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The Influence of Differentiated Instruction and Teaching Competence on the Technical Skills of Senior High School Students

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ABSTRACT

The study aimed to determine the significant relationship between teachers' differentiated instruction and teaching competence to the technical skills of cookery students at selected secondary schools in Davao Occidental, particularly in the municipalities of Malita, Santa Maria, and Don Marcelino using a descriptive-correlational research design. There were 305 respondents of the study selected using a stratified sampling technique. An adapted survey guide questionnaire was utilized during the data collection. The findings revealed a high level of teachers' differentiated instructions in terms of student interest, assessment, lesson planning, content, process, and product. The teachers' teaching competence was high in the areas of planning, development, and results. It was also found that the technical skills of students in terms of cooking, electrical installation, woodcarving, and drafting were high. A significant relationship between differentiated instruction and technical skills was found. Similarly, a significant relationship was also established between teaching competence and technical skills. Moreover, the teacher's differentiated instruction and teaching competence have a direct influence on the level of SHS students' technical skills. Instruction should be differentiated to benefit student based on their needs, and teachers must possess teaching competence to manage the overall skills development.

Keywords: educational management, differentiated instruction, teaching competence, technical skills, senior high school students, cookery, electrical installation, technical drafting, woodworking, Philippines

INTRODUCTION

Professional field-related abilities that are necessary for an individual to complete specific activities are known as technical skills (Pereira et al., 2019). The ability to follow processes and the proficiencies required to perform a certain task are the skills required for the actual performance of work. Sometimes called "hard skills," their significance in the job market cannot be understated (Dolce et al., 2019). Unfortunately, this is not always the case, senior high school graduates who lack the necessary technical skills end up jobless and hopeless, which causes a great deal of strain for them and their families (Mwita, 2019). Therefore, the ability to handle and complete work-related activities using pertinent tools, technologies, and equipment is generally associated with technical skills.

Hosain et al. (2023) conducted a study across two Bangladeshi universities and discovered a substantial positive correlation between technical skills and graduate employability. The modern workplace requires workers to have a high level of technical skill, especially in digital capabilities, and recent graduates who

possess these abilities are more marketable (Mahajan et al., 2022). Technical skills are seen by some occupations as the most crucial set of abilities for graduates to have in order to be recruited. For example, a study conducted in Malaysia among accounting students by Ismail et al. (2020) found that companies value certain skills more when they are looking for a higher accountant.

Additionally, Whitley et al. (2019) define differentiated instruction (DI) as a student-centered approach to instruction that aims to satisfy the various needs of children in multi-ability classes. Teachers must therefore reconsider their educational approaches in order to facilitate equal learning for all students in today's multi-ability classrooms. Differentiating teaching and learning is a component of national policy papers such as the Australian Professional Standards for Teachers, which promote diversity and high-quality education for students with a wide range of abilities (Education Council-Australian Government, 2020). Technical skills are already vital in today's knowledge-based society and seem to be essential to people's future life satisfaction, along with generic skills, as the Philippine Institute for Development Studies (PIDS, 2021) confirmed, noting that inadequate job preparation hindered senior high school graduates' ability to integrate into the workforce. Age, income, and the key 21st century skills—critical thinking, problem-solving, communication, and technical skills—were found to positively affect life happiness.

Teachers must play an important role in order to get effective teaching competence. Students' attention will be consistently piqued by teachers' inventiveness in developing and putting into practice successful teaching techniques such role-playing, games, brainstorming, and student-centered activities (Julaihi & Hamdan 2019). Nevertheless, a thorough grasp of 21st-century learning skills and teacher preparedness to give students the required input and teaching abilities are becoming obstacles that have prevented 21st-century learning from advancing these abilities (Rifin et al., 2019). This issue essentially comes down to the necessity of enhancing technical vocational education instruction in order to raise students' technical skills (Mack & White, 2019). But according to Rana and Shivani (2020), there are variations in teaching competence depending on the type of school, region, subject matter, credentials, and all teaching abilities. Although differentiated instruction is widely used in education and has been shown to improve teaching and learning in many ways, teachers may still find it difficult to implement in the classroom (Yang et al., 2022). In their analysis of the literature on the difficulties of differentiated instruction, Lavania and Nor (2020) compiled ten different types of difficulties that teachers encountered and separated them into two categories: internal difficulties, like self-efficacy, and external difficulties, like school administration support. Teachers can effectively address the diverse learning needs of their students by using differentiated instruction (Pozas et al., 2019).

