RELATIONSHIP OF TEACHING STRATEGIES OF TECHNOLOGY AND LIVELIHOOD EDUCATION (TLE) TEACHERS IN THE NEW NORMAL AND LEARNING PERFORMANCE OF THE SENIOR HIGH SCHOOL STUDENTS IN SELECTED HIGH SCHOOLS IN THE DIVISION OF VALENZUELA

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Chapter 1

THE PROBLEM AND ITS BACKGROUND

Introduction

What is new normal? Before knowing its meaning, let's first recall our life before the pandemic. Our life was normal before like going to the mall with our family, eating in restaurants, going to school meeting our friends and relatives and travelling to places we love. These are just the things we did before which we really missed. But when the Covid-19 came, our lives have changed even our educational system. Many sectors were much affected by the pandemic. Among these are the Learning and Education, Economics and Business, Health and Wellness, Science and Technology, Spirituality and Religion, Infrastructure and Resources (*PressReader.com - Your favorite newspapers and magazines.*, 2021).

The COVID-19 pandemic has profoundly disrupted our education system, changing what classrooms and learning look like on a day-to-day basis. Educators are navigating a constantly shifting landscape, with the health of students, teachers, and the community at large at stake. The current COVID-19 pandemic has disrupted the education system, creating a new environment for learners, parents, and teachers alike. The normal school setup—face-to-face interactions with students and gatherings with fellow teachers—is something we can't have at the moment.

As educators gear with the "new normal" set-up in this Covid-19 pandemic, this is the appropriate time to use our discomfort to forge a new paradigm. This is now the time for schools to ensure that teachers do not just translate what they do inside the classroom into their online teachings. Teacher-driven discussions and lengthy lectures are no longer norms in this situation. In online learning, students are almost always divided on their focus—that of their classes and their attention to their mobile gadgets (Gamiao, 2020).

While home school and online learning are among the proposed solutions, access to technology and the internet, especially in remote areas, remains a challenge. In the public education system, it is not uncommon for students to lack internet connection at home or be unable to afford to "load" their phones regularly. Some do not even have computers or phones at all. As this is a reality that many schools, students, and communities will face, the Department of Education (DepEd) proposes a combination of different learning modalities and will be using the Blended Learning approach.

While home school and online learning are among the proposed solutions, access to technology and the internet, especially in remote areas, remains a challenge. In the public education system, it is not uncommon for students to lack internet connection at home or be unable to afford to "load" their phones regularly. Some do not even have computers or phones at all. As this is a reality that many schools, students, and communities will face, the DepEd proposes a combination of different learning modalities and will be using the Blended Learning approach (Jorge, 2020).

The TLE subject in K-12 curriculum aimed to equip the students with the necessary skills that will be acquired through training, and hands -on activities especially the Technical-Vocational courses. Since, we have no face-to-face classes, most of these training and activities will not be delivered. The major challenge in the field of TLE teachers is how can we upgrade the knowledge, necessary skills and services needed so that our students will become globally competitive. TLE is career oriented, the career path of the students. Although there are available materials in print and non-print media, still no one can deny the fact that "experience is the best teacher" (Yabut, 2020).

According to Sen. Sonny Angara "Education is key for generations of Filipinos to become full-fledged, productive members of society." As for this statement, the challenge for TLE teachers is really getting closer. Blended learning will be offered to our students, which means we will need to call the support of our parents and guardians. The Department of Education is really determined to offer these changes in education because according to Sec. Leonor Briones "Education must continue".

Background of the Study

Teaching strategies, also known as instructional strategies, are methods that teachers use to deliver course material in ways that keep students engaged and practicing different skill sets. An instructor may select different teaching strategies according to unit topic, grade level, class size, and classroom resources. Many kinds of instructional strategies are employed to achieve teaching and learning goals and support different kinds of students (Teaching Strategies, 2021).

The Department of Education (DepEd) emphasized that education will continue under a new normal set-up amid the Covid-19 pandemic. The DepEd various strategies and projects of schools and division offices to improve the quality of teaching and learning while ensuring the health and safety of the learners and teachers.

Educators must be open to being learners as well. This means having to "unlearn to learn," meaning unlearning old methodologies to make way for new ones that will prepare us for education's new normal. This is why we are proactive in attending the Department of Education's (DepEd) virtual trainings and upskilling programs. The DepEd's webinars enable us to learn strategies, techniques, methodologies, and approaches for online and modular teaching. They also hone our technological skills, encourage physical wellness, and provide emotional and mental health support (Razalan, 2020).

Discussion and sharing provide learners with opportunities to "react to the ideas, experience, insights, and knowledge of the teacher or of peer learners and to generate alternative way of thinking and feeling". Students can learn from peers and teachers to develop social skills and abilities, to organize their thoughts, and to develop rational arguments (Belino, 2015).

Institutions of higher learning across the nation are responding to political, economic, social and technological pressures to be more responsive to students' needs and more concerned about how well students are prepared to assume future societal roles. Faculty are already feeling the pressure to lecture less, to make learning environments more interactive, to integrate technology into the learning experience, and to use collaborative learning strategies when appropriate (Teaching Strategies, 2021).

A reflective teacher takes a positive approach to communicate with learners. A proactive approach to teaching considers learners to be active participants in the learning process and not passive receivers of knowledge. He/she is an information creator. He/she builds his / her sense based on prior knowledge and personal intent. Problem-solving requires the continuous adaptation of learning activities to the background, interests, and needs of the learners. To promote quality education, reflective teacher practices good reasoning, creativity, and versatility. Summing up, a reflective teacher is a constructive partner in the decision-making of wise teaching activities that have an effect on himself, the learners, and the classroom. Reflective instruction is a consistent and comprehensive analysis of one's instructional practices and issues to promote the development of self, students, and the system (Valdez, 2020).

In modern education systems learners are expected to possess an increased degree of autonomy and show initiative in learning processes, inspecting learning materials and understanding contents. An efficient growth of knowledge inside and outside of school is only possible if students have skills which initiate, guide and control the search for information and later on its processing and storage. In learning and teaching research those techniques are called learning strategies (Wegner, Minnaert and Strehlke, 2013).

To help senior high school students fit better into a university setting, new students are encouraged to engage in a positive transformation as a strategy. They are taught to focus on developing their emotional intelligence, creativity, understanding their own personalities, their strengths and weaknesses, and developing a long-term vision and mission. (The Star Online, 2020)

There is no teacher preparation program that could have prepared you for this. With the uncertainty around the 2021-2022 school year, it is perhaps even more important to ensure that teachers are prepared to take on the challenges that await them. We need to take a hard look at what we teach, how we teach it, and our own prevailing ideas about education.

Teaching Technology and Livelihood Education requires various knowledge and skill competencies to prepare the students for a better life. Teachers in this field are expected to have integrated information in teaching the subjects and its content. This requires competence both in subject matters and skills. The teachers are expected not only to be knowledgeable in its content but also to have dexterity of skills. But in actual situation, there seems to be a big gap between theory and practice (Elli & Ricafort, 2020).

Teaching strategies plays a central role in education because of its impact on students' performance. Previous reviews of teacher strategies have focused on individual variables and indicators. However, it is also important to understand the other variables on teaching strategies specifically for the Technology and Livelihood Education (TLE) because these highlight the context that the TLE teacher is a part of. Assessment is one of them, it reveals how well students have learned what we want them to learn while instruction ensures that they learned it. For this to occur, assessments, learning objectives, and instructional strategies need to be closely aligned so that they reinforce one another.

This issue on academic achievement is particularly true in the case of the
Philippine basic education. In time of pandemic, students' performance and capabilities was not fully reflected in the overall grade performance of the senior high school students. Results of the attendance and academic performance among public high schools all over the country had been declining. The question is: what more must be done and taken into greater account to be able to improve the academic performance of high school students in TLE in time of pandemics and new normal?

Therefore, it will be a significant endeavor to conduct a research study that would highlight teachers' teaching strategies as a predictor on the learning performance of the Senior High School students. Specifically, this study hoped to heighten the level of awareness on the best practices on teaching strategies of the TLE teachers in the Division of City Schools of Valenzuela.

Conceptual Framework

This study is guided by the Input-Process-Output (IPO) Model reflected in Figure 1. It illustrates the conceptual framework of the study showing the research variables, research procedures/steps in gathering the data up to statistical treatment and interpretation; and output of the study.

The Input shows the teachers profile according to age, sex, civil status, and educational attainment. Also shown were the teaching strategies of the TLE teachers with five variables and students learning performance with four variables.

The Process includes the steps that will undertake by the researcher namely; Distribution of the survey questionnaires and its retrieval; statistical treatment; and interpretation and presentation of findings using textual and tabular form.

The Output exhibits the enhanced teachers' teaching strategies in Technology and Livelihood Education (TLE).

Research Paradigm

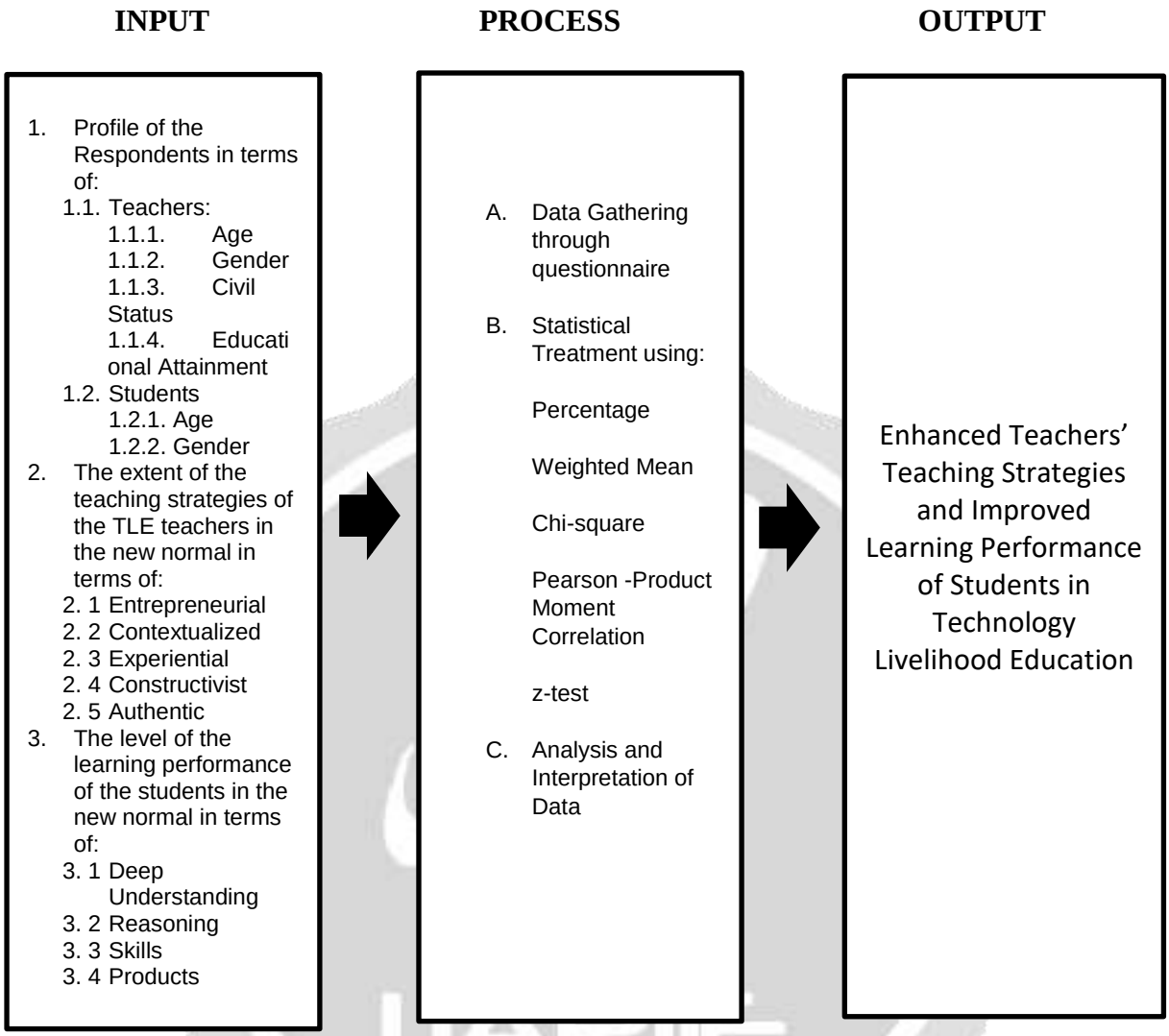

Figure 1: Paradigm of the Study

Statement of the Problem

This study aimed to determine the relationship between the teaching strategies of the Technology and Livelihood education (TLE) of teachers and the learning performance of the Senior High School students from the selected schools of Division of City Schools of Valenzuela.

The study specifically sought to answer the following questions:

1. What is the demographic profile of the respondents in terms of:
   - 1.1 Teachers
     - 1.1.1. Age;
     - 1.1.2. Gender;
     - 1.1.3. Civil Status; and,
     - 1.1.4. Highest Educational Attainment?
   - 1.2 Students
     - 1.2.1 Age; and
     - 1.2.2 Gender?

2 What is the extent of the teaching strategies of the TLE teachers in the new normal in terms of:

2.1 Entrepreneurial;
2.2 Contextualized;
2.3 Experiential;
2.4 Constructivist; and,
2.5 Authentic?

3 What is the level of the learning performance of the students in the new normal in terms of:
3.1 Deep Understanding;
3.2 Reasoning;
3.3 Skills; and,
3.4 Products?

4 Is there a significant relationship between the teaching strategies of the TLE teachers and the learning performance of the students?

5 Is there a significant difference on the teaching strategies of the TLE teachers when grouped according to their demographic profile?

6 Is there a significant difference in the teaching strategies of the TLE teachers as assessed by the two (2) groups of respondents?

7 What are the problems encountered by the teacher respondents in relation to their teaching strategies in the new normal?

8 What are the suggested solutions to the problems encountered by the teacher respondents in relation to their teaching strategies in the new normal?

Null Hypotheses

1. There is no significant relationship between the teaching strategies of the TLE teachers and the learning performance of the students.
2. There is no significant difference on the teaching strategies of the TLE teachers when grouped according to their demographic profile.
3. There is no significant difference in the teaching strategies of the TLE teachers as assessed by the two (2) groups of respondents.

Scope and Delimitation

The study determined the relationship between the teaching strategies of the Technology and Livelihood Education (TLE) of teachers and the learning performance of the Senior High School students from the Division of City Schools of Valenzuela.

The respondents' were one hundred eighty-one (181) Senior High School students and thirty (30) TLE teachers from selected high schools from the Division of City Schools of Valenzuela. The following schools, Valenzuela City School of Mathematics and Science (25 students), Dalandanan National High School (43 students), Caruhatan National High School (23 students), and General Tiburcio De Leon National High School (90 students) were considered because of proximity and the presence of associates teaching from the mentioned schools.

The study was conducted on the academic year of 2021-2022 in the Division of City Schools of Valenzuela. The researcher used a questionnaire and answered by the selected Technology and Livelihood Education (TLE) teachers.

Significance of the Study

The findings of the study will be significant to the following:

Teachers. The data acquired from this study will be useful to the teachers because they will eventually recognize what teaching strategies is the best practice and effective to enhanced students' performance in Technology and Livelihood education (TLE).

Students. The findings of this study will help the students learn better in school and enhanced learning achievement because of the teachers' effective teaching strategies in teaching Technology and Livelihood education (TLE).

School Administrators. The findings of the study will provide the school administrators with knowledge regarding the effective teaching strategies in teaching Technology and Livelihood education (TLE) as a predictor in their students' learning performance.

Future Researchers. This study will serve as a guide and an inspiration to other researchers venturing along this line of study. It may enrich their educational experiences in the field of research and topics contained.

Definition of Terms

Authentic. Making students learn from real-life tasks in real-world context. It is learning by solving real-world problems. Authentic learnings make use of problem-based activities and case studies. It is real-world application of content learned.

Blended Learning. Approach to education in which students learn through electronic and online media as well as traditional face-to-face teaching.

Constructivist. TLE teachers facilitate learning by encouraging TLE students to engage in inquiry such as questioning procedures, tacit assumptions as TLE coach them in the construction of new knowledge and understanding.

Contextualized. Learning in context such as teaching entrepreneurship concepts and the common competencies in the context of TLE specialization. Contextualized learning may also mean internship, apprenticeship, and on-the-job training. It is actual or hands-on learning by working on the job-site.

Deep Understanding. The idea is to involve students meaningfully in hands-on activities for extended periods of time so that their understanding is rich and more extensive than what can be attained by ore conventional instruction and traditional paper-and-pencil assessments.

Entrepreneurial. Providing TLE students with an entrepreneurial mindset. TLE students should be taught to be innovative to generative innovative business ideas and to use information and communication technologies to achieve a better business results.

Experiential. Learning by doing, learning by action, learning through experience, by discovery and exploration.

Japanese 5 S Productivity/Philosophy. The 5S philosophy focusses on effective workplace organization; helps simplify the workplace environment and reduce waste, while improving quality and safety. 5S is the acronym for five Japanese words, seiri, seiton, seiso, seiketsu and shitsuke, which signify order, cleanliness, purity and commitment.

New Normal. Refers to a state to which an economy, society, etc. settles following a crisis, when this differs from the situation that prevailed prior to the start of the crisis.

Positive Transformation. Focused on bridging the gap thus leaving a positive impression on the thinking about learning and development to support the transition into work of people from marginalized backgrounds and those who generally are finding opportunities difficult to develop.

Proactive Approach. focuses on eliminating problems before they have a chance to appear. It simply means that a teacher anticipates what will happen and when, rather than waiting for something to occur and then reacting, oftentimes inappropriately.

Products. Completed works, such as term papers, projects, and other assignments in which students use their knowledge and skills.

Reasoning. It is essential with performance assessment as students demonstrate skills and constructs products. Typically, students are given a problem to solve or are asked to make a decision or other outcome.

Skills. The students are required to demonstrate communication, presentation, and psychomotor skills based from what they have learned from the TLE class discussions. These targets are ideally suited to performance assessment.

Teaching strategies. Refer to methods used to help students learn the desired course contents and be able to develop achievable goals in the future. Teaching strategies identify the different available learning methods to enable them to develop the right strategy to deal with the target group identified.

T. L. E. Refers to Technical Livelihood Education

Chapter 2
REVIEW OF RELATED LITERATURE AND STUDIES

This chapter presents the studies and literature relevant to the research undertaken. The researcher endeavors to look into the different researches and studies written that have bearing to this study. With these materials the researcher's knowledge and experiences will be enhanced.

Local Literature

As the threat of a coronavirus disease 2019 (COVID-19) infection is expected to remain even after the quarantine regulations are relaxed, the Department of Education (DepEd) has started to consider various learning strategies that could be adopted once schools are allowed to reopen. The DepEd is working on a framework on ways to implement a learning continuity plan that would address challenges caused by the pandemic on the education sector.

"There is no definite 'one size-fits all' policy on which delivery approach will be implemented during the learning continuity place. The choice and contextualization of the learning delivery modality will actually depend on the local COVID situation and access to learning platforms in the school, division or region," Sevilla told The STAR. She noted that the available alternative learning delivery modes include online learning and the use of modules containing reading materials and tasks that students can work on in their homes. In cases when limited face-to-face interaction is allowed, DepEd also considers a structured or staggered class sizes with a mix of blended learning methods (Philippine Star, May 2, 2020).

Teachers are encouraged to use their professional judgement to review the suggested strategies and decide on the most appropriate for meeting the needs of their students and deliver the essential content in a resilience and wellbeing, drug education or road safety context (Teaching and Learning Strategies, n.d.)

In-classroom study and individual study/online classroom work, or Blended Learning, will allow students to learn at their own pace under guided modules. The DepEd has launched an online study platform called DepEd Commons, accessible to both private and public schools, to help students continue their lessons. It has also developed an ALS platform in partnership with Unicef called ICT4ALS, a portal of learning resources, activity sheets, and online tutorials for ALS teachers and learners.

However, the challenge of technology access still remains for public school students. Other factors such as home environment (conduciveness to learning), learner attitudes toward home learning, and technology competence can affect learner outcomes and the effective use of Blended Learning. Learning at home also requires parent participation and support.

Education's new normal will not just be about operating in an environment that secures the health of students; nor will it be about completely transitioning to online modalities. Instead, it should be about using technology to increase efficiency in areas with the capacity to do so, while empowering learners and communities to create positive learning environments in which the student can grow. It should not sacrifice

quality but continue to provide equal opportunities, most especially to the marginalized and vulnerable sectors. It is not a one-size-fits-all solution, but one that is dependent on the needs of each learning community (INQUIRER.net, 2020)

In its Learning Continuity Plan, DepEd identified three primary distance learning options: modular or the use of digital or printed module; use of online platforms such as the DepEd Commons; and education through radio and television. A combination of any of these learning strategies constitutes the blended learning approach, which DepEd said would make it more inclusive as it provides options depending on the capacity and the capability of households.

During the enrollment period, DepEd conducted a survey, which included questions on the capacity of households to adopt the new learning strategies. Initial data released in July showed that most households – or 8.8 million parents surveyed – prefer modules. Only 3.3 million chose online learning and 1.4 million favored education via TV and radio. The survey also showed that a lack of available gadgets, insufficient mobile data allowance, and unstable internet connection were among the primary concerns of parents. DepEd stated that gadgets and internet connectivity are not mandatory in adopting blended learning. It said the modular approach makes use of printed learning materials to be provided to the students, who will complete the activity sheets included in the modules (Philippine Star, October 4, 2020).

While there has been some success in the enrollment arena, bumps are still aplenty in the matter of the preparation of the course work and the schemes intended for the delivery of this course work to students, who, for the most part, would be staying home to stay safe from the virus.The challenges for schools include the anticipated increase in costs associated with the shift to distance learning, limited access to the Internet for both teachers and learners, and -- for private schools -- whether there will still be enough students to pay tuition to make their operations viable in the coming school year (Wenilyn Sabalo, Yahoo News, 2020)

The following are the COVID-19 impact on education: First, the closure of schools which is due to the threat of the virus, classes were indefinitely suspended, schools were closed and until now face to face classes are not allowed. Second, cancellation/postponement of assessments, the postponements of board exams and other major examinations. Third, lesser job opportunities for New Graduates, it due to the economic crisis, many companies closed and employees were lay off. Fourth, the emergence of alternative way of teaching and learning-because schools are closed, alternative ways of learning are used.

There are effective teaching strategies in the new normal education which we can apply in our teaching. The DepEd has prepared the different learning delivery modalities so that learning must continue. First, the face-to face learning, the teacher and learners are in the classroom but due to pandemic this is not allowed. Second, the blended learning, this is a combination of face-to face learning and distance learning. Third, the distance learning, these are modular self-learning materials are given through the parents or guardians of the students concerned. They are designed for independent learning; and online learning-needs computer, laptop, tablet or smart phone and internet connection. Fourth, TV/Radio-Based learning, this needs the guidance of the parents when the learners watch the DepEd programs. Lastly, home schooling, the qualified parent/guardian teaches his/her child using the learning materials. The parents must coordinate first to the school if he/she is qualified.

We are all adjusting to these new strategies in teaching and learning. Teachers and parents should work hand in hand to help learners continue their education. There should be constant communication between parents and teachers. All we can do now is to live normally in this new normal and help our dear learners in their modular learning (*PressReader.com - Your favorite newspapers and magazines.*, 2021).

The flexible learning system that combines different methods of teaching will be the new norm in the education sector even after the current pandemic, according to Commission on Higher Education (CHED) Chairman J. Prospero de Vera III. Flexible learning involves having a combination of learning delivery strategies such as the use of online platforms or the use of digital or printed modules. CHED also allowed some higher education institutions (HEIs) offering medical and other allied health programs to resume limited face-to-face classes for some subjects (Philippine Star, May 22, 2020).

Educators need to design assessment and grading systems and think on their purposes and priorities. Encouraging student learning is the best and not just let students accountable for their own learning. Mentors must think that in times of remote learning, continuous feed backing from students on their learning can help them reflect on their strengths. Teacher's feedback would be a "discipline" so that students will further improve

on their studies. The pandemic would be a big factor in finishing requirements by students, which in normal times are easily done. By focusing on their mastery on learning, educators can also adopt grades that clearly demonstrate mastery of knowledge and skills, as well as craft criteria for mastery of learning. Constant feedback will help students achieve these criteria. Grades would eventually be issued with compassion and fairness (The Manila Times, 2020).

Based from the book of Corpuz and Salandanan (2016) "Principles of Teaching", the framework of TLE teaching in the K-12 Curriculum made by the TLE experts of the DepEd cited the following in relation to teaching approaches, methods and techniques – entrepreneurial, contextualized, integrative, experiential, authentic and constructivist learning.

First is Authentic which is making students learn from real-life tasks in real-world context. It is learning by solving real-world problems. Authentic learnings make use of problem-based activities and case studies. It is real-world application of content learned.

Second is Constructivist which TLE teachers facilitate learning by encouraging TLE students to engage in inquiry such as questioning procedures, tacit assumptions as TLE coach them in the construction of new knowledge and understanding.

Third, contextualized is learning in context such as teaching entrepreneurship concepts and the common competencies in the context of TLE specialization. Contextualized learning may also mean internship, apprenticeship, and on-the-job training. It is actual or hands-on learning by working on the job-site.

Fourth, entrepreneurial which is providing TLE students with an entrepreneurial mindset. TLE students should be taught to be innovative to generative innovative business ideas and to use information and communication technologies to achieve a better business results.

Lastly, experiential is learning by doing, learning by action, learning through experience, by discovery and exploration.

From the book of Cajigal and Mantuano (2016), "Assessment of Learning", performance assessments of TLE students primarily used four types of learning targets which are deep understanding, reasoning, skills and products.

Top of the list is Deep Understanding, the idea is to involve students meaningfully in hands-on activities for extended periods of time so that their understanding is rich and more extensive than what can be attained by ore conventional instruction and traditional paper-and-pencil assessments.

Next is Product which are completed works, such as term papers, projects, and other assignments in which students use their knowledge and skills.

Followed by Reasoning, it is essential with performance assessment as students demonstrate skills and constructs products. Typically, students are given a problem to solve or are asked to make a decision or other outcome.

Finally, Skills which the students are required to demonstrate communication, presentation, and psychomotor skills. These targets are ideally suited to performance assessment.

Foreign Literature

The transition to online teaching has been partially, if not completely, challenging for faculty teaching in colleges and universities. Some university made the decision to move to online teaching. Online teaching is not new to other faculty; teachers have spent a great deal of time and effort learning and understanding best practices in online education. But the speedy transition to online format has shifted the focus of the teachers from student engagement and fostering the joy of learning together to "content delivery." Teachers have experienced a sense of rush and inadequacy, and they feel a need to hide their fears and challenges with this online transition from their students (A Reflection on the Sudden Transition: Ideas to Make Your Synchronous Online Classes More Fun - Faculty Focus | Higher Ed Teaching & Learning, 2020).

Connecting with students is one of the most rewarding aspects of a professor's job. Some faculty hesitate to teach online, frequently offering the rationale: "I want to connect with my students. There's just not enough interaction and engagement online!" Faculty are not alone in yearning for this connection – students want it too. When many universities rushed to provide remote instruction due to the COVID-19 pandemic. Training amidst this crisis gave me insights on what instructors new to synchronous teaching struggled with the most. In this article, I share these insights and provide four strategies for optimizing the student experience in synchronous sessions. (Synchronous Strategies for the "New Normal" | Faculty Focus, 2020).

Every classroom brings together students with distinct abilities and personalities. Since every student has different capabilities, some learn faster than others. Because of this difference, it becomes a challenge for teachers to implement methods that help out the entire class. Therefore, teachers need to come up with effective teaching strategies and implement innovative solutions in order to meet every student's individual needs in the class. Of course, coming up with effective teaching strategies that work best for all students is not possible because there is no "one-size-fits-all" solution in teaching (5 Effective Teaching Strategies to Help Your Students In School, 2019).

Japanese teachers believe students learn best by first struggling to solve mathematics problems, then participating in discussions about how to solve them, and then hearing about the pros and cons of different methods and relationships between them (Exploring Japanese Teaching Methods, 2018).

Singapore's 21st Century teaching strategies is by cultivating strong school leadership, committing to ongoing professional development, and exploring innovative models like its tech-infused Future Schools, Singapore has become one of the top-scoring countries on the PISA tests (edutopia.org, 2012).

As educators, we know that building community in the online environment increases the likelihood of student success. Finding ways to concretize something as ephemeral as "a sense of belonging" can be difficult; however, here are five places where you can start. First, make yourself available, as the professor, you are the touchstone of your online course community, which means you need to model citizenship in your course. Second, create a communication plan. communication is essential to any relationship, and before you ask students to put themselves out there, you have to show them that it's safe to do so. Third, encourage interaction, classroom interactions happen by proximity in the brick-and-mortar classroom, but in the online classroom, you have to be more deliberate about student-student and student-faculty exchanges happen. Fourth, build "outside class" spaces. Unlike the brick-and-mortar classroom, online classrooms can feel all encompassing, lacking the traditional space and time borders that demarcate the classroom. Lastly, bring the outside in. Paradoxically, online courses can also feel compartmentalized and isolated from the wider campus community. In our courses, we need to remind students that they are a part of large campus culture.

Being deliberate, consistent, and relentless, we can build communities in our online courses that help students to connect with not only with the course materials, but with one another. And by working to create these relationships, we can turn "I'm sorry to bother you" emails into "I'm glad I have someone to reach out to." (Five Ways to Build Community in Online Classrooms - Faculty Focus | Higher Ed Teaching & Learning, 2018).

School and teachers can influence the extent and quality of learning for all students. Teacher's beliefs, practices and attitudes are important for understanding and improving educational processes. They are closely linked to teachers' strategies for coping with challenges in their daily professional life. Educators have control over numerous factors that influence motivation, achievement and behavior of students. They are turning around their approach into a focus on creating positive school climate and responsive classroom as part of holistic quality education based on child rights where there is effective teaching and classroom management, thus enhancing students' learning experiences (The Importance of Teaching Strategies in Education | excerpt 2021).

Local Studies

According to Aquino and Manuel (2018), education is the most efficient system of equipping people with knowledge, skills, and attitudes essential for effective membership is society. It consists of general and specialized educations which are acquired through formal, non-formal or informal schemes. A major subsystem of education dealing with the technological aspects of the environment is technology education. In its general form, technology education seeks to help people become technology –literate and equips with the basic skills, knowledge and understanding of the scope, materials, equipment, processes, products, problems, and developments in the world of works. In its specialized form, technology education seeks to prepare people of

work, either as skilled worker, technician, technologist or technology teacher and specialist. In the school, teachers are expected to perform with the competencies to be effective in the learning process, update and upgrade their knowledge in technology suited to the purpose and objectives of education.

As mentioned by Jacolbia (2016), among the learning areas, the Technology and Livelihood Education subject is the most experiential, interactive, interdisciplinary and value-laden (cultural, aesthetic, vocational, political-economic and moral values). It is in this learning area that provides the Filipino learners the quality time to demonstrate practical knowledge and life skills that have been gained, especially the skills of vocational efficiency and empathy. Technology and livelihood education is vital to becoming a productive member of the modern workforce. Choosing a career path and then learning the technology related to that field or industry can be an excellent way to improve the chances of succeeding in a career endeavor. Technology education is widely available but it is not always free. Typically, students will attend vocational schools, technical colleges and universities to learn technology, including computer programming.

Cardino & Ortega-Dela Cruz (2020), mentioned that effective teaching requires flexibility, creativity, and responsibility in order to provide an instructional environment able to respond to the learner's individual needs. Pervasive uniformity in teaching fails many learners. There is a reason in both theory and research to support a movement towards an instruction attentive to students' variance manifested in at least three areas: the student's readiness, interest, and learning profile. Nowadays, one of the challenges in teaching-learning process is knowing the most effective teaching approach and strategies that are also in line with the learning styles of the students.

According to Fayombo (2015), some investigators confirmed that the alignment of teaching strategies and learning styles has a positive impact on the academic achievement of students. For example, Tulbure as mentioned by Fayombo found significant differences between the achievement scores obtained by three categories of learners (convergers, divergers and accommodators) from two faculties of a Romanian University after the cooperative learning strategy was implemented. Similarly, Damrongpanit and Reungtragu, which was also mentioned by Fayombo reported significant differences between different matching conditions of students' learning styles and teachers' teaching styles after comparing the academic achievement of 3,382 ninth-grade students. In addition, Al-Saud revealed a significant difference in the mean values of GPA in relation to the first-year dental students' learning style preferences with students who have a single learning style preference having a lower mean GPA than those with multiple learning style preferences. Evidence also abounds that matching teaching strategies and learning styles has a positive impact on the academic achievement and learning outcomes and that the match of teaching and learning styles in tertiary learners' second language acquisition can effectively improve students' achievement; motivation, and attitudes toward learning. On the other hand, a number of studies have revealed that matches between students' learning styles and instructional strategies did not affect the students' learning performance.

According to Ramos (2015), the faculty members perceived themselves to be often in using teaching approaches and teaching methods; and sometimes in using teaching techniques/styles, instructional support activities, and non-formal activities. There is no significant relationships exist between the faculty members' profile variables and their level of pedagogical approaches in teaching approaches, teaching methods, teaching techniques/styles, non-formal activities and instructional support activities.

From the results of the study of Ramos (2015) The relationships between pedagogical approaches and attitude toward teaching have computed r value of -.012 which have significance level of .916. This means that the relationship is not significant at the 0.05 level. The results may be attributed that the faculty members' attitude toward teaching does not affect the level of pedagogical approaches in teaching approaches, teaching methods, teaching techniques/styles, non-formal activities and instructional support activities.

"Future educators' perceptions on technology and livelihood education status and development of work skills," (2016), the test for significant relationship between the assessment of respondents towards the status of the technology and livelihood education program and their development in terms of "work skills". The decision is to reject the null hypothesis if the computed p - value is less than or equal to the 0.05 level of significance. Otherwise, do not reject the null hypothesis if the computed p - value is greater than the 0.05 level of significance. With p – values less than the 0.05 level of significance (0.000, 0.000, 0.000 and 0.000), the researcher rejects the null hypothesis. Therefore, at 5% level of significance, there exists a significant relationship between the assessment of respondents towards the status of the technology and livelihood education program in terms of "Curriculum Content", "Instructional Methods", "Faculty Competence" and "Adequacy of Facilities".

According to Torio and Cabrillas-Torio (2015), in considering students' holistic development, it is also proper to consider factors that drive students to learn. These factors are sources of motivation to study a particular subject. The source of motivation of the students may be coming from within or may be due to some external stimuli. Identification of significant factors to learning may lead teachers to the identification of needs. With the results of the study, it was found that the top two sources of motivation at the end of the introduction of the teaching strategy are intrinsic and extrinsic. This means that majority of the group considered in the study have more significant personal reasons in studying the subject area. This may not be the case for other groups of students. The positive 20% learning gain of the students may in part be associated to this intrinsic source of motivation. They have concluded that academic performance is a complex interplay of a lot of school factors. The teaching strategy is just one of the many factors that can bring positive changes in the performance level of students. Another big factor that affects performance is motivation. In this study, one teaching strategy was used as a means to target performance of students as well as motivation.

Based from the results of the study of Naelga and Sonsona (2017), it has found out that the Grade 9 TLE teacher uses a combination of teaching methods to impart the skills and competencies to students. The assessment of competencies has taken the learners' knowledge and attitudes into account but required actual performance of the competency as the primary source of evidence. Naelga and Sonsona study recommends that teachers must be updated with the latest trends specifically on the teaching of K to 12 curriculum, further, they must possess the necessary National Certificate II given and administered by TESDA as this presupposes that learning can only be transferred if teachers themselves are knowledgeable; schools should be focused on providing appropriate laboratories for the conduct of technology transfer and enhancement of learning.

According to Shiela Gregorio (2016), considering the nature of TLE, it provides vocational expertise and develops critical thinking among our students. This study was covered to determine its depth and how the researcher can be of help to the TLE teachers to overcome these problems by working out recommendations to lessen the burden of TLE teachers especially in using remedial measures in the absence of facilities or equipment. Gregorio conducted an ocular inspection of the facilities of the schools, distributed questionnaires, done informal interview and informal classroom observation. Gregorio study revealed that technical vocational teachers are greater in number when it comes to relevant seminars/trainings, NC II level and TM 1 compared to the general secondary teachers. More general secondary teachers who teach TLE subjects which is not his major area of specialization than technical vocational teachers. Available equipment, materials and facilities do not conform to the recommended numbers which are required to support the needs of the students who enrolled in the TLE subject and several problems being experienced by the teachers in the absence of the required facilities in school but they have some remedial measures done in order to facilitate the lesson well.

Conferring to Carreon (2018), the propagation of digital learning tools and the need to incorporate contextualized pedagogy plays a vital role in the development of 21st-century skills. His research sought to explore the effect of Facebook as an integrated blended learning tool for students learning outcome using a quasi-experimental pretest-posttest and interview research design. The study gathered data from 15 students for the experimental group that was based on internet access profile and online behavior towards integrated blended learning mechanism and 15 students for control group infused in a traditional approach. The instrument used was the researcher-made test based on the prescribed learning competency in TLE exploratory validated by a master teacher. The salient findings yielded, that the students who involved on integrated blended learning tool had a significantly greater achievement in two of the exploratory learning competencies: entrepreneurship and prepare and use of tools in Technology and Livelihood Education Grade 7 exploratory. Despite limited access to the internet, student's experience in the blended instruction was exemplary, proving that Facebook was an effective learning-teaching integration and supplementary instruction in redefining classroom. Hence, it fosters motivation and confidence in interacting with other students. Finally, Facebook as blended learning integration is an effective instructional tool for teaching TLE exploratory which allows millennial learners to learn according to their own pace, time and place.

Cahapay (2020) concluded from his research study that the unprecedented impacts of the COVID-19 global outbreak are indeed ushering educational systems to a new normal period in human history. This paper attempted to rethink education in the new normal post-COVID-19 era from the perspective of curriculum studies. A curriculum goal that must be emphasized in the new normal curriculum is to develop preparedness competencies among the learners. When it comes to curriculum content, there are challenges to whether to integrate or reduce. On the other hand, instructional approaches mostly shifting to online modality should be considered in the light of different factors. As regards instructional evaluation, some concerns related to the assessment of learning present cogent reminders for educators.

Foreign Studies

According to Hodges et al. (2020), during these school closures, all face-to-face lessons were cancelled, compelling many institutions, including our own university, to immediately transition from face-to-face in-person learning to completely online lessons. The abrupt switch to fully online learning has been particularly stressful for many instructors and students who prefer in-person instruction. Online learning is often stigmatized as a weaker option that provides a lower quality education than in-person face-to-face learning.

Pomerantz and Brooks (2017) mentioned that, indeed, such negative attitudes to fully online learning were revealed by a large EDUCAUSE survey. The survey of 11,141 faculty members from 131 U.S. institutions found that only 9% of faculty preferred to teach a fully online course. In other words, a whopping 91% of faculty do not wish to teach in a completely online environment. Students' opinions of fully online courses are not much better; a recent student survey by EDUCAUSE of more than 40,000 students across 118 American universities revealed that as many as 70% of the respondents mostly or completely prefer face-to-face learning environments (Gierdowski 2019).

Well-planned active online learning lessons are markedly different from the emergency online teaching offered in response to a crisis. One promising strategy for promoting online active learning is the fully online flipped classroom pedagogical approach, hereafter referred to as the online flipped classroom approach. An online flipped classroom is a variant of the conventional flipped model. A conventional flipped classroom model consists of online learning of basic concepts before class, followed by face-to-face learning activities. The conventional flipped model has become very popular in recent years due to its association with active learning, which emphasizes students' active learning (Xiu and Tompson 2020). Active learning activities such as peer discussions can help students construct better understandings of the subject material (Deslauriers et al. 2019).

According to Hew et al (2020) that amidst the burgeoning use of online learning during the unpredictable present, this study evaluates the efficacy of a videoconferencing-supported fully online flipped classroom. It compares student outcomes in four higher education classes: conventional flipped Course 1 versus online flipped Course 1, and conventional flipped Course 2 versus online flipped Course 2. Overall, this study makes three contributions to the literature on flipped classrooms. First, it provides a thick description of the development of the conventional flipped classroom approach based on the 5E framework, and the transformation of the conventional flipped classroom into a fully online flipped classroom. A thick description of the development of the flipped classrooms is provided to encourage replication by other researchers and practitioners. Second, our findings reveal that the online flipped classroom approach can be as effective as the conventional flipped classroom. Third, we identify seven good practices for using videoconferencing to support online flipped classrooms. This set of good practices can provide useful guidelines for other instructors who might be interested in implementing an online flipped approach.

According to Adams Becker et al. (2017), the 2017 New Media Consortium Horizon Report found that blended learning designs were one of the short term forces driving technology adoption in higher education in the next 1–2 years. Also, blended learning is one of the key issues in teaching and learning in the EDUCAUSE Learning Initiative's 2017 annual survey of higher education (EDUCAUSE 2017). As institutions begin to examine BL instruction, there is a growing research interest in exploring the implications for both faculty and students. This modality is creating a community of practice built on a singular and pervasive research question, "How is blended learning impacting the teaching and learning environment?" That question continues to gain traction as investigators study the complexities of how BL interacts with cognitive, affective, and behavioral components of student behavior, and examine its transformation potential for the academy. Those issues are so compelling that several volumes have been dedicated to assembling the research on how blended learning can be better understood (Dziuban et al. 2016)

Graham et al. (2018) concluded that blended learning is the harbinger of substantial change in higher education and will become equally impactful in K-12 schooling and industrial training. Blended learning, because of its flexibility, allows us to maximize many positive education functions. If Floridi (2014) is correct and we are about to live in an environment where we are on the communication loop rather than in it, our educational future is about to change. However, if Graham et al. (2018) results are correct their theoretical speculations have some validity, the future of blended learning should encourage everyone about the coming changes.

From the study of Baran et al. (2017), preservice teachers' perceptions of the support their teacher education programs provide for developing their technological pedagogical content knowledge (TPACK). The

research was conducted with 215 preservice teachers in the last year of teacher education programs and teaching certificate programs in three universities in Turkey. Data sources were the synthesis of qualitative evidence (SQD) scale that was validated in the Turkish context as part of this study and the TPACK-practical scale. The strategies investigated in the SQD-model included: using teacher educators as role models; reflecting on the role of technology in education; learning how to use technology by design; collaboration with peers; scaffolding authentic technology experiences; and providing continuous feedback. The linear regression analysis revealed a positive relation between teacher education strategies and preservice teachers' TPACK. Reflection and teacher educators' as role models were the most frequently used teacher education strategies in teacher education programs included in this study. Results provided recommendations for further research on the connection between the teacher education strategies and the development of preservice teachers' TPACK in teacher education programs.

According to Rose (2020), while in the midst of this COVID-19 crisis, it is crucial that the academic educational community learns from the experience and prioritizes a forward-thinking and scholarly approach as practical solutions are implemented. Reflection and evaluation must follow. For educators, the expression "make your work count twice" (the first time for the job you are doing and the second to get the work published and disseminated, examples, creating a curriculum that you plan to use for scholarship by publishing it, and the plan for educational scholarship has never been more imperative. One area in which students can serve and have a positive effect is as educators to their peers, patients, and communities, using the tools available through social media and other modalities to help influence behaviors in a positive way.

Synthesis

The related literature and studies support the present study, the researcher believed that effective implementation of the teaching strategies were needed for the enhancement of the learning performance of the senior high school students in the TLE. Furthermore, it will help the teachers to realize and know the best practices on teaching TLE in the new normal.

As what Carreon (2018) expressed, the propagation of digital learning tools and the need to incorporate contextualized pedagogy plays a vital role in the development of 21st-century skills.

Jacolbia (2016) concluded that among the learning areas, the Technology and Livelihood Education subject is the most experiential, interactive, interdisciplinary and value-laden. It is in this learning area that provides the Filipino learners the quality time to demonstrate practical knowledge and life skills that have been gained, especially the skills of vocational efficiency and empathy. Technology and livelihood education is vital to becoming a productive member of the modern workforce.

In line with this, Shiela Gregorio (2016), mentioned that considering the nature of TLE, it provides vocational expertise and develops critical thinking among our students. This study was covered to determine its depth and how the researcher can be of help to the TLE teachers to overcome these problems by working out recommendations to lessen the burden of TLE teachers especially in using remedial measures in the absence of facilities or equipment.

The collection of studies and literature focused on the teaching strategies. It provides discussions about the influence the teaching strategies were needed for the enhancement of the learning performance of the senior high school students in the TLE. This study adds to what the existing literature claims that to improve the academic performance of the students in TLE, we must begin in knowing the students' learning style. Determining their learning styles will be a great help to teachers in designing and implementing a particular strategy that suits them.

Chapter 3
METHODOLOGY

This chapter presents the research design, respondents of the study, setting research instrument, validation of instruments, gathering procedures, and the statistical treatment used in this study.

Research Method Used

The researcher made use of the quantitative correlation method of research with survey as the main

activity answering the questions in connection with the relationship between the teaching strategies of the Technology and Livelihood Education (TLE) of teachers and the learning performance of the Senior High School students from the selected schools of Division of City Schools of Valenzuela.

The correlation research aimed to describe the nature of a situation as it exists at the time of study, and to explore the causes of the phenomenon under analysis. It described the survey method as involving the gathering of data in order to test hypotheses or to answer question on the current status of the subject of the study. It determines the ways things are and measures what already exist.

Respondents of the Study

The respondents were the one hundred eighty-one (181) Senior High School students and thirty (30) teachers from selected high schools from the Division of City Schools of Valenzuela. The following schools, Valenzuela City School of Mathematics and Science, Parada High School, Dalandanan National High School, Caruhatan National High School, and General Tiburcio De Leon National High School were considered because of accessibility proximity and the presence of associates teaching from the mentioned schools. The student-respondents of this study was based on the computation of sampling through the application Slovin formula with 0.07 margin of error.

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{1665}{1 + 1665(0.07)^2}$$

$$n = 181\ respondents$$

Table 1
Respondents of the Study

Schools	Population	Sample	Teachers
1. Valenzuela City School of Mathematics and Science	231	25	4
2. Dalandanan National High School	396	43	12
3. Caruhatan National High School	214	23	8
4. Gen. Tiburcio De Leon National High School	824	90	6
Total	1665	181	30

The purposive sampling method is a sampling technique in which researcher relies on his or her own judgment when choosing members of population to participate in the study. Purposive sampling is a non-probability sampling method and it occurs when "elements selected for the sample are chosen by the judgment of the researcher. Researchers often believe that they can obtain a representative sample by using a sound judgment, which will result in saving time and money".

The study was conducted on the academic year 2021-2022 in the Division of City Schools of Valenzuela, the researcher used a questionnaire answered by the selected Technology and Livelihood education (TLE) teachers.

Research Instrument

In this study, the researcher used a self-made questionnaire. The instruments helped to determine the extent of the teaching strategies of the Technology and Livelihood education (TLE) of teachers and the level of learning performance of the Senior High School students. There was one questionnaire set for the following: (1) teaching strategies of the Technology and Livelihood education (TLE) of teachers; (2) Level of learning performance of the Senior High School students; (3) problems encountered by the respondents' in relation to their teaching strategies/practices during the new normal; and, (4) suggested solutions to the problems encountered by the respondents, in relation to their teaching strategies/practices during the new normal.

Validation of the Instrument

The researcher used a self-made questionnaire. The instruments helped to determine the extent of the teaching strategies of the Technology and Livelihood Education (TLE) of teachers and the level of learning

performance of the Senior High School students. The questionnaire was validated through a dry-run. The result of the dry-run was used as basis for its improvement and refinement. The instruments were validated by the statistician for reliability and by the researcher's adviser and other experts. Substantial copies were then reproduce for the target number of respondents through google forms.

Constructing of the Questionnaire

Questionnaire. The researcher utilized a researcher-made questionnaire. The research tool was made up of four parts. Part one was about the demographic profile of the respondents which include: age, sex, civil status, and highest educational attainment. The second part was about the assessment of the extent of the teaching strategies of the TLE teachers in the new normal.

The equivalent point assigned to each indicated item to the extent of the teaching strategies as perceived by the respondents was be determined by estimating each weighted average using the following scale:

Scale	**Description**
4.20-5.00	Highly Practiced
3.40-4.19	Practiced
2.60-3.39	Moderately Practiced
1.80-2.59	Less Practiced
1:00-1.79	Never Practiced

The third part deals on the level of the learning performance of the students in the new normal. This was assessed using the following scale:

Scale	**Description**
4.20-5.00	Excellent
3.40-4.19	Very Good
2.60-3.39	Good
1.80-2.59	Fair
1:00-1.79	Poor

The fourth part deals on the problems encountered by the respondents in relation to their teaching strategies/practices during the new normal. This was assessed using the following scale:

Scale	**Description**
4.20-5.00	Extremely Serious
3.40-4.19	Serious
2.60-3.39	Moderately Serious
1.80-2.59	Less Serious
1:00-1.79	Not a Serious Problem

And lastly, the fourth part was about the suggested solutions to address the problems encountered by the respondents in relation to their teaching strategies practices during the new normal. This was assessed using the following scale:

Scale	**Description**
4.20-5.00	Highly Recommended
3.40-4.19	Recommended
2.60-3.39	Moderately Recommended
1.80-2.59	Less Recommended
1:00-1.79	Not Recommended

Data Gathering Procedures

Letter of request for the permission to conduct a research was sent to the Schools Division Superintendent of the Division of Valenzuela City. Another letter request was given to the principals of the four schools, the letter content included the persons involved in the study, the objectives of the study and the benefit of the institution and the respondents gained from the research. The Dean of the Graduate Studies, and the research adviser endorsed the letter.

Statistical Treatment of Data

Percentage (%) was used to present the demographic profile of the respondents in terms age, sex, civil status, and highest educational attainment. The formula used to compute for the percentage:

Formula:

$$Percentage\ (P) = \frac{f}{N} \times 100\%$$

Where:
$f =$ Frequency
$N =$ total number of respondents

Weighted Mean utilized to determine the assessment of the extent of the teaching strategies of the TLE teachers and the level of the learning performance of the students in the new normal. This is computed by adding all the weights per item and dividing the sum by the number of items. The overall weighted mean is computed by adding all the products in multiplying the frequency to the corresponding weights and dividing the sum by the total number of respondents. The formula is:

Formula:

$$W\bar{x} = \frac{\sum_{i=1}^{n} w_i x_i}{w}$$

Where:
$W\bar{x} =$ Weighted Mean
$\sum_{i=1}^{n} w_i x_i = The\ sum\ of\ the\ weight\ of\ X's$

Chi-square test was used to attempt in finding out the significant relationship between the significant relationship between the teaching strategies of the TLE teachers and their demographic profiles.

Formula:

$$\chi_c^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

Where: X_c^2 = Chi Square obtained

$\sum$ = the sum of

O = observed score

E = expected score

Pearson-Product Moment Correlation was used to determine if there is a significant relationship between the teaching strategies of the Technology and Livelihood education (TLE) of teachers and the learning performance of the Senior High School students from the selected schools of Division of City Schools of Valenzuela.

Formula:

$$r_{xy} = \frac{N\sum XY - \sum X \sum Y}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}}$$

Where:

$\boldsymbol{N}$	-	No. of pairs
$\sum \boldsymbol{X}$	-	Summation of X

$\sum Y$ - Summation of Y
$\sum X^2$ - Summation of X^2
$\sum Y^2$ - Summation of Y^2
$\sum XY$ - Summation of product of X and Y

Table of Relationship for the Value of r

The Value of r	Verbal Interpretation
± 1	Perfectly Relationship
± 0.81 to ± 0.99	Very High Relationship
± 0.71 to ± 0.80	High Relationship
± 0.41 to ± 0.70	Moderate Relationship
± 0.21 to ± 0.40	Low Relationship
± 0.01 to ± 0.20	Slight Relationship
0	No Relationship

Chapter 4

PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

This chapter presented, analyzed and interpreted the results of the study. The findings of the study were organized in six parts, based on the problems posed in Chapter 1.

The first part described the profiles of the teacher respondents in terms of age, sex, civil status, and highest educational attainment. In terms of student-respondents it also described their profiles in terms of age and sex. Part two is an assessment of the extent of the teaching strategies of the TLE teachers in the new normal in terms of the following: Entrepreneurial, Contextualized, Experiential, Constructivist, and Authentic. The third part determined the level of the learning performance of the students in the new normal in terms of Deep Understanding, Reasoning, Skills, and Products. Part four differentiated the teaching strategies of the TLE teachers according to their demographic profiles. The fifth part of this chapter evaluated the relationship between the teaching strategies of the TLE teachers and the learning performance of the students. Finally, part six determined difference in the teaching strategies of the TLE teachers as rated by the students and the TLE teachers themselves.

Question No.1 What is the profile of the respondents in terms of:

1.1 Teachers
- 1.1.1 Age;
- 1.1.2 Gender;
- 1.1.3 Civil Status; and,
- 1.1.4 Highest Educational Attainment?

1.2 Students
- 1.2.1 Age; and,
- 1.2.2 Gender?

Table 1.1.1
Distribution of Teacher-Respondents According to Age

Indicators	Frequency	Percentage	Rank
30 & below	7	23.33%	2
31 – 40	12	40.00%	1
41 – 50	6	20.00%	3

51 & above	5	16.67%	4
Total	**30**	**100%**	

The table 1.1 exhibited the distribution of the teacher-respondents' profile in terms of age. The 31-40 years old group dominated the distribution by sharing twelve (12) respondents or 40.00% of the total research participants. It was followed by the age bracket of 30 and below which have seven (7) teachers or 23.33% of the total distribution. Third from the list was the age group of 41-50 years old group with six (6) or 20.00% teachers' respondents. The group of 51-above years old has a share of five (5) participants out of one thirty total respondents or 16.67% of the distribution.

Table 1.1.2
Distribution of Teacher-Respondents
According to Gender

Indicators	Frequency	Percentage	Rank
Female	18	60.00%	1
Male	12	40.00%	2
Total	**30**	**100%**	

The table 1.1.2 exhibited the distribution of the teacher-respondents' profile in terms of gender. The female dominated the distribution by sharing eighteen (18) or 60.00% of the total research participants. It was followed by twelve (12) or 40.00%.

Table 1.1.3
Distribution of Teacher-Respondents
According to Civil Status

Indicators	Frequency	Percentage	Rank
Single	6	20.00%	2
Married	23	76.67%	1
Widowed/Legally Separated	1	3.33%	3
Total	**30**	**100%**	

The table 1.1.3 exhibited the distribution of the teacher-respondents' profile in terms of civil status. Teachers who are married dominated the distribution by sharing twenty-three (23) or 76.67% of the total research participants. It was followed by single which have six (6) teachers or 20.00% of the total distribution. Third from widowed/Legally separated with one (1) or 3.33% teachers' respondents.

Table 1.1.4
Distribution of Teacher-Respondents
According to Highest Educational Attainment

Indicators	Frequency	Percentage	Rank
Bachelor Degree	10	33.33%	2

With MA/MS Units	15	50.00%	1
MA/MS Degree	5	16.67%	3
Total	**30**	**100%**	

The table 1.1.4 exhibited the distribution of the teachers-respondents' profile in terms of Highest Educational attainment. Teachers with MA/MS Degree dominated the distribution by sharing fifteen (15) or 50.00% of the total research participants. It was followed by the Bachelor Degree which have ten (10) teachers or 33.33% of the total distribution. Third from the list was the MA/MS Degree with five (5) or 16.67% teachers' respondents. For the fourth place teachers with PhD/EdD units and PhD/EdD Degree tied with zero (0) respondents or 0.00% of the distribution.

Table 1.2.1
Distribution of Student-Respondents
According to Age

Indicators	Frequency	Percentage	Rank
16 - 17	73	39.46%	2
18 - 19	76	41.08%	1
20 & above	36	19.46%	3
Total	**185**	**100%**	

The table 1.2.1 exhibited the distribution of the students-respondents' profile in terms of age. The 18-19 years old group dominated the distribution by sharing seventy-six (76) or 41.08% of the total research participants. It was followed by the age bracket of 16 – 17 which have seventy – three (73) students or 39.46% of the total distribution. Third from the list was the age group of 20 and above years old group with thirty - six (36) or 19.46% students' respondents.

Table 1.2.2
Distribution of Student-Respondents
According to Gender

Indicators	Frequency	Percentage	Rank
Female	115	62.16%	1
Male	70	37.84%	2
Total	**185**	**100%**	

The table 1.2.2 exhibited the distribution of the students-respondents' profile in terms of gender. Female students dominated the distribution by sharing one hundred fifteen (115) or 62.16% of the total research participants. It was followed by the male students with seventy (70) students or 37.84% of the total distribution.

Question No. 2 What is the extent of the teaching strategies of the TLE teachers in the new normal in terms of:

2.1 entrepreneurial;
2.2 contextualized;
2.3 experiential;
2.4 constructivist; and,
2.5 authentic?

Table 2.1
Teaching Strategies of TLE Teachers in the New Normal As Assessed by the Respondents In Terms of Entrepreneurial

Indicators	Teachers			Students			Mean Difference
	WM	VI	R	WM	VI	R	
1. Introduce the students on business concept so as to develop their business sense and open their mind on business opportunities.	4.33	HP	10	4.37	HP	5.5	0.04
2. Equip the students with knowledge on solving business problems and turned problems into opportunities.	4.37	HP	9	4.26	HP	10	0.11
3. Develop the students self-confidence and resiliency to prepare them on facing problems, risks and even failure.	4.50	HP	6.5	4.43	HP	1	0.07
4. Inculcate the spirit of hard work to the students to lead them to give their best shot on every endeavors, projects, and products.	4.60	HP	3.5	4.38	HP	4	0.22
5. Provide the students with basic knowledge on costing, pricing, purchasing, profiting and resourcing of materials and/or ingredients to prepare them for a business opportunity.	4.40	HP	8	4.42	HP	2.5	0.02
6. Develop their skills on baking/masonry/electrical/electronics to uplift their confidence on their work output.	4.50	HP	6.5	4.27	HP	9	0.23
7. Inspire the students to be creative so as to maximize available materials and able to find ways on resolving missing ingredients and/or absence of materials	4.60	HP	3.5	4.35	HP	7	0.25
8. Develop students' understanding on Technological and Livelihood Education concepts.	4.77	HP	1	4.42	HP	2.5	0.35
9. Motivate students to explore business opportunities based on their TLE learnings.	4.73	HP	2	4.37	HP	5.5	0.36
10. Prepare students on the actual world of business by providing them real training exercises even in the new normal	4.57	HP	5	4.31	HP	8	0.26
Average Weighted Mean	**4.54**	**HP**		**4.36**	**HP**		**0.18**

Legend:

4.20	*-*	*5.00*	→	*Highly Practiced (HP)*
3.40	*-*	*4.19*	→	*Practiced (P)*
2.60	*-*	*3.39*	→	*Moderately Practiced (MP)*
1.80	*-*	*2.59*	→	*Less Practiced (LP)*
1.00	*-*	*1.79*	→	*Not Practiced (NP)*
		WM	→	*Weighted Mean*
		VI	→	*Verbal Interpretation*
		R	→	*Rank*

The assessment of teaching strategies of TLE teachers in new normal in terms of entrepreneurial is presented in Table 2.1, which was computed with 4.54 weighted mean for teacher-respondents, indicating that it is occasionally practiced. Ranked first was indicator number 8, "Develop students' understanding on Technological and Livelihood Education concepts," with 4.77 mean score from the respondents. It was followed by indicator number 9, "Motivate students to explore business opportunities based on their TLE learnings", for a second place with 4.73 mean score. Positioned at third spot was indicator number 4, "Inculcate the spirit of hard work to the students to lead them to give their best shot on every endeavors, projects, and products", and indicator number 7, "Inspire the students to be creative so as to maximize available materials and able to find ways on resolving missing ingredients and/or absence of materials," which received 4.35 weighted grade from the respondents. At the fifth is indicator number 10, "Prepare students on the actual world of business by providing them real training exercises even in the new normal", which gained 4.57 average score. Tied at sixth and seventh positions are indicator number 3, "Develop the students' self-confidence and resiliency to prepare

them on facing problems, risks and even failure", and indicator number 6, "Develop their skills on baking/masonry/electrical/electronics to uplift their confidence on their work output", which has a 4.50 weighted mean. Indicator number 5, "Provide the students with basic knowledge on costing, pricing, purchasing, profiting and resourcing of materials and/or ingredients to prepare them for a business opportunity," was placed at eighth spot with 4.40 average points. At ninth spot was indicator number 2, "Equip the students with knowledge on solving business problems and turned problems into opportunities," was assessed with 4.37 mean grade. Completing the list, indicator number 1, "Introduce the students on business concept so as to develop their business sense and open their mind on business opportunities," accumulating 4.43 average points.

Table 2.1 also illustrated the assessment of teaching strategies of TLE teachers in new normal in terms of entrepreneurial as assessed by student-respondents. Topping the list of indicators was indicator number 3, "Develop the students' self-confidence and resiliency to prepare them on facing problems, risks and even failure," which gained 4.43 weighted mean from the students. Indicator number 5, "Provide the students with basic knowledge on costing, pricing, purchasing, profiting and resourcing of materials and/or ingredients to prepare them for a business opportunity," and indicator number 8, "Develop students' understanding on Technological and Livelihood Education concepts," tied at the second and third spot with an average score of 4.42. At the fourth is indicator number 4 itself, "Inculcate the spirit of hard work to the students to lead them to give their best shot on every endeavors, projects, and products," which gained 4.38 average score. It was closely followed by indicator number 1, "Introduce the students on business concept so as to develop their business sense and open their mind on business opportunities," and indicator number 9, "Motivate students to explore business opportunities based on their TLE learnings," with 4.37 weighted score. Indicator number 7, "Inspire the students to be creative so as to maximize available materials and able to find ways on resolving missing ingredients and/or absence of materials," was placed on the seventh rank itself with 4.35 weighted mean. It is followed by indicator number 10, "Prepare students on the actual world of business by providing them real training exercises even in the new normal," in the eight spot accumulating 4.31 mean grade. Indicator number 6, "Develop their skills on baking/masonry/electrical/electronics to uplift their confidence on their work output," was at ninth spot with an average score of 4.27 while indicator number 2, "Equip the students with knowledge on solving business problems and turned problems into opportunities," placed at the last rank with an accumulated grade point of 4.26 from the respondents.

Table 2.2
Teaching Strategies of TLE Teachers in the New Normal As Assessed by the Respondents In Terms of Contextualized

Indicators	Teachers			Students			Mean Difference
	WM	VI	R	WM	VI	R	
1. Consider the students with different racial and ethnic origin to serve as a source of first-hand information on the topic related to their culture	4.53	HP	8	3.95	P	9	0.58
2. Consider students' diversity in bringing their different point of view and varied approaches to the learning process	4.47	HP	9	4.05	P	8	0.42
3. Encouraged students to share their personal experiences and background to interact and collaborate with their classmates during the group activity	4.67	HP	2	4.34	HP	2	0.33
4. Motivate learners to perform independently about proper maintenance of electrical tools and equipment, kitchen wares and utensils, computer accessories and the like	4.67	HP	2	4.31	HP	5	0.36
5. Learners were asked to internalize the health and safety procedures through safety measures	4.67	HP	2	4.41	HP	1	0.26
6. Require the students to prepare a sketch and layout of their own kitchen at home, electrical wiring diagram, or computer specifications design	4.43	HP	10	3.94	P	10	0.49
7. Teach learners to use appropriate tools, utensils and the likes, for the job required	4.63	HP	4.5	4.33	HP	3	0.3

8. Teach learners to perform correct methods of calculations to get accuracy on measurement	4.60	HP	6.5	4.29	HP	6	0.31
9. Perform correct methods of calculations to get accuracy of measurement	4.63	HP	4.5	4.32	HP	4	0.31
10. Take into account students' prior knowledge when planning class program for TLE lessons	4.60	HP	6.5	4.21	HP	7	0.39
Average Weighted Mean	**4.59**	**HP**		**4.22**	**HP**		**0.37**

Legend:

4.20	*-*	*5.00*	→	*Highly Practiced (HP)*
3.40	*-*	*4.19*	→	*Practiced (P)*
2.60	*-*	*3.39*	→	*Moderately Practiced (MP)*
1.80	*-*	*2.59*	→	*Less Practiced (LP)*
1.00	*-*	*1.79*	→	*Not Practiced (NP)*
		WM	→	*Weighted Mean*
		VI	→	*Verbal Interpretation*
		R	→	*Rank*

Table 2.2 displayed teaching strategies of TLE teachers in new normal in terms of contextualized. Indicator number 3, "Encouraged students to share their personal experiences and background to interact and collaborate with their classmates during the group activity", indicator number 4, "Motivate learners to perform independently about proper maintenance of electrical tools and equipment, kitchen wares and utensils, computer accessories and the like," and indicator number 5, "Learners were asked to internalize the health and safety procedures through safety measures," triple tied on the topped of the list with a computed value of 4.67. It was followed by indicator number 7, "Teach learners to use appropriate tools, utensils and the likes, for the job required", and indicator number 9, "Perform correct methods of calculations to get accuracy of measurement," as tied on the fourth and fifth position with 4.63 mean grade. Tied on sixth and seventh was indicator number 8, "Teach learners to perform correct methods of calculations to get accuracy on measurement", and indicator number 10, "Take into account students' prior knowledge when planning class program for TLE lessons," with mean grade of 4.21 from the teachers. Placed at eighth position was indicator number 1, "Consider the students with different racial and ethnic origin to serve as a source of first-hand information on the topic related to their culture", with closed 4.53 mean score. It is closely followed by the ninth rank which is indicator number 2, "Consider students' diversity in bringing their different point of view and varied approaches to the learning process", with collected 4.47 average score from the respondents. Lastly, completing the list was indicator number 6, "Require the students to prepare a sketch and layout of their own kitchen at home, electrical wiring diagram, or computer specifications design", gathered an average score of 4.43.

Table 2.2 also revealed teaching strategies of TLE teachers in new normal in terms of contextualized. Based from the students' feedback, all indicators under the mentioned variable gathered 4.42 weighted mean. Topped the survey, indicator number 5, "Learners were asked to internalize the health and safety procedures through safety measures", gained a weighted mean of 4.41. This is followed by indicator 3, "Encouraged students to share their personal experiences and background to interact and collaborate with their classmates during the group activity", placing at second spot with average point of 4.34. Indicator number 7, "Teach learners to use appropriate tools, utensils and the likes, for the job required", gathered a weighted mean of 4.33 for third spot. It was closely followed by Indicator number 9, "Perform correct methods of calculations to get accuracy of measurement", which placed fourth spot with 4.32 mean score from the students while closely followed by indicator number 4, "Motivate learners to perform independently about proper maintenance of electrical tools and equipment, kitchen wares and utensils, computer accessories and the like", at fifth spot with 4.31 mean score. Positioned at sixth position was indicator number 8, "Teach learners to perform correct methods of calculations to get accuracy on measurement", with 4.29 weighted mean. For seventh place, indicator number 10, "Take into account students' prior knowledge when planning class program for TLE lessons," gathered 4.21 mean grade. Indicator number 2, "Consider students' diversity in bringing their different point of view and varied approaches to the learning process," placed eighth with 4.05 average score. For the ninth place, indicator number 1, "Consider the students with different racial and ethnic origin to serve as a source of first-hand information on the topic related to their culture," gained 3.95 weighted mean. Completing the indicators was indicator number 6, "Require the students to prepare a sketch and layout of their own kitchen at home, electrical wiring diagram, or computer specifications design", was good for the tenth and last spot with 3.94 mean score based from the response of the student-respondents.

Table 2.3
Teaching Strategies of TLE Teachers in the New Normal
As Assessed by the Respondents In Terms of Experiential

Indicators	Teachers			Students			Mean Difference
	WM	VI	R	WM	VI	R	
1. Let the students learn by doing mostly in workplace like kitchen laboratory, welding/electronic facilities, and/or computer laboratory.	4.27	HP	10	4.30	HP	6	0.03
2. Wearing personal protective equipment and considering Japanese 5 S Productivity Philosophy	4.63	HP	4	4.45	HP	1	0.18
3. Listen and ask questions to the students in order to gauge their level of understanding	4.70	HP	2	4.42	HP	2	0.28
4. Utilize video lessons and activities	4.73	HP	1	4.41	HP	3	0.32
5. Expose the class to the use of investigative strategies	4.40	HP	8	4.28	HP	8	0.12
6. Use indigenous materials in teaching TLE	4.57	HP	5	4.12	P	10	0.45
7. Give students hands-on experience in choosing equipment/tools/utensils appropriately	4.67	HP	3	4.34	HP	4	0.33
8. Develop the students' motor skills in using scientific, industrial tools or creative media	4.37	HP	9	4.15	P	9	0.22
9. Enable students to design and create objects or equipment in different physical media	4.43	HP	7	4.29	HP	7	0.14
10. Applied a combination of synchronous tools such as web conferencing, asynchronous tools such as discussion forms and/or social media for group work, e-portfolio's and multimedia for reporting and remote labs for experimental works	4.53	HP	6	4.31	HP	5	0.22
Average Weighted Mean	**4.53**	**HP**	**0**	**4.31**	**HP**	**0**	**0.22**

Legend:

4.20	-	*5.00*	→	*Highly Practiced (HP)*
3.40	-	*4.19*	→	*Practiced (P)*
2.60	-	*3.39*	→	*Moderately Practiced (MP)*
1.80	-	*2.59*	→	*Less Practiced (LP)*
1.00	-	*1.79*	→	*Not Practiced (NP)*
		WM	→	*Weighted Mean*
		VI	→	*Verbal Interpretation*
		R	→	*Rank*

The teaching strategies of TLE teachers in new normal in terms of experiential was presented in Table 2.3, which was computed with 4.53 weighted mean from teacher-respondents and 4.31 for student-respondents. Ranked first was indicator number 4, "Utilize video lessons and activities", with 4.73 mean score from the teacher-respondents. It was followed by indicator number 3, "Listen and ask questions to the students in order to gauge their level of understanding", for a second place with 4.70 mean score. Positioned at third spot was indicator number 7, "Give students hands-on experience in choosing equipment/tools/utensils appropriately", which received 4.67 weighted grade from the respondents. At the fourth is indicator number 2, "Wearing personal protective equipment and considering Japanese 5 S Productivity Philosophy", which gained 4.63 average score. The fifth rank is indicator number 6, "Use indigenous materials in teaching TLE," which has a 4.57 weighted mean. Indicator number 10, "Applied a combination of synchronous tools such as web conferencing, asynchronous tools such as discussion forms and/or social media for group work, e-portfolio's and multimedia for reporting and remote labs for experimental works", gathered 4.53 mean grade for the sixth position. Indicator number 9, "Enable students to design and create objects or equipment in different physical media", was placed at seventh spot with 4.43 average points. At eighth spot was indicator number 5, "Expose

the class to the use of investigative strategies," was assessed with 4.40 mean grade. For ninth place was indicator number 8, "Develop the students' motor skills in using scientific, industrial tools or creative media," with a mean grade of 4.37. Completing the list, indicator number 1, "Let the students learn by doing mostly in workplace like kitchen laboratory, welding/electronic facilities, and/or computer laboratory", accumulating 4.27 average points.

Table 2.3 also illustrated the teaching strategies of TLE teachers in new normal in terms of experiential as assessed by student-respondents. Topping the list of indicators was indicator number 2, "Wearing personal protective equipment and considering Japanese 5 S Productivity Philosophy", which gained 4.45 weighted mean from the students. Indicator number 3, "Listen and ask questions to the students in order to gauge their level of understanding", was at second spot with an average score of 4.42. At the third is indicator number 4, "Utilize video lessons and activities", which gained 4.41 average score. It was closely followed by indicator number 7, "Give students hands-on experience in choosing equipment/tools/utensils appropriately", with 4.34 weighted score for the fourth spot. Indicator number 10, "Applied a combination of synchronous tools such as web conferencing, asynchronous tools such as discussion forms and/or social media for group work, e-portfolio's and multimedia for reporting and remote labs for experimental works", was placed on the fifth rank with 4.31 weighted mean. It is followed by indicator number 1, "Let the students learn by doing mostly in workplace like kitchen laboratory, welding/electronic facilities, and/or computer laboratory", in the sixth spot accumulating 4.30 mean grade. Indicator number 9, "Enable students to design and create objects or equipment in different physical media", was at seventh spot with an average score of 4.29 while closely followed by indicator number 5, "Expose the class to the use of investigative strategies", placed at eighth spot with computed 4.28 mean score. Placed at ninth spot was indicator number 8, "Develop the students' motor skills in using scientific, industrial tools or creative media" with mean score of 4.15. Lastly, indicator number 6, "Use indigenous materials in teaching TLE", placed at the last rank with an accumulated grade point of 4.12 from the respondents.

Table 2.4
Teaching Strategies of TLE Teachers in the New Normal
As Assessed by the Respondent In Terms of Constructivist

Indicators	Teachers			Students			Mean Difference
	WM	VI	R	WM	VI	R	
1. Motivate the students to create scenarios of their learning experiences by writing reflective journals or creating personal blogs through digital portfolios (cooking books, recipe blogs, food plating videos, demo videos).	4.37	HP	7	4.25	HP	5	0.12
2. Provide real world case based learning environments rather than pre-determined instructional events	4.33	HP	9	4.18	P	6	0.15
3. Use technology to come up with something new and unique through product innovation considering proper nutrition and availability of ingredients or raw materials needed for production	4.37	HP	7	4.12	P	9	0.25
4. Allow students to work in group	4.57	HP	4	4.31	HP	2	0.26
5. Motivate the students to use instructional tool as a primary source rather than a textbook	4.53	HP	5	4.29	HP	3.5	0.24
6. Allow the students or the team to do the task entirely on their own, the teacher's provide help and assistance as needed	4.60	HP	2.5	4.34	HP	1	0.26
7. Encourage students to use appropriate local materials as substitute for listed materials that are not available	4.67	HP	1	4.17	P	7	0.5
8. Diagnose and troubleshoot computer system. Able to diagnose and configure computer system and network. Able to adjust flavors on baking and cooking. Able to detect wiring problems	4.20	HP	10	4.02	P	10	0.18
9. The students relate what they have learned in TLE class to their life outside of school	4.60	HP	2.5	4.29	HP	3.5	0.31

10. The students able to work at the speed which suits their ability and adjust depending on the activity needs	4.37	HP	7	4.16	P	8	0.21
Average Weighted Mean	**4.46**	**HP**		**4.21**	**HP**		**0.25**

Legend:

4.20	*-*	*5.00*	→	*Highly Practiced (HP)*
3.40	*-*	*4.19*	→	*Practiced (P)*
2.60	*-*	*3.39*	→	*Moderately Practiced (MP)*
1.80	*-*	*2.59*	→	*Less Practiced (LP)*
1.00	*-*	*1.79*	→	*Not Practiced (NP)*
		WM	→	*Weighted Mean*
		VI	→	*Verbal Interpretation*
		R	→	*Rank*

The assessment of teaching strategies of TLE teachers in new normal in terms of constructivist is presented in Table 2.4, which was computed with 4.46 weighted mean for teacher-respondents. Ranked first was indicator number 7, " Encourage students to use appropriate local materials as substitute for listed materials that are not available," with 4.67 mean score from the respondents. It was followed by indicator number 6, "Allow the students or the team to do the task entirely on their own, the teacher's provide help and assistance as needed", and indicator number 9, "The students relate what they have learned in TLE class to their life outside of school," tied for second and third place with 4.60 mean score. Ranked fourth was indicator number 4 itself, "Allow students to work in group", which received 4.57 weighted grade from the respondents. At the fifth is indicator number 5 itself, "Motivate the students to use instructional tool as a primary source rather than a textbook", which gained 4.53 average score. Triple tied on the list at sixth, seventh and eight positions are indicator number 1, "Motivate the students to create scenarios of their learning experiences by writing reflective journals or creating personal blogs through digital portfolios (cooking books, recipe blogs, food plating videos, demo videos)", indicator number 3, "Use technology to come up with something new and unique through product innovation considering proper nutrition and availability of ingredients or raw materials needed for production", and indicator number 10, "The students able to work at the speed which suits their ability and adjust depending on the activity needs", which has a 4.37 weighted mean. Indicator number 2, "Provide real world case based learning environments rather than pre-determined instructional events," was placed at ninth spot with 4.33 average points. Completing the list, indicator number 8, "Diagnose and troubleshoot computer system. Able to diagnose and configure computer system and network. Able to adjust flavors on baking and cooking. Able to detect wiring problems," accumulating 4.20 average points.

Table 2.4 also illustrated the assessment of teaching strategies of TLE teachers in new normal in terms of constructivist as assessed by student-respondents. Topping the list of indicators was indicator number 6, "Allow the students or the team to do the task entirely on their own, the teacher's provide help and assistance as needed," which gained 4.34 weighted mean from the students. Indicator number 4, "Allow students to work in group," was placed in the second spot with an average score of 4.31. Tied at the third and fourth placed was indicator number 5, "Motivate the students to use instructional tool as a primary source rather than a textbook," and indicator number 9, "The students relate what they have learned in TLE class to their life outside of school," which gained 4.29 average score. It was closely followed by indicator number 1, " Motivate the students to create scenarios of their learning experiences by writing reflective journals or creating personal blogs through digital portfolios (cooking books, recipe blogs, food plating videos, demo videos)," with 4.25 weighted score for fifth spot. Indicator number 2, "Provide real world case based learning environments rather than pre-determined instructional events," was placed on the sixth rank with 4.18 weighted mean. It is followed by indicator number 7, "Encourage students to use appropriate local materials as substitute for listed materials that are not available," in the seventh spot itself accumulating 4.17 mean grade. Indicator number 10, "The students able to work at the speed which suits their ability and adjust depending on the activity needs," was at eighth spot with an average score of 4.16 while indicator number 3, "Use technology to come up with something new and unique through product innovation considering proper nutrition and availability of ingredients or raw materials needed for production," placed at the ninth rank with an accumulated grade point of 4.12 from the respondents. Lastly, completing the list was indicator number 8, "Diagnose and troubleshoot computer system. Able to diagnose and configure computer system and network. Able to adjust flavors on baking and cooking. Able to detect wiring problems", with an average score of 4.02.

Table 2.5
Teaching Strategies of TLE Teachers in the New Normal
As Assessed by the Respondents In Terms of Authentic

Indicators	Teachers			Students			Mean Difference
	WM	VI	R	WM	VI	R	
1. Students' tasks focus on contextualizing rather than abstracting	4.50	HP	6	4.24	HP	6.5	0.26
2. Students rate their works by comparing their output with the evaluation sample or based on the rubric for scoring	4.47	HP	7	4.24	HP	6.5	0.23
3. Relate the concept of TLE to other disciplines like Science, Mathematics and Languages	4.53	HP	5	4.18	P	10	0.35
4. Relate TLE to current technology	4.67	HP	1	4.41	HP	1	0.26
5. Guide students in applying technology in launching business/livelihood program	4.40	HP	8.5	4.38	HP	2	0.02
6. Allow the use of calculator/computers/LCD projector for drills and practices and to collect and analyze data	4.37	HP	10	4.19	P	9	0.18
7. Encourage students to practice working if they have the materials/equipment/tools/utensils at home	4.63	HP	2	4.34	HP	4	0.29
8. Develop skills and confidence by encouraging them to present demo presentation	4.57	HP	3.5	4.31	HP	5	0.26
9. Engage in a role play of a particular TLE activity. Described what might happen if one element of the activity missing. Be able to present solution	4.57	HP	3.5	4.22	HP	8	0.35
10.Develop a business/marketing/ sales plan for an imaginary or real company in a student area of interest	4.40	HP	8.5	4.35	HP	3	0.05
Average Weighted Mean	**4.51**	**HP**		**4.29**	**HP**		**0.22**

Legend:

4.20	*-*	*5.00*	→	*Highly Practiced (HP)*
3.40	*-*	*4.19*	→	*Practiced (P)*
2.60	*-*	*3.39*	→	*Moderately Practiced (MP)*
1.80	*-*	*2.59*	→	*Less Practiced (LP)*
1.00	*-*	*1.79*	→	*Not Practiced (NP)*
		WM	→	*Weighted Mean*
		VI	→	*Verbal Interpretation*
		R	→	*Rank*

Table 2.5 displayed teaching strategies of TLE teachers in new normal in terms of authentic. Indicator number 4, "Relate TLE to current technology", topped of the list with a computed value of 4.67. It was followed by indicator number 7, "Encourage students to practice working if they have the materials/equipment/tools/utensils at home", and placed second with 4.63 mean grade. Tied on third and fourth spot was indicator number 8, "Develop skills and confidence by encouraging them to present demo presentation", and indicator number 9, "Engage in a role play of a particular TLE activity. Described what might happen if one element of the activity missing. Be able to present solution," with mean grade of 4.57 from the teachers. Placed at fifth position was indicator number 3, "Relate the concept of TLE to other disciplines like Science, Mathematics and Languages", with closed 4.53 mean score. It is closely followed by the sixth rank which is indicator number 1, "Students' tasks focus on contextualizing rather than abstracting", with collected 4.50 average score from the respondents. Followed by indicator number 2, "Students rate their works by comparing their output with the evaluation sample or based on the rubric for scoring," which gained 4.47 for the seventh spot. Tied on eighth and ninth spot was indicator number 5, "Guide students in applying technology in launching business/livelihood program," and indicator number 10, "Develop a business/marketing/ sales plan for an imaginary or real company in a student area of interest," with 4.40 mean score. Lastly, completing the list

was indicator number 6, "Allow the use of calculator/computers/LCD projector for drills and practices and to collect and analyze data", gathered an average score of 4.37.

Table 2.5 also revealed teaching strategies of TLE teachers in new normal in terms of authentic. Based from the students' feedback, all indicators under the mentioned variable gathered 4.29 weighted mean. Topped the survey, indicator number 4, "Relate TLE to current technology", gained a weighted mean of 4.41. This is followed by indicator 5, "Guide students in applying technology in launching business/livelihood program", placing at second spot with average point of 4.38. Indicator number 10, "Develop a business/marketing/ sales plan for an imaginary or real company in a student area of interest", gathered a weighted mean of 4.35 for third spot. It was closely followed by Indicator number 7, "Encourage students to practice working if they have the materials/equipment/tools/utensils at home", which placed fourth spot with 4.34 mean score from the students while closely followed by indicator number 8, "Develop skills and confidence by encouraging them to present demo presentation", at fifth spot with 4.31 mean score. Tied in the position of sixth and seventh was indicator number 1, "Students' tasks focus on contextualizing rather than abstracting", and indicator number 2, "Students rate their works by comparing their output with the evaluation sample or based on the rubric for scoring", with 4.24 weighted mean. Indicator number 9, "Engage in a role play of a particular TLE activity. Described what might happen if one element of the activity missing. Be able to present solution," placed eighth with 4.22 average score. For the ninth place, indicator number 6, "Allow the use of calculator/computers/LCD projector for drills and practices and to collect and analyze data," gained 4.19 weighted mean. Completing the indicators was indicator number 3, "Relate the concept of TLE to other disciplines like Science, Mathematics and Languages", was good for the tenth and last spot with 4.18 mean score based from the response of the student-respondents.

Table 2.6
Summary on Teaching Strategies of TLE Teachers in the New Normal As Assessed by the Respondents

Indicators	Teachers			Students			Mean Difference
	AWM	VI	R	AWM	VI	R	
2.1. Entrepreneurial	4.54	HP	2	4.36	HP	1	0.18
2.2. Contextualized	4.59	HP	1	4.22	HP	4	0.37
2.3. Experiential	4.53	HP	3	4.31	HP	2	0.22
2.4. Constructivist	4.46	HP	5	4.21	HP	5	0.25
2.5. Authentic	4.51	HP	4	4.29	HP	3	0.22
Composite Weighted Mean	**4.53**	**HP**		**4.28**	**HP**	0	**0.51**

Legend:

4.20	-	*5.00*	→	*Highly Practiced (HP)*
3.40	-	*4.19*	→	*Practiced (P)*
2.60	-	*3.39*	→	*Moderately Practiced (MP)*
1.80	-	*2.59*	→	*Less Practiced (LP)*
1.00	-	*1.79*	→	*Not Practiced (NP)*
		WM	→	*Weighted Mean*
		VI	→	*Verbal Interpretation*
		R	→	*Rank*

Table 2.6 showed the summary on teaching strategies of TLE teachers in the new normal as assessed by the respondents. The teacher-respondents lean on contextualized and entrepreneurial based on their feedback with computed weighted mean of 4.59 and 4.54 respectively. Then, closely followed by experiential which was positioned at third with 4.53 mean score, and was followed by authentic with 4.51 mean rating. Lastly, it was constructivist with 4.46 average score. Finally, the teaching strategies of TLE teachers in the new normal gained a composite weighted mean of 3.77 from teacher-respondents.

On the other hand, table 2.6 also illustrated the summary on teaching strategies of TLE teachers in the new normal as assessed by the student-respondents. Topped on the list was entrepreneurial which gathered an

average score of 4.36. Followed by experiential with 4.31 mean score while authentic was at the third spot with 4.29 weighted mean. Ranked fourth was contextualized with 4.22 average score and was closely followed by the last rank, constructivist, with 4.21 mean grade. Lastly, the teaching strategies of TLE teachers in the new normal had a composite weighted mean of 4.28.

Question No. 3 What is the level of the learning performance of the students in the new normal in terms of:

3.1 deep understanding;
3.2 reasoning;
3.3 skills; and
3.4 products?

Table 3.1
Learning Performance of the Students in the New Normal As Assessed by the Respondents In Terms of Deep Understanding

Indicators	Frequency					WM	VI	R
	5	4	3	2	1			
1. The students have a hands-on activities every week	15	11	3	0	1	4.30	O	8
2. The students learned the process of cooking viands and other foods through TLE	15	13	1	0	1	4.37	O	6
3. The students learned to identify the usage of different kitchen utensils and equipment	20	7	2	0	1	4.50	O	2.5
4. The students learned to identify computer parts and accessories and understand their usage and functions	17	7	5	0	1	4.30	O	8
5. The students recognize the hardware and understand the software	14	11	4	0	1	4.23	O	10
6. The students able to apply their knowledge on cooking practices, tasting and plating	20	9	0	0	1	4.57	O	1
7. The students able to adjust on actual problem situations like measurement adjustments during cooking activities and taste adjustments, wiring adjustments and computer manipulations	15	12	1	1	1	4.30	O	8
8. The students able to create sweet and other dessert that can be a source of income	20	8	0	1	1	4.50	O	2.5
9. The students able to make or prepare food from scratch	17	11	0	1	1	4.40	O	4.5
10. The students understand the concepts of TLE lessons and manifest on their asynchronous activity through video presentation	17	10	2	0	1	4.40	O	4.5
Average Weighted Mean						**4.39**	**O**	

Legend:

4.20	*-*	*5.00*	→	*Outstanding (O)*
3.40	*-*	*4.19*	→	*Very Satisfactory (VS)*
2.60	*-*	*3.39*	→	*Satisfactory (S)*
1.80	*-*	*2.59*	→	*Fair (F)*
1.00	*-*	*1.79*	→	*Poor (P)*
		WM	→	*Weighted Mean*
		VI	→	*Verbal Interpretation*
		R	→	*Rank*

The assessment of learning performance in the new normal in terms of deep understanding was presented in Table 3.1, which was computed with 4.39 weighted mean for respondents. Ranked first was indicator number 6, “The students able to apply their knowledge on cooking practices, tasting and plating,” with

4.57 mean score from the respondents. It was followed by indicator number 3, "The students learned to identify the usage of different kitchen utensils and equipment", and indicator number 8, "The students able to create sweet and other dessert that can be a source of income," tied for second and third place with 4.50 mean score. Ranked fourth and fifth was indicator number 9, "The students able to make or prepare food from scratch", and indicator number 10, "The students understand the concepts of TLE lessons and manifest on their asynchronous activity through video presentation", which both received 4.40 weighted grade from the respondents. At the sixth spot was indicator number 2, "The students learned the process of cooking viands and other foods through TLE", which gained 4.37 average score. Triple tied on the list at seventh, eight, and ninth positions are indicator number 1, "The students have a hands-on activities every week", indicator number 4, "The students learned to identify computer parts and accessories and understand their usage and functions", and indicator number 7, "The students able to adjust on actual problem situations like measurement adjustments during cooking activities and taste adjustments, wiring adjustments and computer manipulations", which has a 4.30 weighted mean. Completing the list was indicator number 5, "The students recognize the hardware and understand the software," accumulating 4.23 average points.

Table 3.2
Learning Performance of the Students in the New Normal
As Assessed by the Respondents In Terms of Reasoning

Indicators	Frequency					WM	VI	R
	5	4	3	2	1			
1. The students can express themselves and effectively reasoned out on some issues on TLE and during activity application	17	12	0	0	1	4.47	O	1.5
2. The students can set-up meetings with their groupmates and review their progress	12	15	2	0	1	4.23	O	9
3. The students can easily understand and interpret verbal questions from their TLE teachers	15	14	1	0	0	4.47	O	1.5
4. The students can set-up short term objectives in relation to TLE projects	14	15	1	0	0	4.43	O	3.5
5. The students can do brain storming for project planning	15	13	2	0	0	4.43	O	3.5
6. The students can directly inform their groupmates if there is too much careless on their working project	12	14	3	0	1	4.20	O	10
7. The students can establish foundation plan for an effective outcome of project proposal on TLE subject	13	15	2	0	0	4.37	O	6.5
8. The students can take responsibility for their tasks and defend their works or projects	14	13	3		0	4.37	O	6.5
9. The students can work with their TLE teams, express their thoughts for the development of their project even in the new normal	13	14	3			4.33	O	8
10. The students can express their thoughts and ideas based on information on hand through letters or memos, manifesting preparedness on formal transaction	15	12	3			4.40	O	5
Average Weighted Mean						**4.37**	**O**	

Legend:

4.20	*-*	*5.00*	→	*Outstanding (O)*
3.40	*-*	*4.19*	→	*Very Satisfactory (VS)*
2.60	*-*	*3.39*	→	*Satisfactory (S)*
1.80	*-*	*2.59*	→	*Fair (F)*
1.00	*-*	*1.79*	→	*Poor (P)*
		WM	→	*Weighted Mean*
		VI	→	*Verbal Interpretation*
		R	→	*Rank*

Table 3.2 displayed the assessment of learning performance in the new normal in terms of reasoning. Indicator number 1, "The students can express themselves and effectively reasoned out on some issues on TLE and during activity application", with indicator number 3, "The students can easily understand and interpret verbal questions from their TLE teachers," topped the list with computed value of 4.47. It was followed by indicator number 4, "The students can set-up short term objectives in relation to TLE projects", and indicator number 5, "The students can do brain storming for project planning ", tied on third and fourth place with 4.43 mean grade. At fifth spot was indicator number 10, "The students can express their thoughts and ideas based on information on hand through letters or memos, manifesting preparedness on formal transaction," with 4.40 gathered average score. Tied on sixth and seventh spot was indicator number 7, "The students can establish foundation plan for an effective outcome of project proposal on TLE subject", and indicator number 8, "The students can take responsibility for their tasks and defend their works or projects," with mean grade of 4.37 from the respondents. Placed at eighth position was indicator number 9, "The students can work with their TLE teams, express their thoughts for the development of their project even in the new normal", with closed 4.33 mean score. It was followed by the ninth rank which is indicator number 2, "The students can set-up meetings with their groupmates and review their progress", with collected 4.23 average score from the respondents. Lastly, completing the list was indicator number 6, "The students can directly inform their groupmates if there is too much careless on their working project", gathered an average score of 4.20.

Table 3.3
Learning Performance of the Students in the New Normal
As Assessed by the Respondents In Terms of Skills

Indicators	Frequency					WM	VI	R
	5	4	3	2	1			
1. Gain livelihood experience through training	21	8	1	0	0	4.67	O	1
2. Acquire working knowledge of the materials, tools, equipment used in the TLE subject	21	7	2	0	0	4.63	O	2
3. Understand the processes and products of production	18	9	3	0	0	4.50	O	7
4. Explore various business opportunities and make intelligent choice of entrepreneurial activity	18	10	2	0	0	4.53	O	5
5. Demonstrate knowledge and skills in selecting materials/ingredients and applying art principles in recycling, plating, cooking and the likes	18	10	2	0	0	4.53	O	5
6. Demonstrate managerial and manipulative skills on the principles, practice and techniques in growing crops	16	12	2	0	0	4.47	O	8
7. Understanding of the basic life skills in lettering	15	13	2		0	4.43	O	9.5
8. Develop safety working habits	19	10	1	0		4.60	O	3
9. Do the task entirely on their own	14	15	1			4.43	O	9.5
10. Use appropriate local materials as substitute for listed materials that are not available	17	12	1			4.53	O	5
Average Weighted Mean						**4.53**	**O**	

Legend:

4.20	*-*	*5.00*	→	*Outstanding (O)*
3.40	*-*	*4.19*	→	*Very Satisfactory (VS)*
2.60	*-*	*3.39*	→	*Satisfactory (S)*
1.80	*-*	*2.59*	→	*Fair (F)*
1.00	*-*	*1.79*	→	*Poor (P)*
		WM	→	*Weighted Mean*
		VI	→	*Verbal Interpretation*
		R	→	*Rank*

The learning performance in the new normal in terms of skills as assessed by the respondents is presented in Table 3.3, which was computed with 4.53 weighted mean from the respondent. Ranked first was indicator number 1 itself, "Gain livelihood experience through training", with 4.67 mean score from the respondents. Indicator number 2, "Acquire working knowledge of the materials, tools, equipment used in the TLE subject", also stayed on its position with an average of 4.63 score. It was closely followed by indicator number 8, "Develop safety working habits", for a third place with 4.60 mean score. Tied at fourth, fifth and sixth spot was indicator number 4, "Explore various business opportunities and make intelligent choice of entrepreneurial activity", indicator number 5, "Demonstrate knowledge and skills in selecting materials/ingredients and applying art principles in recycling, plating, cooking and the likes," and indicator number 10, "Use appropriate local materials as substitute for listed materials that are not available," which received 4.53 weighted grade from the respondents. At the seventh position is indicator number 3, "Understand the processes and products of production", which gained 4.50 average score. The eighth rank is indicator number 6, "Demonstrate managerial and manipulative skills on the principles, practice and techniques in growing crops," which has a 4.47 weighted mean. Tied in completing the list was indicator number 7, "Understanding of the basic life skills in lettering", and indicator number 9, "Do the task entirely on their own," accumulating 4.43 average points.

Table 3.4
Learning Performance of the Students in the New Normal
As Assessed by the Respondents In Terms of Products

Indicators	Frequency					WM	VI	R
	5	4	3	2	1			
1. The students are aware of the methodology used for managing projects or products	15	11	4	0	0	4.37	O	6.5
2. The students decide the projects or products that have to be developed	15	12	3	0	0	4.40	O	3.5
3. The students are frequently informed about the progress of projects or products	14	15	1	0	0	4.43	O	1.5
4. The students project or product management processes are well documented and controlled	15	11	4	0	0	4.37	O	6.5
5. All projects are using a projects or products management plan	13	15	2	0	0	4.37	O	6.5
6. The students are requested to document lessons learned and apply them to future projects or products	14	15	1	0	0	4.43	O	1.5
7. The students have to ensure compliance with Japanese 5 S Productivity Philosophy, school and teacher's policies and any regulatory requirements	14	12	4	0	0	4.33	O	9
8. Projects meet their schedule objectives	12	15	3		0	4.30	O	10
9. The students able to design and create objects, equipment and/or plans	13	15	2	0		4.37	O	6.5
10. The students are requested to presents their work output and allow them to answer questions from critiques	13	16	1			4.40	O	3.5
Average Weighted Mean	**138**	**137**	**25**	**0**	**0**	**4.38**	**O**	

Legend:

4.20	*-*	*5.00*	→	*Outstanding (O)*
3.40	*-*	*4.19*	→	*Very Satisfactory (VS)*
2.60	*-*	*3.39*	→	*Satisfactory (S)*
1.80	*-*	*2.59*	→	*Fair (F)*
1.00	*-*	*1.79*	→	*Poor (P)*
		WM	→	*Weighted Mean*
		VI	→	*Verbal Interpretation*
		R	→	*Rank*

The assessment of learning performance in the new normal in terms of products was presented in Table 3.4, which was computed with 4.38 weighted mean from respondents. Ranked first was indicator number 3, " The students are frequently informed about the progress of projects or products," and indicator number 6, "The students are requested to document lessons learned and apply them to future projects or products," with both 4.43 mean score from the respondents. It was followed by indicator number 2, "The students decide the projects or products that have to be developed", and indicator number 10, "The students are requested to presents their work output and allow them to answer questions from critiques," for third and fourth place with both 4.40 mean score. Ranked fifth, sixth, seventh and eighth which all gathered 4.37 weighted mean were indicator number 1, "The students are aware of the methodology used for managing projects or products", indicator number 4, "The students project or product management processes are well documented and controlled", indicator number 5, "All projects are using a projects or products management plan", and indicator number 9, "The students able to design and create objects, equipment and/or plans". At the ninth spot was indicator number 7, "The students have to ensure compliance with Japanese 5 S Productivity Philosophy, school and teacher's policies and any regulatory requirements", which gained 4.33 average score. Completing the list was indicator number 8, "Projects meet their schedule objectives," accumulating 4.30 average points.

Table 3.5
Summary on Learning Performance of the Students in the New Normal As Assessed by the Respondents

Indicators	Frequency					AWM	VI	R
	5	4	3	2	1			
3.1 Deep Understanding	170	99	18	3	10	4.39	O	2
3.2 Reasoning	140	137	20	0	3	4.37	O	4
3.3 Skills	177	106	17	0	0	4.53	O	1
3.4 Products	138	137	25	0	0	4.38	O	3
Composite Weighted Mean	**625**	**479**	**80**	**3**	**13**	**4.42**	**O**	

Legend:

4.20	-	*5.00*	→	*Outstanding (O)*
3.40	-	*4.19*	→	*Very Satisfactory (VS)*
2.60	-	*3.39*	→	*Satisfactory (S)*
1.80	-	*2.59*	→	*Fair (F)*
1.00	-	*1.79*	→	*Poor (P)*
		WM	→	*Weighted Mean*
		VI	→	*Verbal Interpretation*
		R	→	*Rank*

Table 2.6 displayed the summary on learning performance of the students in the new normal as assessed by the respondents. Topped on the list was skills which gained an average score of 4.53. Followed by deep understanding with 4.39 mean score. On the third spot was products with 4.38 average score. Completing the list was reasoning with 4.37 mean grade. Thus, the summary on learning performance of the students in the new normal had a composite weighted mean of 4.42.

Question No. 4 Is there a significant relationship between the teaching strategies of the TLE teachers and the learning performance of the students?

Table 4
Significant Relationship Between the Teaching Strategies of TLE Teachers and Learning Performance of the Students

Indicators	Mean	Pearson r	Computed t-Value	Decision	Remarks

Teaching Strategies of TLE Teachers	4.53	0.75	1.738	Accept Null Hypothesis (Ho)	Not Significant
Learning Performance of the Students	4.42	High Relationship			
F-Critical/Tabular Value at 0.05 Level of Significance (α)= ±2.045					

Legend:

The Value of r	***Verbal Interpretation***
±1	*Perfectly Relationship*
±0.81 to ±0.99	*Very High Relationship*
±0.71 to ±0.80	*High Relationship*
±0.41 to ±0.70	*Moderate Relationship*
±0.21 to ±0.40	*Low Relationship*
±0.01 to ±0.20	*Slight Relationship*
0	*No Relationship*

Table 4 revealed the relationship between the teaching strategies of TLE teachers and learning performance of the students. The perception of the TLE teachers on their teaching strategies was computed with weighted mean of 4.53, whereas, the mean score of the teacher-respondents on their learning performance of the students was computed with 4.42 weighted mean.

The Pearson correlation between the teaching strategies of TLE teachers and learning performance of the students based on the teacher-respondent perception was computed at 0.75 which indicates that there is a high correlation between the teaching strategies of TLE teachers and learning performance of the students.

The relationship between the two mentioned variables connotes positive relationship which indicates that, as the extent of teaching strategies of TLE teachers' increases, the level of learning performance of the students' increase. The teaching strategies of TLE teachers' is reflected on the learning performance of the students.

Question No. 5 Is there a significant difference on the teaching strategies of the TLE teachers in the new normal when grouped according to demographic profile?

Table 5.1
Significant Difference on the Teaching Strategies of TLE Teachers in the New Normal When Grouped According to Age

Indicators	**Mean**	**Group**				**Computed F-Value**	**Decision**	**Remarks**
	SD	**A**	**B**	**C**	**D**			
2.1. Entrepreneurial	Mean	4.44	4.63	4.78	4.14	3.036	Reject Ho	Significant
	SD	0.35	0.37	0.40	0.44			
2.2. Contextualized	Mean	4.77	4.54	4.75	4.26	1.668	Accept Ho	Not Significant
	SD	0.23	0.49	0.40	0.55			
2.3. Experiential	Mean	4.70	4.48	4.83	4.04	3.132	Reject Ho	Significant

	SD	0.27	0.46	0.23	0.78			
2.4. Constructivist	Mean	4.34	4.49	4.72	4.24	0.637	Accept Ho	Not Significant
	SD	0.96	0.52	0.39	0.45			
2.5. Authentic	Mean	4.63	4.43	4.80	4.20	1.514	Accept Ho	Not Significant
	SD	0.41	0.54	0.19	0.75			
Teaching Strategies of TLE Teachers	Mean	4.58	4.52	4.78	4.18	2.553	Accept Ho	Not Significant
	SD	0.32	0.41	0.23	0.41			
F-Critical/Tabular Value at 0.05 Level of Significance (α) =2.975								

Legend:

A → *30 & below*
B → *31 – 40*
C → *41 – 50*
D → *51 & above*

Table 5.1 revealed the significant difference on the extent of teaching strategies of TLE Teachers in the New Normal when grouped according to age. Wherein, the grouped of respondents under the age bracket of 30 years old and below obtained a mean grade of 4.58 for the extent of teaching strategies of TLE teachers. The grouped of teachers with 31-40 years old garnered a mean score of 4.52. Whereas, the TLE teachers bracketed at age range of 41-50 years old recorded an average grade of 4.78. The senior group of 51-years old and bove accumulated an average score of 4.18. Observing the mean computed value of each group, it showed much closed mean values which led to the computed F-value of 2.553 at 5% level of significance which is much lower than the critical value of 2.975. Therefore, there is no significant difference on the extent of teaching strategies of TLE teachers in the new normal when grouped according to age. Thus, it only suggests that the extent of teaching strategies of TLE teachers were not differ in terms of its variables.

Table 5.2
Significant Difference on the Teaching Strategies of TLE Teachers in the New Normal When Grouped According to Gender

Indicators	Mean	Group		Computed F-Value	Decision	Remarks
	SD	A	B			
2.1. Entrepreneurial	Mean	4.54	4.53	0.015	Accept Ho	Not Significant
	SD	0.44	0.41			
2.2. Contextualized	Mean	4.54	4.53	0.015	Accept Ho	Not Significant
	SD	0.44	0.41			
2.3. Experiential	Mean	4.64	4.51	0.645	Accept Ho	Not Significant
	SD	0.46	0.45			
2.4. Constructivist	Mean	4.48	4.43	0.037	Accept Ho	Not Significant
	SD	0.69	0.51			

2.5. Authentic	Mean	4.59	4.38	1.191	Accept Ho	Not Significant
	SD	0.48	0.58			
Teaching Strategies of TLE Teachers	Mean	4.58	4.44	0.950	Accept Ho	Not Significant
	SD	0.39	0.39			
F-Critical/Tabular Value at 0.05 Level of Significance (α) =4.196						

Legend:

A → *Female*

B → *Male*

Table 5.2 revealed the significant difference on the extent of teaching strategies of TLE Teachers in the New Normal when grouped according to sex. Wherein, the grouped of female respondents obtained a mean grade of 4.58 for the extent of teaching strategies of TLE teachers. Whereas, the male TLE teachers recorded an average grade of 4.44. Observing the mean computed value of each group, it showed much closed mean values which led to the computed F-value of 0.950 at 5% level of significance which is much lower than the critical value of 4.196. Therefore, there is no significant difference on the extent of teaching strategies of TLE teachers in the new normal when grouped according to gender. Thus, it only suggests that the extent of teaching strategies of TLE teachers were not differ in terms of sex.

Table 5.3
Significant Difference on the Teaching Strategies of TLE Teachers in the New Normal When Grouped According to Civil Status

Indicators	**Mean**	**Group**			**Computed F – Value**	**Decision**	**Remarks**
	SD	**A**	**B**	**C**			
2.1. Entrepreneurial	Mean	4.63	4.50	4.80	0.426	Accept Ho	Not Significant
	SD	0.33	0.45	-			
2.2. Contextualized	Mean	4.68	4.57	4.60	0.153	Accept Ho	Not Significant
	SD	0.31	0.50	-			
2.3. Experiential	Mean	4.63	4.50	4.50	0.146	Accept Ho	Not Significant
	SD	0.18	0.57	-			
2.4. Constructivist	Mean	4.18	4.51	4.90	0.952	Accept Ho	Not Significant
	SD	0.98	0.49	-			
2.5. Authentic	Mean	4.65	4.47	4.70	0.352	Accept Ho	Not Significant
	SD	0.36	0.57	-			
Teaching Strategies of TLE Teachers	Mean	4.56	4.51	4.70	0.129	Accept Ho	Not Significant

	SD	0.33	0.42	-			
F-Critical/Tabular Value at 0.05 Level of Significance (α) =3.354							

Legend:

A → *Single*

B → *Married*

C → *Widowed / Legally Separated*

Table 5.3 revealed the significant difference on the extent of teaching strategies of TLE Teachers in the New Normal when grouped according to civil status. Wherein, the grouped of single respondents obtained a mean grade of 4.56 for the extent of teaching strategies of TLE teachers. The grouped of married teachers garnered a mean score of 4.51. Whereas, the TLE teachers bracketed at age range of 41-50 years old recorded an average grade of 4.78. The group of widowed/legally separated accumulated an average score of 4.70. Observing the mean computed value of each group, it showed much closed mean values which led to the computed F-value of 0.129 at 5% level of significance which is much lower than the critical value of 3.354. Therefore, there is no significant difference on the extent of teaching strategies of TLE teachers in the new normal when grouped according to civil status. Thus, it only suggests that the extent of teaching strategies of TLE teachers were not differ in terms of its variables.

Table 5.4
Significant Difference on the Teaching Strategies of TLE Teachers in the New Normal When Grouped According to Highest Educational Attainment

Indicators	Mean	Group					Computed F-Value	Decision	Remarks
	SD	A	B	C	D	E			
2.1. Entrepreneurial	Mean	4.65	4.40	4.72	-	-	0.795	Accept Ho	Not Significant
	SD	0.34	0.45	0.41	-	-			
2.2. Contextualized	Mean	4.62	4.61	4.46	-	-	0.109	Accept Ho	Not Significant
	SD	0.47	0.42	0.57	-	-			
2.3. Experiential	Mean	4.67	4.41	4.60	-	-	0.377	Accept Ho	Not Significant
	SD	0.31	0.58	0.59	-	-			
2.4. Constructivist	Mean	4.51	4.38	4.60	-	-	0.128	Accept Ho	Not Significant
	SD	0.84	0.49	0.51	-	-			
2.5. Authentic	Mean	4.65	4.47	4.36	-	-	0.279	Accept Ho	Not Significant
	SD	0.35	0.59	0.62	-	-			
Teaching Strategies of TLE Teachers	Mean	4.62	4.45	4.55	-	-	0.245	Accept Ho	Not Significant
	SD	0.36	0.39	0.50	-	-			
F-Critical/Tabular Value at 0.05 Level of Significance (α) =2.759									

Legend:

A → *Bachelor Degree*

B → *Bachelor Degree with MA/MS Units*

C → *MA/MS Degree*

D → *MA/MS Degree with PhD/EdD Units*

E → *PhD/EdD Degree*

Table 5.4 revealed the significant difference on the extent of teaching strategies of TLE Teachers in the New Normal when grouped according to highest educational attainment. Wherein, the grouped of respondents with bachelor's degree obtained a mean grade of 4.62 for the extent of teaching strategies of TLE teachers. The grouped of teachers with bachelor's degree and MA/MS units garnered a mean score of 4.45. Whereas, the TLE teachers with master's degree recorded an average grade of 4.55. Observing the mean computed value of each group, it showed much closed mean values which led to the computed F-value of 0.245 at 5% level of significance which is much lower than the critical value of 2.759. Therefore, there is no significant difference on the extent of teaching strategies of TLE teachers in the new normal when grouped according to highest educational attainment. Thus, it only suggests that the extent of teaching strategies of TLE teachers were not differ in terms of its variables.

Question No. 6 Is there a significant difference in the teaching strategies of the TLE teachers as rated by the students and the TLE teachers themselves?

Table 6
Significant Difference in the Teaching Strategies of the TLE teachers as rated by the Students and the TLE Teachers

Indicators	Teaching Strategies of TLE Teachers		Computed F-Value	Decision	Remarks
	Mean	SD			
TLE Teachers	4.52	0.39	5.702	Reject Null Hypothesis (Ho)	Significant
Students	4.27	0.55			
F-Critical/Tabular Value at 0.05 Level of Significance (α)= ±3.885					

Table 6 disclosed the significant difference on the extent of teaching strategies of TLE Teachers in the new normal as rated by the students and the TLE teachers themselves. Wherein, the TLE teachers rated themselves on their extent of teaching strategies with mean grade of 4.52 and deviation of 0.39. Whereas, students' perception was recorded with mean score of 4.27 in terms of the extent of teaching strategies of TLE teachers.

The results signify the difference on the perception of the two groups with t-value of 5.702 which is higher than the tabular value of 3.885 at 5% level of significance. Therefore, there is a significant difference in the perception of the two groups of respondents on the teaching strategies of the TLE teachers.

Question No. 7 What are the problems encountered by the respondents in relation to their teaching strategies in the new normal?

Table 7
Problem Encountered in Teaching Strategies in the New Normal As Assessed by the Respondents

Indicators	Frequency					WM	VI	R
	5	4	3	2	1			
1. Lack of trainings related to area of specialization	6	13	9	2		3.77	S	1
2. Insufficient quantities of qualified technology education teachers	5	15	7	3		3.73	S	2.5
3. Unrepaired equipment due to absence or lack of budget and inadequate facilities	7	12	7	4		3.73	S	2.5

4. Lack of teaching strategies	4	9	12	4	1	3.37	MS	9.5
5. Unaware of the benefits of using various approaches	6	6	12	5	1	3.37	MS	9.5
6. Inadequacy of business and industry connection with technology education	4	12	11	2	1	3.53	S	6
7. Lack of time to prepare technology based lessons	6	7	11	5	1	3.40	MS	8
8. Lack of technology skills to support the students when they use technology in the subject	7	9	10	3	1	3.60	S	5
9. Lack of internet connection in accessing Learning Resources Management and Development System (LRMDS)	8	8	10	4		3.67	S	4
10. Lack of instructional materials align with pedagogical approaches	4	11	10	5		3.47	S	7
Average Weighted Mean						**3.56**	**S**	

Legend:

4.20 - 5.00 → Extremely Serious (ES)
3.40 - 4.19 → Serious (S)
2.60 - 3.39 → Moderately Serious (MS)
1.80 - 2.59 → Less Serious (LS)
1.00 - 1.79 → Not Serious (NS)
WM → Weighted Mean
VI → Verbal Interpretation
R → Rank

The problems encountered in teaching strategies in the new normal as assessed by the respondents was presented in Table 7, which was computed with 3.56 weighted mean for respondents. Ranked first was indicator number 1 itself, "Lack of trainings related to area of specialization," with 3.77 mean score from the respondents. It was followed by indicator number 2, "Insufficient quantities of qualified technology education teachers", and indicator number 3, "Unrepaired equipment due to absence or lack of budget and inadequate facilities," tied for second and third place with 3.72 mean score. Indicator number 9, "Lack of internet connection in accessing Learning Resources Management and Development System," was on the fourth spot with 3.67 weighted mean. Ranked fifth was indicator number 8, "Lack of technology skills to support the students when they use technology in the subject", which received 3.60 weighted grade from the respondents. At the sixth spot was indicator number 6 itself, "The students learned the process of cooking viands and other foods through TL Inadequacy of business and industry connection with technology education E", which gained 3.63 average score. Placed on the seventh spot was indicator number 10, "Lack of instructional materials align with pedagogical approaches," which has a 3.47 weighted mean. For eighth place, indicator number 7, "Lack of time to prepare technology based lessons," gained 3.40 average score. Completing the list were indicator number 4, "The students recognize the hardware and understand the software Lack of teaching strategies," and indicator number 5, "Unaware of the benefits of using various approaches," accumulating 3.37 average points.

Question No. 8 What are the suggested solutions to the problems encountered by the respondents in relation to their teaching strategies in the new normal?

Table 8
Suggested Solutions in Teaching Strategies in the New Normal
As Assessed by the Respondents

Indicators	**Frequency**					**WM**	**VI**	**R**
	5	**4**	**3**	**2**	**1**			
1. Conduct more on seminars and trainings related to area of specialization	16	10	4			4.40	HR	1.5
2. Undertake significant efforts aimed at recruiting and preparing new TLE educators at all levels	14	10	5	1		4.23	HR	8.5
3. Improvised tools and equipment that can be fabricated at a lower cost to comply with the needed	12	13	5			4.23	HR	8.5

tools and equipment								
4. Provide a seminar-workshop which will make the teacher aware on the different teaching strategies on TLE	13	15	2			4.37	HR	3
5. Interact with different expert in the field which will teach them to understand the different activities under various pedagogical approaches.	17	8	5			4.40	HR	1.5
6. Established linkage with partner industries which can support the purchased/ donate the needed facilities	13	11	6			4.23	HR	8.5
7. Provide time management seminars to the faculty to develop their time management skills and prioritization	15	10	5			4.33	HR	5
8. Invest on technology skills trainings and workshops for the TLE faculty to become an effective teacher and facilitator during TLE class	13	11	6			4.23	HR	8.5
9. Provide the teachers with internet connection allowance from any available budget to perform better teaching performance and manage to access LRMDS	16	8	6		0	4.33	HR	5
10. Identify and communicate a clear and understandable purpose of pedagogical approaches to obtain the necessary instructional materials	15	10	5	0	0	4.33	HR	5
Average Weighted Mean						**4.31**	**HR**	

Legend:

4.20	-	*5.00*	→	*Highly Recommended (HR)*
3.40	-	*4.19*	→	*Recommended (R)*
2.60	-	*3.39*	→	*Moderately Recommended (MR)*
1.80	-	*2.59*	→	*Least Recommended (LR)*
1.00	-	*1.79*	→	*Not Recommended (NR)*
		WM	→	*Weighted Mean*
		VI	→	*Verbal Interpretation*
		R	→	*Rank*

Table 8 displayed the suggested solutions in teaching strategies in the new normal as assessed by the respondents. Indicator number 1, "Conduct more on seminars and trainings related to area of specialization", with indicator number 5, "Interact with different expert in the field which will teach them to understand the different activities under various pedagogical approaches.," topped the list with computed value of 4.40. It was followed by indicator number 4, "Provide a seminar-workshop which will make the teacher aware on the different teaching strategies on TLE", for the third place with 4.37 mean grade. Triple tied on the fourth, fifth, and sixth spots were indicator number 7, "Provide time management seminars to the faculty to develop their time management skills and prioritization," indicator number 9, "Provide the teachers with internet connection allowance from any available budget to perform better teaching performance and manage to access LRMDS," and indicator number 10, "Identify and communicate a clear and understandable purpose of pedagogical approaches to obtain the necessary instructional materials," with 4.33 gathered average score. For seventh, eighth, ninth, and tenth position, all of them gathered an average score of 4.20 from indicator number 2, "Undertake significant efforts aimed at recruiting and preparing new TLE educators at all levels," indicator number 3, "Improvised tools and equipment that can be fabricated at a lower cost to comply with the needed tools and equipment," indicator number 6 "Established linkage with partner industries which can support the purchased/ donate the needed facilities," and indicator number 8, "Invest on technology skills trainings and workshops for the TLE faculty to become an effective teacher and facilitator during TLE class."

Chapter 5
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the significant findings, the conclusions drawn and the recommendations offered.

This research work assessed the significant relationship between the teaching strategies of the Technology and Livelihood education (TLE) of teachers and the learning performance of the Senior High School students from the selected schools of Division of City Schools of Valenzuela.

Specifically, this research aimed to answer the following questions:

1 What is the demographic profile of the respondents in terms of:
- 1.1 Teachers
  - 1.1.1. Age;
  - 1.1.2. Gender;
  - 1.1.3. Civil Status; and,
  - 1.1.4. Highest Educational Attainment?
- 1.2. Students
  - 1.2.1. Age; and,
  - 1.2.2. Gender?

2. What is the extent of the teaching strategies of the TLE teachers in the new normal in terms of:
   - 2.1. Entrepreneurial;
   - 2.2. Contextualized;
   - 2.3. Experiential;
   - 2.4. Constructivist; and,
   - 2.5. Authentic?

3. What is the level of the learning performance of the students in the new normal in terms of:
   - 3.1. Deep Understanding;
   - 3.2. Reasoning;
   - 3.3. Skills; and,
   - 3.4. Products?

4. Is there a significant relationship between the teaching strategies of the TLE teachers and the learning performance of the students?

5. Is there a significant difference on the teaching strategies of the TLE teachers when grouped according to their demographic profile?

6. Is there a significant difference in the teaching strategies of the TLE teachers as assessed by the two (2) groups of respondents?

7. What are the problems encountered by the teacher respondents in relation to their teaching strategies in the new normal?

8. What are the suggested solutions to the problems encountered by the teacher respondents in relation to their teaching strategies in the new normal?

Null Hypotheses

1. There is no significant relationship between the teaching strategies of the TLE teachers and the learning performance of the students.
2. There is no significant difference on the teaching strategies of the TLE teachers when grouped according to their demographic profile.
3. There is no significant difference in the teaching strategies of the TLE teachers as assessed by the two (2) groups of respondents.

The respondents were one hundred eighty-one (181) Senior High School students and twenty-five (24) TLE teachers from selected high schools from the Division of City Schools of Valenzuela. The following schools, Valenzuela City School of Mathematics and Science (25 students), Dalandanan High School (43 students), Caruhatan High School (23 students), and General Tiburcio De Leon National High School (90 students) were considered because of proximity and the presence of associates teaching from the mentioned schools.

The study was conducted on the academic year of 2021-2022 in the Division of City Schools of Valenzuela. The researcher used a questionnaire answered by the selected Technology and Livelihood education (TLE) teachers.

SUMMARY OF FINDINGS

1. **Demographic Profiles of the Respondents**

1.1. Age

The 31-40 years old group dominated the teacher-respondent distribution by sharing twelve (12) respondents or forty percent (40%) of the total teachers' participants. While the senior group of 51 years old and above has the least participants number of five (5) or around seventeen percent (16.67%) of teachers' population.

While the 18-19 years old group of student-respondents has the highest participants with seventy-six (76) students or forty-one percent (41.08%) of the total students' participants.

1.2. Gender

A total of eighteen (18) or a percentage share of sixty percent (60%) from the participants of the selected high school teachers from the Division of Valenzuela City were female and forty percent (40%) or a frequency of twelve (12) were male teachers participated.

Female students dominated the distribution from student-participants by sharing one hundred fifteen (115) or 62.16% of the total research participants.

1.3. Civil Status

The married teachers group dominated the distribution by partaking twenty-three (23) respondents or closed to seventy-seven percent (76.67%) of the total teacher-participants. While the single teacher group has participants number of only six (6) or twenty percent (20%) of the total population.

1.4. