess significant differences in the summative test of grade 9 students in cookery who grouped according to their level of ability. This is the appropriate statistical treatment which would determine the significant difference between the variables in this study.

To determine the significant effect on the performance in practical and summative test of the respondents the researcher used the Regression Analysis. This is a high-powered statistical method to allow the researcher to examine the two variables of interest.

RESULT AND DISCUSSION

Table 1. Level of Differentiated Instructional Strategy of TLE Teacher with Regards to Mastery of the Subject Matter

| STATEMENT | Mean | SD | Remarks |
|--|-------------|------|-----------------------|
| My teacher provides clear directions about learning objectives and competencies. | 3.80 | 0.40 | Strongly Agree |
| My teacher covers a range of topics guided by the Most Essential Learning Competencies (MELCs). | 3.53 | 0.51 | Strongly Agree |
| My teacher makes sure to have all her lessons fully planned out in advance. | 3.42 | 0.50 | Strongly Agree |
| My teacher can provide and explain in-depth information about the content. | 3.79 | 0.41 | Strongly Agree |
| My teacher presents the contents following a clear and logical framework, highlighting the important aspects of the subject. | 3.68 | 0.47 | Strongly Agree |
| My teacher presents information from diverse angles and viewpoints. | 3.79 | 0.47 | Strongly Agree |
| My teacher can create graphic organizers as an aid to illustrate difficult topics. | 3.21 | 0.70 | Agree |
| My teacher employs well-designed resources that are relevant to the subject matter. | 3.58 | 0.50 | Strongly Agree |
| My teacher incorporates a variety of learning activities into the lesson. | 3.66 | 0.53 | Strongly Agree |
| My teacher is efficient in delivering the lesson within the set time frame. | 3.74 | 0.45 | Strongly Agree |
| Grand Mean | 3.62 | | Strongly Agree |
| Interpretation | | | Very High |

Table 1 presents the level of differentiated instructional strategy of TLE teacher with regard to mastery of the subject matter. Based on the respondents' evaluation, the teacher provides clear directions about learning objectives and competencies, it attained the highest mean ($M=4.80$, $SD=0.40$) and was remarked as Strongly Agree. However, it was manifested that the teacher can create graphic organizers as an aid to illustrate difficult topics, it yielded the lowest mean with ($M=3.21$, $SD=0.70$) and was remarked Agree.

Overall, the level of differentiated instructional strategy of TLE teacher with regards to mastery of the subject matter attained the grand mean of 3.62 and was interpreted as Very High as evaluated by the respondents.

The findings above were supported by Kapur (2022) that educators are required to augment their knowledge in terms of different types of instructional strategies by not only imparting information to students in terms of academic subjects and lesson plans, but also in the achievement of learning goals. Also, teacher should stimulate students for them to be motivated towards learning and achievement.

Mastery of the subject by teachers not only motivates students and drives them to succeed, but it also raises the standard of instruction. In order to satisfy requirements and standards of quality education, teachers must have a wealth of knowledge and expertise in both teaching and assessment techniques to meet the learning needs of the students and develop their skills. (Ksenia, 2017).

Table 2. Level of Differentiated Instructional Strategy of TLE Teacher with Regards to

| Communication Skills | | | |
|---|-------------|-----------|-----------------------|
| STATEMENT | Mean | SD | Remarks |
| My teacher facilitates active and engaging discussions during class. | 3.63 | 0.49 | Strongly Agree |
| My teacher consistently uses English as the language of instruction. | 3.18 | 0.61 | Agree |
| My teacher communicates using mother-tongue language as medium of instruction. | 3.66 | 0.48 | Strongly Agree |
| My teacher encourages a positive and productive interaction between students and teacher. | 3.61 | 0.55 | Strongly Agree |
| My teacher always asks us individually or by class about our concerns and problems in class. | 3.63 | 0.49 | Strongly Agree |
| My teacher is able to communicate with us and our parents regarding our performance. | 3.50 | 0.56 | Strongly Agree |
| My teacher let us have positive conversations about the discussion. | 3.55 | 0.50 | Strongly Agree |
| My teacher promotes peace and understanding in the class with our diverse individual differences. | 3.61 | 0.55 | Strongly Agree |
| My teacher synthesizes and interprets information by asking essential questions that help clarify a path toward better solutions. | 3.58 | 0.55 | Strongly Agree |
| My teacher negotiates a feasible resolution or compromise acceptable to everyone. | 3.79 | 0.41 | Strongly Agree |
| Grand Mean | 3.57 | | Strongly Agree |
| Interpretation | | | Very High |

Table 2 reveals that in terms of communication skills, the TLE teacher's level of competence was *very high* as evidenced by the grand mean of 3.57. This means that the respondents viewed the TLE teacher effectively communicates with the respondents in Cookery 9.

The table presented that the respondents *strongly agree* that the TLE teacher *negotiates a feasible resolution or compromise acceptable to everyone* obtaining the highest ($M=3.79$, $SD=0.41$). This meant that the teacher provides fair solutions for everyone in every concerns and problems encountered in the classroom. However, the statement *My teacher consistently uses English as the language of instruction* obtained *agree* bearing the lowest ($M=18$, $SD=0.61$). This meant that the TLE teacher often use the English language as a medium of instruction in teaching.

According to Peters-Richardson (2017) to identify and address the gaps to improve the quality and equity of education for is learner is through the implementation and integration of differentiated instruction and Information. Hence, monitoring is one way to effectively achieve differentiated instruction and technology integration in public secondary schools. Moreover, teachers collaborating with every student, focusing on the use of collaborative and differentiated instructional strategies promotes and increases the accessibility of curriculum content for all learners.

Furthermore, in a study of Sword (2020) teaching entails communication and is vital ability in interacting with students. Therefore, it is required of them to understand and deconstruct difficult knowledge, communicate it to their learners' attention by listening, addressing any questions or issues they may have.

Table 3. Level of Differentiated Instructional Strategy of TLE Teacher with Regards to Learning Assessment Skills

| STATEMENT | Mean | SD | Remarks |
|---|-------------|-----------|----------------|
| 1. My teacher evaluates the results of our assessment fairly and with no bias at all. | 3.74 | 0.45 | Strongly Agree |

| | | | |
|--|-------------|------|-----------------------|
| 2. My teacher provides clear instructions and step-by-step procedures for every learning task or activity. | 3.74 | 0.45 | Strongly Agree |
| 3. My teacher establishes clear performance standards for evaluating our work using rubrics. | 3.68 | 0.47 | Strongly Agree |
| 4. My teacher promotes individual learning tasks. | 3.61 | 0.64 | Strongly Agree |
| 5. My teacher assesses and evaluates our academic progress, behavior, and interaction in class individually or by group. | 3.55 | 0.50 | Strongly Agree |
| 6. My teacher focuses on project-based assessment which enables us to synthesize the scope of discussions/lessons. | 3.32 | 0.57 | Strongly Agree |
| 7. My teacher makes sure to include reflection in our hands-on activities, group works, and paper & pencil assessments. | 3.61 | 0.55 | Strongly Agree |
| 8. My teacher provides tools for systematic recording of learning tasks. | 3.45 | 0.50 | Strongly Agree |
| 9. My teacher presents a record of our current progress to help us understand our instructional needs. | 3.58 | 0.55 | Strongly Agree |
| 10. My teacher provides feedback on our performance in class. | 3.63 | 0.49 | Strongly Agree |
| Grand Mean | 3.59 | | Strongly Agree |
| Interpretation | | | Very High |

The table above reveals that in terms of learning assessment skills, TLE teacher's level of the differentiated instructional strategy was *very high* as evidenced by the grand mean ($M=3.59$). This means that the respondents viewed that TLE teacher applied utilized differentiated instructional strategy in learning assessment which contribute to the performance of the respondents in learning.

It presented that respondents *strongly agree* that the TLE teacher evaluates the results of our assessment fairly and with no bias at all and provides clear instructions and step-by-step procedures for every learning task or activity obtaining the highest ($M=3.74$, $SD=0.45$). This shows that the TLE teacher employs an equally positive impact on the respondents' learning assessment.

Gaitas and Martins (2016) study supports the claim stating assessment as one of five domains as perceived difficulty of teachers in regular classes. Given with competent use of differentiated instructional strategies, regular diagnostic assessment in scaffold learning helps student to move forward from their current position of competency. Teachers realized that the potential for learning is enlarged if learners are engaged, associate new learning with existing information allows to consolidate the information to be suited to the learning style crucial for student development.

Kapur (2021) discussed how implementation of assessment strategies can be utilized in differentiated instruction. The primary aim of assessment strategies is to identify the performance of students. After the teachers have imparted information to the students in terms of academic subjects and lesson plans, they need to implement assessment strategies. Furthermore, the teachers are also able to find out, whether their teaching-learning methods and teaching-learning materials are appropriate or there is a need to bring about improvements.

Therefore, implementation of assessment strategies is a meaningful factor that highlight the meaning and significance of curriculum and instructional strategies.

Table 4. Level of Differentiated Instructional Strategy of TLE Teacher with Regards to Mastery of the Classroom Management Skills

| STATEMENT | Mean | SD | Remarks |
|--|-------------|------|-----------------------|
| 1. My teacher evaluates the results of our assessment fairly and with no bias at all. | 3.45 | 0.50 | Strongly Agree |
| 2. My teacher provides clear instructions and step-by-step procedures for every learning task or activity. | 3.82 | 0.39 | Strongly Agree |
| 3. My teacher establishes clear performance standards for evaluating our work using rubrics. | 3.95 | 0.23 | Strongly Agree |
| 4. My teacher promotes individual learning tasks. | 3.16 | 0.82 | Agree |
| 5. My teacher assesses and evaluates our academic progress, behavior, and interaction in class individually or by group. | 3.84 | 0.37 | Strongly Agree |
| 6. My teacher focuses on project-based assessment which enables us to synthesize the scope of discussions/lessons. | 3.76 | 0.43 | Strongly Agree |
| 7. My teacher makes sure to include reflection in our hands-on activities, group works, and paper & pencil assessments. | 3.55 | 0.50 | Strongly Agree |
| 8. My teacher provides tools for systematic recording of learning tasks. | 3.61 | 0.50 | Strongly Agree |
| 9. My teacher presents a record of our current progress to help us understand our instructional needs. | 3.76 | 0.49 | Strongly Agree |
| 10. My teacher provides feedback on our performance in class. | 3.74 | 0.45 | Strongly Agree |
| Grand Mean | 3.66 | | Strongly Agree |
| Interpretation | | | Very High |

The table above reveals that in terms of classroom management skills, the TLE teacher's level of the differentiated instructional strategy was *very high* as evidenced by the grand (M=3.66). This means that the respondents evaluated the TLE teacher as effective in managing the classroom.

The table presented that the respondents strongly agree that *my teacher establishes clear performance standards for evaluating our work using rubric* obtaining the highest (M=3.95, SD=0.23). However, the respondents *agree* that *my teacher promotes individual learning tasks* bearing the lowest (M=3.16, SD=0.82). In this manner, TLE teacher must consider more individual activities that suit the level of ability of the respondents.

Gentry et al, (2013) defined differentiated instruction as teacher's responsiveness towards student's needs. Flexible learning goals, and effective and ongoing evaluation, flexible grouping, respectful activities, learning arrangements, and collaboration between students and teachers are among major ideas that underlie differentiated instruction.

Results also supported by Okri and Idika (2021) investigation of relative effectiveness of differentiated instructional strategy on secondary school students' achievement wherein it yielded that there is a significant interaction effect of differentiated instructional strategy.

Table 5. Level of Performance of Grade 9 Students in Cookery in terms of Practical Test

| Grading Scale | GROUP A | | | GROUP B | | |
|---------------|---------|------|-------------------|---------|------|-------------------|
| | f | % | Interpretation | f | % | Interpretation |
| 90 – 100 | 19 | 100% | Outstanding | 19 | 100% | Outstanding |
| 85 – 89 | 0 | 0 | Very Satisfactory | 0 | 0 | Very Satisfactory |

| | | | | | | |
|-----------------------|--------------------|---|---------------------------|--------------------|---|---------------------------|
| 80 – 84 | 0 | 0 | Satisfactory | 0 | 0 | Satisfactory |
| 75 – 79 | 0 | 0 | Fairly Satisfactory | 0 | 0 | Fairly Satisfactory |
| Below 75 | 0 | 0 | Did Not Meet Expectations | 0 | 0 | Did Not Meet Expectations |
| Mean | 94.21 | | | 96.95 | | |
| Interpretation | Outstanding | | | Outstanding | | |

Table 5 reveals the level of performance of Grade 9 students in Cookery in terms of Practical Test. It can be seen that 19 or 100% of the respondents under Group A obtained grades ranging from “90 to 100” which had a verbal interpretation of “Outstanding”. The mean of the students’ grade, 94.21 with a verbal interpretation of “Outstanding” implies that the respondents performed very well in their practical test.

Similarly, it is shown that 19 or 100% of the respondents under Group B obtained grades ranging from “90 to 100” which had a verbal interpretation of “Outstanding”. The mean of the students’ grade, 96.95 with a verbal interpretation of “Outstanding” indicates that the respondents showed exceptional performance in their practical test after the application of the differentiated instructional strategy of the TLE teacher.

The abovementioned claims are supported by Juraschka (2021) that students can only progress after demonstrating mastery. Through competency-based education primarily focus on how competent each student in the subject instead of progressing depending on their age, student’ progress based on where they are and what they can do.

Table 6. Level of Performance of Grade 9 Students in Cookery in terms of Summative Test

| Grading Scale | GROUP A | | | GROUP B | | |
|-----------------------|--------------------------|-----|---------------------------|--------------------|-----|---------------------------|
| | f | % | Descriptors | f | % | Descriptors |
| 90 – 100 | 8 | 42% | Outstanding | 17 | 89% | Outstanding |
| 85 – 89 | 8 | 42% | Very Satisfactory | 2 | 11% | Very Satisfactory |
| 80 – 84 | 3 | 16% | Satisfactory | 0 | 0 | Satisfactory |
| 75 – 79 | 0 | 0 | Fairly Satisfactory | 0 | 0 | Fairly Satisfactory |
| Below 75 | 0 | 0 | Did Not Meet Expectations | 0 | 0 | Did Not Meet Expectations |
| Mean | 88.33 | | | 95.53 | | |
| Interpretation | Very Satisfactory | | | Outstanding | | |

Table 6 reveals the level of performance of Grade 9 students in Cookery in terms of the Summative Test. It can be seen that 8 or 42% of the respondents under Group A obtained ranging “90-100” which had an interpretation of “Outstanding”. The other 8 or 42% of the respondents under Group A obtained grades ranging from “85-89” which had a verbal interpretation of “Very Satisfactory”. The remaining 3 or 16% of the respondents obtained grades ranging from “80-84” which had a verbal interpretation of Satisfactory. It implies that the respondents were Very Satisfactory in the summative test with the (M=88.33).

Correspondingly, it was shown that 17 or 89% of the respondents under Group B obtained grades ranging from “90-100” which had a verbal interpretation of “Outstanding”. The 2 or 11% of the respondents ranging from “85-89” which had a verbal interpretation of “Very Satisfactory”. The Group B

have a ($M=95.53$) which indicates that the respondents showed exceptional performance in their summative test.

Kapur (2021) discussed that implementation of assessment strategies to differentiated instruction help teachers to find out whether their teaching-learning methods and teaching-learning materials are appropriate or there is a need to bring out improvements.

Table 7. Significant Difference in the Summative Test of Grade 9 Students in Cookery According to their Level of Ability

| Group | Mean | MD | t-value | p-value | Analysis |
|-------|-------|------|---------|---------|-------------|
| A | 88.33 | 7.20 | -3.59 | 0.000 | Significant |
| B | 95.53 | | | | |

Table 7 presents the *significant* difference between the students' performance in the Summative Test in Cookery according to their level of ability. The obtained ($MD = 7.20$, $t = -3.59$, $p = 0.000$) between Group A and Group B implies that the performance of the two groups of students was of different. To note, students under Category B performed better than students under Category A. The p-value which is lower than (0.05) level of significance supports the analysis.

Best (2020) stated that the only way to ensure that each student's learning abilities are satisfied is to use differentiated instruction. Teachers may utilize differentiation tactics through a range of difficulty levels in activities, presentation of learning contents in multiple modes, supporting homework or challenging assignments, and pulling-out groups. Teachers should consider adjusting the level of involvement, strategic groupings, and use of hands-on learning strategies.

Table 8. Significant Effect of Differentiated Instructional Strategy of TLE Teacher on the Performance in Practical Test of Grade 9 Students in Cookery

| Variables | | t-value | p-value | Analysis |
|-----------------------------|----------------|---------|---------|-----------------|
| Mastery of the Subject | Practical Test | -0.22 | 0.824 | Not Significant |
| Communication Skills | | 4.37 | 0.000 | Significant |
| Learning Assessment Skills | | 0.80 | 0.429 | Not Significant |
| Classroom Management Skills | | 2.77 | 0.009 | Significant |
| | | | | |

**significant at .05 level of significance*

Table 8 revealed the effect of the differentiated instructional strategy of TLE teacher on the performance in the Practical Test of Grade 9 students in Cookery.

A not significant analysis was obtained on the effect of the differentiated instructional strategy of TLE teacher on the performance in Practical Test of Grade 9 students in Cookery in terms of mastery of the subject ($t=-0.22$, $p=0.824$) and assessment skills ($t=0.80$, $p=0.429$), p-values were greater than (0.05) level of significance which supports the analysis. However, a significant analysis was revealed on the effect of the differentiated instructional strategy of TLE teacher on the performance in Practical Test of Grade 9 students in Cookery in terms of communication skills ($t=4.37$, $p=0.000$) and classroom management skills ($t=2.77$, $p=0.009$) p-values were lower than (0.05) level of significance which supports the analysis. This means further that the communication skills and classroom management skills of teachers on the application of differentiated instructional strategy show implications on the students' performance in the practical test in Cookery.

Kapur (2021) highlighted the principle of hands-on work and reinforcing practical work and flexibility. It can be stated that principle of hands-on work coincides with principle of curriculum as well as instructional strategy proving that it has an advantage in facilitating learning and understanding of academic subjects. Moreover, Naelga & Sonsona found out that 90% of teachers are rated as competent

equipped with necessary skills. Results revealed that grade 9 TLE teachers uses a combination of teaching methods to impart skills and competencies to students. The assessment of competencies has taken learners' knowledge and attitudes into account but required actual performance of the competency as evidence.

Table 9. Significant Effect of Differentiated Instructional Strategy of TLE teachers on the Performance in Summative Test of Grade 9 students in Cookery

| Variables | t-value | p-value | Analysis |
|-----------------------------|---------|---------|-----------------|
| Mastery of the Subject | 1.12 | 0.271 | Not Significant |
| Communication Skills | 1.07 | 0.293 | Not Significant |
| Learning Assessment Skills | 0.36 | 0.719 | Not Significant |
| Classroom Management Skills | 0.90 | 0.373 | Not Significant |

**significant at .05 level of significance*

Revealed in the above result was the significant effect of TLE teacher's differentiated instructional strategy in terms of mastery of the subject, communication skills, communication skills, learning assessment skills, and classroom management skills.

It was manifested that the differentiated instructional strategy of TLE teacher in terms of mastery of the subject matter showed a *not significant* effect on the performance of grade 9 students in terms of the summative test. This was supported by the attained p-value (0.271) which was below the (0.05) level of significance. This further implies that the respondents viewed that the TLE teacher's mastery of the subject matter in differentiated instructional strategy may mainly not affect their performance in the summative test.

Similarly, the differentiated instructional strategy of TLE teacher in terms of communication skills exhibited no significance on students' performance in the summative test. The gained p-value (0.293) was beyond the (0.05) level of significance. This explains further that the differentiated instructional strategy of TLE teacher will not define the summative test of the respondents.

On the same note, the TLE teacher's differentiated instructional strategy in terms of learning assessment skills does *not significantly* affect the summative test of the respondents. The p-value (0.719) relative to the result was greater than the (0.05) level of significance. This meant that differentiated instructional strategy in terms of learning assessment skills cannot be equated to the respondents' summative test.

Furthermore, the TLE teacher's differentiated instructional strategy in terms of classroom management skills does *not significantly* affect the summative test of the respondents in cookery 9. The p-value (0.373) relative to the result was less than the (0.05) level of significance. This meant that the is the summative test of the respondents is not being influenced by classroom management skills in differentiated instructional strategy.

Based on the findings above, it can be deduced that differentiated instructional strategy will not influence the summative test. However, the functionalities of this can be perceived on the learning of students.

Results are backed by the study of Downes (2019) competency-based learning which is structured on skills directly on the side of cookery in TLE. Competencies are necessary abilities for students to perform in school and afterward. This movement in education towards skills over content, mastery over seat time, and targets over tasks necessitate new evaluation approaches.

CONCLUSION

In view of the findings of the study, the researcher concluded the following:

It was concluded that the differentiated instructional strategy of TLE teacher showed a significant effect on the Practical Test of grade 9 students in Cookery in terms of communications skills and classroom management skills. Respondents viewed that communication skills and classroom management skills influenced their learning using the differentiated instructional strategy applied by the TLE teacher. Therefore, the hypothesis was partially accepted. It was concluded that the differentiated instructional strategy of TLE teacher has no significant effect to the Summative test of grade 9 students in Cookery. Therefore, the hypothesis was accepted.

RECOMMENDATIONS

In light of the findings and conclusions, the following recommendations are offered:

1. It is recommended that teachers need to attend skills training on how to implement differentiated instructional strategy and develop their skills to enable them to adapt content and instruction depending on the learning styles and needs of the students.
2. It is recommended to monitor the application of differentiated instructional strategy by having sort of feedback coming from observing peers which help in developing teachers' efficacy and support their classrooms' differentiated instruction practices.
3. Schools can adopt strategic intervention plans which focused on the improvement of students' performance in cookery.
4. Future researchers can explore other learning concepts in relation to the utilization of differentiated instructional strategy.
5. It is further recommended to develop a work plan which help teachers to integrate skills instruction.

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