As a result, students' interest and academic performance are linked (Ahinful et al., 2019); therefore, students who are more interested typically perform better academically (Pérez-López & Ibarrondo-Dávila, 2020). Assessment reports provide evidence of student growth and accomplishment, which frequently helps with professional evaluation, promotion, and reputation building for teachers. By showcasing their capacity to support student learning and development through assessment, teachers can boost their professional recognition and improve the standard of education (Lacina & Griffith, 2019).

Additionally, lesson planning is the process through which a teacher establishes goals, creates activities to meet those goals, and creates a schedule for achieving classroom objectives (Singapore Management University, 2020). The lesson's content outlines the knowledge and skills that students at each grade level should possess in the fundamental academic disciplines (Schwartz, 2023). According to Hummel (2024), differentiated instruction enhances student learning outcomes by providing a detailed explanation of how

the lesson will proceed in the classroom. This includes step-by-step instructions that guide you through the entire process from the moment students enter the classroom until the bell rings at the end of the period (Dalila et al., 2022). However, in order to optimize curriculum implementation (Prasetyono et al., 2021), technical vocational teacher teaching competency training incorporates pedagogical competencies (Lukiianchuk et al., 2021). When it comes to lesson planning and learning material preparation, teachers who are competent in differentiated instruction possess the necessary knowledge, abilities, and preparedness to apply differentiated pedagogy (Agus, 2021). This indicates there are teachers who have not been exposed to the implementation of differentiated pedagogy and do not utilize this pedagogy in their teaching (Mokhlis, 2021). Remedial education teachers need to establish differentiated teaching technique for all students to address the variability of skills of all the students in the class (Mansor et al., 2022). To address the needs of diverse students, differentiated pedagogy must be used in classrooms (Jawan & Mahamod, 2021). Differentiated pedagogy is a good teaching strategy for the classroom, according to Mustaffa et al. (2021), because it allows teachers to adapt their lesson plans and instructional strategies to the needs of their students.

Additionally, Al-Ali (2022) contended that the technical skills of graduates of technical vocational education would be significantly impacted by the competencies of their technical vocational education teachers. In addition to increasing their chances of being hired for teaching positions in vocational schools (Yudiono et al., 2021), teachers with technical vocational education skills can also inspire and improve the technical skills of their students (Daniyarovna et al., 2021).

In particular, research on cooking skills has been conducted in different countries in relation to healthy eating practices. Cooking methods are still up for contention, particularly when it comes to their connection to healthier eating. These qualities require the capacity to use technical methods in practical operations, proficiency in organizing and cooking food from scratch, utilizing prepared food, or both, as well as visual and analytical skills (Turkeri, 2022). Meanwhile, without being physically limited, students can experiment with various components, wiring configurations, and scenarios by building electrical circuits and systems using their electrical installation skills (Waluyo et al., 2021). Further, woodcarvings contribute to the development of cultural tourist businesses as well as the preservation of traditional crafts and student skills that foster cross-cultural understanding and exchange (Pang, 2021). Finally, one of the four fundamental language skills that students need to acquire is drafting. It entails the use of language to express thoughts, feelings, or intentions in written form as text (Putri & Aminatun, 2021).

In Figure 1, it gleaned that the independent variables were differentiated instruction and teachers' competence. In particular, differentiated instruction have indicator, to wit, student interest, assessment, lesson planning, content, process, and product while teachers competence have indicators, namely, planning, development, and result. On the other hand, the dependent variable is technical skills with its indicators such as cooking, electrical installation, word carving, and crafting. Moreover, the arrows shows the direct influence of differentiated instruction and teachers' competence towards the technical skills of the Technical-Vocational and Livelihood students.

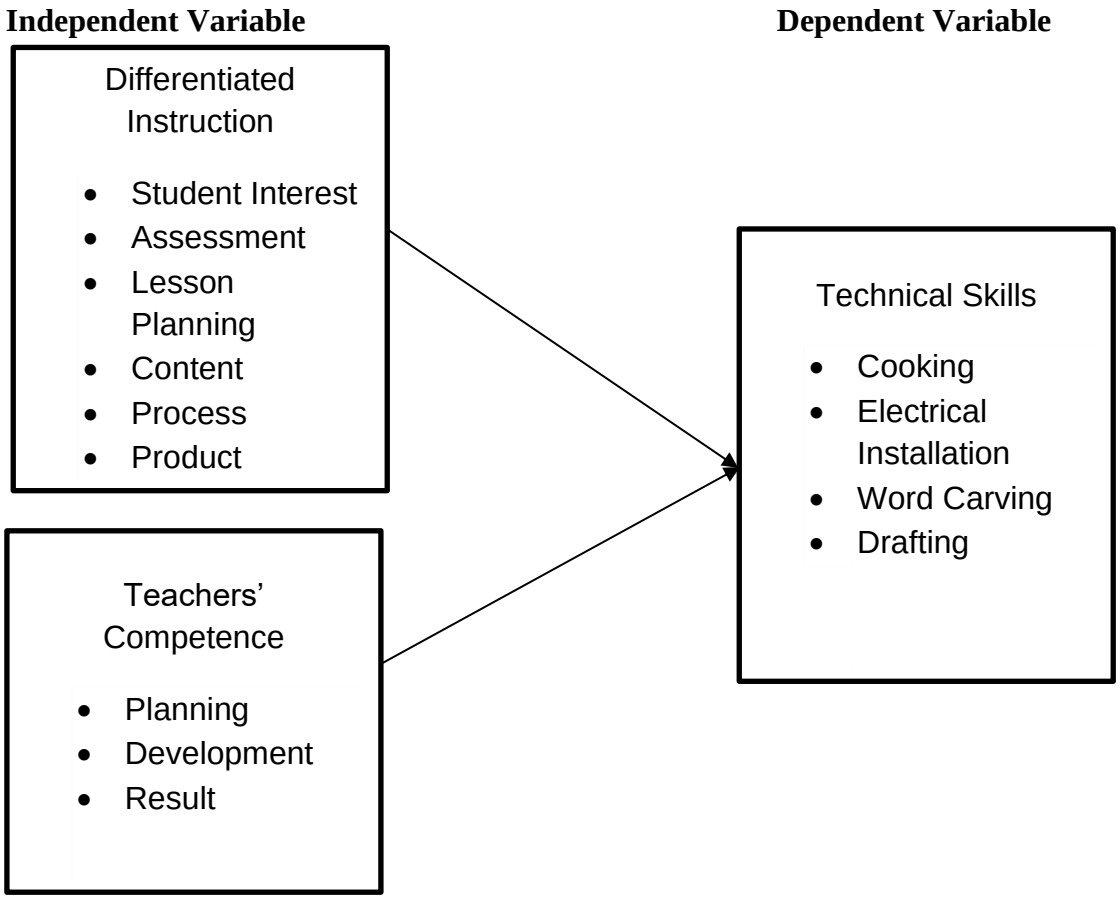

Figure 1. Schematic Diagram Showing the Variables of the Study

The "Differentiation and Learning Theory" of Tomlison (2017) served as the foundation for the investigation. Reaching students on their learning level is the main issue that teachers deal with each year. In an effort to choose which learning theory best suits their students, teachers look for different learning theories. Finding a method to apply the learning theory to produce a successful and genuine learning experience is the next stage.

Teachers may experience a sense of purposelessness as a result of the changing classroom paradigms that differentiation and technology are bringing about. It may appear that the use of technology and student-centered learning significantly reduces the role of the teacher. The reality is that teachers today play a variety of functions rather than having their job curtailed. They take on the roles of coordinator, teacher, support system, and facilitator for their students. Teachers can map their career and stay current by having a solid basis in a learning theory. According to this perspective, a variety of learning theories can profit from using differentiation in their teaching, particularly in a classroom with technology (Kaelin, 2009).

The "Differentiation and Constructivism Theory" was also taken into account in the research. Since both approaches focus on student-centered learning, differentiated instruction appears to be a good fit for constructivism's learning theory. Constructivism's core tenets are that learning is an active, not a passive, process and that knowledge is derived from prior knowledge (Hoover, 1996). A constructivist classroom, the position of the teacher necessitates a change of perspective. The teacher interacts with the pupils rather than standing at the front of the room and giving information to those who don't know anything about it. Teachers are required to leave the front of the classroom and accompany students "into the trenches." To

aid in self-discovery, students are watched and mentored. In a Constructivist classroom that emphasizes differentiation, technology plays a significant role in generating real learning experiences (Petraglia, 1998).

As stated in "Differentiation and Cognitive Theory," which was also anchored, students have a tendency to retain important information and, similar to constructivism, work with prior knowledge. Teachers serve as guides to deeper learning by allowing students to expand their prior knowledge through self-discovery; in cognitive theory, this prior knowledge is referred to as a "schema" or internal knowledge structure (Mergel, 1998). Students are supposed to make comparisons between new material and what they already know or understand, or what they call their "schema." The schema can be expanded, integrated, or changed to accommodate additional information once the pupils have it. Cognitive theory addresses the notion that learning must have purpose, and it makes excellent use of both technology and differentiation. By addressing each learner's unique needs, differentiation aims to offer personalized learning experiences. Activities can be more individually tailored with the use of technology. The student can then find a means to mimic the new information into their long-term memory by creating a meaningful experience that aligns with their "schema" or existing knowledge. The student can then find a means to mimic the new information into their long-term memory by creating a meaningful experience that aligns with their "schema" or existing knowledge. Students can have a meaningful, individualized learning experience through differentiation.

In accordance with the study of Graham et al. (2021), there are not much research demonstrating the efficacy of DI on a global scale. According to Smale-Jacobse et al. (2019), there is a dearth of high-quality studies on DI's efficacy in secondary school settings. Similarly, Gibbs and McKay (2021) found only six relatively small-scale research on DI in Australia that concentrated on the conceptualization and implementation of this technique rather than its efficacy in terms of student learning outcomes. In order to accomplish its vision-mission statement, Javier (2021) required teachers to be creative in the classroom by incorporating the usage of digital teaching and learning resources into the curriculum and pedagogy. This raises questions about how to improve the way teachers teach by giving them real-world problem-solving examples to help them develop their technical skills. According to Garduque (2012), this would enable the students to enhance their technical skills and increase their chances of success in their future undertakings.

The Division of Davao Occidental, particularly in the secondary schools offering Senior High School (SHS) programs in Technical-Vocational and Livelihood Track, found that there were several SHS-graduated students who were not accepted for employment due to job readiness in terms of skills. According to Pajares (2018) in the province of Cebu, the majority of senior high school graduates are not ready for employment in their respective districts due to a mismatch between their programs and skills. Employers are therefore reluctant to hire graduates who lack the skills and training that businesses and sectors require.

Hence, the researchers believed that the competence of teachers paired with an appropriate and relevant pedagogical approach might significantly increase the technical skills of senior high school graduates and fill the job vacancies in industries locally and abroad, lowering the unemployment rate and developing the lives of Filipino communities in general. Thus, this study was proposed to contribute to the existing body of knowledge by determining the influence of differentiated instruction and teaching competence on the technical skills of senior high school students in selected public secondary schools in the Division of Davao Occidental.

Thus, the main purpose of the study was to determine the significant relationship between differentiated instruction and technical skills, significant relationship between teachers' competence and technical skills, and the significance influence of differentiated instruction and teaching competence on technical skills. Specifically, it assesses the level of differentiated instruction, level of teachers' competence, and level of technical skills. The null hypotheses were tested at a 0.05 level of significance to attain these objectives, such as, there is no significant relationship between differentiated instruction and technical skills, there is no significant relationship between teachers' competence and technical skills, there is no significance influence of differentiated instruction and teaching competence on technical skills.

This study is of great position because it contributes to the body of knowledge that is important to educational development and policies. More so, the significance of the study may help *teachers* in different countries to gain knowledge and awareness on the importance of differentiated instruction in addressing the different needs of the students for them to acquire better learnings, which is crucial for their growth and development. It also helps them assess and evaluate their competence in implementing effective and efficient learning instruction using a variety of instructional delivery that influences students' learning. Further, the findings may serve as the basis for the *Department of Education* in promulgating programs and policies that strengthen and improve the capacity of the teachers to implement and provide quality learning through effective teaching strategies leading to the development of students' skills and learning development. Moreover, the findings may also have significant influence to the *stakeholders* to understand their roles in providing support to the implementation of the overall school operations that would benefit students, teachers, parents, and the community toward quality education.

In addition, the *Technical-Vocational Livelihood teachers* may use the findings in developing activities and interventions that help students increase the motivation to engage in various activities that enhance their technical skills in cooking, electrical installation, wood carving, and drafting. The *school* itself may give strong attention to the SHS teachers by sending them in various training related to their specialization to ensure a productive and quality teaching and learning process, where the diversity of the learners, as to their learning needs, may adequately be met. The *future researchers* may use the findings in conducting future related studies that may address the gap, verify claims, and queries of the present study to enrich the findings of the study.

METHOD

This section presents the study's information about the respondents, materials and instruments, research design and procedure.

Respondents

The study was conducted at secondary school in the selected municipalities of the Division of Davao Occidental, to wit, Malita, Santa Maria, and Don Marcelino. There were 305 respondents included in the study out of the total population of 1,454 Technical-Vocational and Livelihood students using stratified random sampling technique.

A specific number of people from each group are sampled in stratified sampling, a sampling technique where several groupings, or strata, are created from different combinations of characteristics in the study population (Parsons 2017). The stratified random sampling technique was used to select respondents of the study. The respondents were selected based on the school where they enrolled using the raosoft calculator. These respondents were the primary source of the study, who answered the survey guide questionnaire.

In the selection of the respondents, the researcher followed inclusion and exclusion criteria. For the inclusion criteria, the respondents of the study must be senior high school students in the participating school enrolled in cooking, electrical installation, wood carving, and drafting for the school year 2024-2025 regardless of their gender and age. For the exclusion criteria, those who were not senior high school students. Along with the participation, the respondents have the right to withdraw from their participation considering the risk or discomfort experienced.

Materials and Instrument

A contextualized survey questionnaire was used in the study authored by Whipple (2012) for differentiated instruction with indicators, namely: students' interest, assessment, lesson planning, content, process, and product; Moreno-Murcia et al. (2014) for teaching competence with indicators, to wit: planning, development, and product; and Serpa Juan (2014) for technical skills with the indicator cookery, electrical installation, woodcarving, and drafting. Furthermore, the survey questionnaire consists of three parts. Part I: Level of differentiated instruction with indicators students assessment (5 items), assessment (5 items), lesson planning (5 items), content (5 items), process (5 items), and product (5 items). Part II: level of teachers' teaching competence with indicators planning (5 items), development (17 items), and result (7 items). Part III: level of technical skills among senior high school students with indicators cooking (9 items), electrical installation (13 items), woodcarving (14 items), and drafting (9 items).

In evaluating the influence of differentiated instruction, teaching competence, and technical skills of the Senior High School students a range of means, descriptive equivalent, and interpretation were further provided. Further, the respondents rated the survey questionnaire using a five-point Likert scale, as follows: 4.20 – 5.00 very high, which means that the influence of differentiated instruction and teaching competence on the technical skills of SHS students is always manifested, 3.40 – 4.19 High, which means that the influence of differentiated instruction and teaching competence on the technical skills of SHS students is often manifested, 2.60 - 3.39 Moderate, which means that the influence of differentiated instruction and teaching competence on the technical skills of SHS students is sometimes manifested, 1.80 – 2.59 Low, which means that the influence of differentiated instruction and teaching competence on the technical skills of SHS students is rarely manifested and 1.00 – 1.79 Very Low, which means that the influence of differentiated instruction and teaching competence on the technical skills of SHS students is not manifested.

Prior to the conduct of the study, a validation process was conducted to ensure the validity of the instrument garnering a mean score of 4.52 described as excellent. In addition, pilot testing was performed to the 30 respondents who were not part of the study to determine whether the question is capturing the information it is intended to measure. A Cronbach Alpha of 0.735 (acceptable) for differentiated instruction, 0.924 (excellent) for teachers' competence, and 0.766 (acceptable) for technical skills were revealed.

Research Design and Procedure

This research study utilized a descriptive-correlational research design to determine the significant relationship between differentiated instruction and technical skills and teaching competence and technical skills. According to McBurney and White (2009), descriptive correlational design is employed in research studies that seek to give static images of circumstances and establish the relationship between various variables. Accordingly, the purpose of descriptive study is to characterize a phenomena and its features, as stated by Nassaji (2015). It is more important to focus on what happened in this study than on how or

why. This study employed descriptive research to assess the degree of technical skills, teaching competency, and differentiated instruction.

Additionally, based on computed and analyzed data, the correlation design helps provide facts on which scientific decisions were based and helps determine the relationship between two variables using correlation analysis. Creswell (2002) supported the idea by emphasizing that the researcher may use correlation statistics to relate two or more scores for each participant rather than attempting to monitor or take advantage of the experiment variables. To ascertain the significant association between teaching competence and technical skills as well as between differentiated instruction and technical abilities, a correlational research design was employed in this study. Additionally, a significant value that tests the null hypothesis is indicated by a 0.05 Alpha. In this case, hypothesis testing establishes the strength of the correlations between variables (Creswell, 2012).

In the collection of data, the researcher wrote a letter to the Schools Division Superintendent of Davao Occidental asking permission to get information from the three (3) identified and selected public secondary senior high schools of the division. Once permitted, the same courtesy letter was addressed to the corresponding principal of the said schools and arranged for the schedule to conduct the study. On the appointed date, the researcher personally distributed and administered the survey questionnaires after a letter of permission and consent was sent to the selected and identified respondents. After the administration of the survey, all data were collected, retrieved, tabulated, and subjected to statistical treatment. The results were analyzed and interpreted to come up with sound conclusions and recommendations for the study.

The data gathered was treated with the utmost confidentiality using appropriate statistical tools such as mean, Pearson-r, and multiple regression analysis. Specifically, mean was used determine the level of differentiated instruction, level of teachers' competence, and level of technical skills. Meanwhile, Pearson-r was used to determine the significant relationship between differentiated instruction and technical skills and significant relationship between teachers' competence and technical skills. Further, multiple regression analysis was used to determine the domains of differentiated instruction and teachers' competence that influences the technical skills of SHS senior high school students.

When conducting research, ethical considerations are frequently taken into account. The University of Mindanao Ethics Review Committee (UMERC) with the Protocol Number 2024-436. The participation of the respondents was purely voluntary and they can withdraw their participation at any point in time if they feel hesitant or harmed. They were made aware that any responses they provide were treated with the utmost confidentiality and not disclosed to third parties without their consent, prior authorization, or information. Prior to the conduct of the study, the respondents' full consent was sought by signing the inform and assent form. The researcher made sure that all ideas from other authors and academics were properly and precisely cited. Turnitin was used to check the research for plagiarism. The researcher took control, ownership, and authorship of the study while upholding the highest standards of science and professionalism. There was no deception since the study needed respondents to provide accurate and full information. The researcher provided credit for an individual's contributions to the study and carried accountability. There were no universally accepted standards for assigning authorship, and principles, customs, and practices differ significantly from one discipline to another. Hence, this research adhered completely to the ethical procedures and criteria set by the University of Mindanao's Ethics Committee. In addition, the researcher was the only one have the right to present the paper at any research conference as well as on the publication of the study.

RESULTS AND DISCUSSION

Level of Differentiated Instruction

Table 1 presents the descriptive level of differentiated instruction in terms of student interest, assessment, lesson planning, content, process, and product.

Table 1 Level of Differentiated Instruction

Indicators	SD	Mean	Descriptive Level
Student Interest	0.30	4.06	High
Assessment	0.25	4.02	High
Lesson Planning	0.20	4.05	High
Content	0.20	3.98	High
Process	0.20	4.07	High
Product	0.21	3.97	High
Overall	**0.12**	**4.02**	**High**

As to the findings of the study, an overall mean of 4.02 was generated described as high and an SD of 0.12 showing a very low dispersion and high reliability. It implies that the teachers often practice differentiated instruction in teaching SHS students by determining student interest in the subject matter, assessing their prior learning, and planning lessons to present the content, process, and product during the instruction. Respectively, the process got the highest mean of 4.07 described as high, and an SD of 0.21 (high reliability). Meanwhile, product got the lowest mean of 3.97 which is described as high, and an SD of 0.21 (high reliability)

The findings suggest that teachers frequently adapt their lessons to the preferences and needs of their students and offer a variety of ways for students to express themselves in their final work. Even though differentiated instruction is widely used in education and has been shown to improve teaching and learning in many ways (Deunk et al., 2018), teachers may still find it challenging to implement in the classroom (Yang et al., 2022). Additionally, the classroom was set up to guarantee that every activity was carried out successfully. Teachers can effectively address the diverse learning requirements of their students by using differentiated instruction (Marcela, Verena, et al., 2019).

It shows that the teacher has clearly stated what students must know, comprehend, and be able to accomplish, and that the curriculum is founded on key ideas and generalizations. To guarantee that the students' learning needs were met, a range of instructional resources and support techniques were used. Addressing students' learning needs through adaptive teaching in heterogeneous classrooms has been suggested as the best option for a fair educational system because early student stratification may have unintended effects on the educational opportunities of students with different background characteristics (OECD, 2018).

Level of Teaching Competence

Table 2 shows the results on the level of teaching competence in terms of planning, development, and results. Accordingly, an overall mean of 4.02 was accumulated which is described as high and an SD of 0.68 indicating low dispersion and high reliability. Indicatively, results obtained the highest mean of 4.06 described as high, and an SD of 0.70 (reliable). Furthermore, planning obtained the lowest mean of 3.99 which is described as high, and an SD of 0.68 (reliable).

Table 2 Level of Teaching Competence

Indicators	SD	Mean	Descriptive Level
Planning	0.68	3.99	High
Development	0.66	4.01	High
Results	0.70	4.06	High
Overall	**0.12**	**4.02**	**High**

The findings suggest that the teacher's competence in planning, development, and results was high when teaching SHS students. In order for students to complete the tasks, the findings highlight how teachers should clearly explain the material and connect the classroom and lab content. The teachers used ICT in the classroom and demonstrated a solid understanding of the course material to guarantee high-quality learning. Teachers must play an important role in order to get effective teaching competence. Students' attention will be consistently piqued by teachers' ingenuity in developing and putting into practice successful teaching techniques such role-playing, games, brainstorming, and student-centered activities (Julaihi & Hamdan 2019).

One of the challenges that has prevented 21st-century learning from advancing these skills is a thorough understanding of 21st-century learning skills and teacher preparedness to give students the required input and teaching skills (Rifin et al., 2019). It emphasizes that the teacher informs students about the competencies expected to learn by providing relevant and scientific information for a better understanding of the subject matter. The use of research, resources, and flexibility to facilitate learning. The content was designed and developed to promote the acquisition of competencies and assess the criteria of the activities to establish productive outcomes. Rana and Shivani (2020) confirmed that distinctions in teaching competence exist based on school setting, school type, subject background, qualifications, and all teaching skills. Differentiating the learning process refers to how students are processing principles and skills.

Level of Technical Skills

Table 3 displays the descriptive results on the level of technical skills in terms of cooking. The results on the technical skills of the senior high school students has a mean of 3.83 were revealed which described as high and an SD of 0.13 showing a low dispersion and high reliability. Cooking has the highest mean of 3.99 with a SD of 0.20. While on the other hand, wood carving has the lowest mean of 3.71 and SD of 0.15 described as high.

The findings signify that the senior high school students used appropriate kitchen tools and equipment during production. After using all the materials in the working area, it was kept neat and clean to avoid contamination. Exact measuring tools were used to calculate the ingredients and cost of production. Kitchen plans and layout were carried out as well as the control of hazards and risks. The students also carried out measurements and calculations and can analyze signs, symbols and data.

Al-Ali (2022) claimed that the technical skills of graduates of technical vocational education would be greatly affected by the competencies of their teachers. To optimize the execution of the curriculum, technical vocational teacher teaching competency training incorporates pedagogical competencies (Lukiianchuk et al., 2021). In addition to increasing their chances of being hired for teaching positions in vocational schools (Yudiono et al., 2021), teachers with technical vocational education skills can also inspire and improve the technical skills of their students (Daniyarovna et al., 2021).

Table 3 Level of Technical Skills

Indicators	SD	Mean	Descriptive Level
Cooking	0.20	3.99	High
Electrical Installation	0.21	3.86	High
Wood Carving	0.15	3.71	High
Drafting	0.20	3.77	High
Overall	**0.13**	**3.83**	**High**

Significant Relationship Between Differentiated Instruction and Technical Skills

Table 4 shows the results on the relationship between differentiated instruction and technical skills. Based on the results presented, the relationship between student Interest, assessment, lesson planning, content, process, and product versus the technical skills are all significant. It was shown that there is a significant relationship between differentiated instruction and technical skills with an overall p-value of 0.000 which is less than the 0.05 level of significance. Hence, the null hypothesis is rejected.

It also clarifies how the teachers' differentiated instruction of cooking students has a direct impact on the students' technical skills. According to Smale-Jacobse et al. (2019), differentiated instruction is an integral part of the larger construct differentiation, which encompasses not just DI during an entire lesson but also student assessment, evaluation, philosophical considerations, and more broad ideas. In the overall scheme of educational fairness, it is crucial to support each student based on their abilities and assist them in reaching their greatest potential (General Assembly of the United Nations, 2019).

Table 4 Significance of the Relationship between Differentiated Instruction and Technical Skills

Differentiated Instruction	Technical Skills
Student Interest	.297** .000
Assessment	.488** .000
Lesson Planning	.516** .000
Content	.223** .000
Process	.161** .005
Product	.409** .000
Overall	**.634**** **.000**

Significant Relationship Between Teaching Competence and Technical Skills

Table 5 presents the results on the relationship between teaching competence and technical skills. Anchored on the results of the study, it was revealed a significant relationship between teaching competence and technical skills given the p-value of 0.000 which is less than the 0.05 level of significance,

therefore, the null hypothesis was rejected. It was explained that the technical skills of the cookery students is substantially affected by the teaching competence of the teachers (Suhaimi & Nasir, 2021).

Table 5 Significance of the Relationship between Teaching Competence and Technical Skills

Teaching Competence	Technical Skills
Planning	.249** .000
Development	.090 .114
Result	.206** .000
Overall	**.310**** **.000**

In planning, teacher provides clear information about objectives, bibliography, tutorials, contents, and assessment methods in the subject curriculum and also informs the students of the competencies expected to acquire. However, out of the three indicators, only development shows no significant relationship to the cookery students' technical skills with a p-value of 0.114 which is greater than the 0.05 level of significance. The teacher interweaves the content of the subject matter with other courses.

According to Al-Ali (2022), the technical skills of SHS students would be profoundly affected by the competence of their technical vocational education teachers. To maximize the delivery of the curriculum (Prasetyono et al., 2021), technical vocational teacher competency training combines pedagogical competencies (Lukiianchuk et al., 2021).

Significant Influence of Differentiated Instruction and Teaching Competence on Technical Skills

Table 6 shows the results on the significance influence of differentiated instruction and teaching competence on technical skills.

Table 6 Significance on the Influence of Differentiated Instruction and Teaching Competence on Technical Skills

Technical Skills				
(Variables)	B	β	t	Sig.
Constant	1.719		6.837	.000
Differentiated Instruction	.298	.291	5.077	.000
Teaching Competence	.228	.225	3.921	.000
R	.437			
R^2	.191			
ΔR	.185			

F	35.604
ρ	.000

Respectively, the results revealed a significant influence on differentiated instruction to technical skills was found with a p-value of 0.00, which is less than the 0.05 level of significance. Hence, the null hypothesis is rejected. It implies that the level of SHS teachers' differentiated instruction has a direct influence on the level of technical skills of SHS students. Students learn in a variety of ways, according to research, and this influences their motivation and engagement, which helps them develop their technical skills. Differentiating instruction according to each student's needs will benefit them all. Students' technical skills can be improved by adapting instructional strategies to suit their preferred learning styles (Malacapay, 2019).

On the other hand, a significant influence was found on teaching competence to technical skills given a p-value of 0.000, which is less than the 0.05 level of significance. Therefore, the null hypothesis is rejected. This implies that teaching competence has a significant influence on the SHS students' level of technical skills. The learning process is significantly impacted by teachers' teaching competence. Therefore, in order to oversee the students' total skill development, teachers need to be competent (Janubas, 2022). A teacher can effectively carry out their primary responsibilities and promote effective learning when they possess the necessary competences (Ozgenel & Mert, 2019).

CONCLUSION AND RECOMMENDATION

Anchored on the findings on the study, it was revealed that the level of differentiated instruction was high. Accordingly, student interest was high, assessment was high, lesson planning was high, content was high, process was high, and product was high. Meanwhile, the teaching competency level was also high. Respectively, planning was high, development was high, and results was high. In addition, the level of technical skills was also high. Specifically, cooking was high, electrical installation was high, woodcarving was high, and drafting was high. On the other hand, a significant relationship was found between differentiated instruction and technical skills. Similarly, a significant relationship was also found between teaching competence and technical skills. Further, both teachers' differentiated instruction and teaching competence have a direct influence on the level of SHS students' technical skills. Therefore, the null hypothesis has been rejected. The results imply that SHS students' technical skills were influenced by the teachers' differentiated instruction and teaching competence.

In line with the findings, the researcher recommends that the teachers may conduct a cultural background assessment of the students to determine the necessary teaching approach that helps them improve their learning and gauge their understanding on the subject matter which is based on the major concepts and generalization to ensure that they are performing towards their highest potential. It also suggested that the teachers consider the learning preference of the students for them to perform well on their activities. Meanwhile, it is advised that teachers give thorough and understandable instructions to help students better grasp the learning objectives, where the subject matter is adapted to the students' current level of knowledge. Teachers may also instruct and enable students to keep kitchen tools and equipment clean and organized, assess workplace dangers and hazards, choose measuring devices, and determine which drawing supplies and equipment are appropriate for a given task. This makes sure that teaching and learning are delivered smoothly, effectively, and efficiently, which helps to meet learning goals. The

results could be used by future researchers to fill up the knowledge gap about senior high school teachers and students.

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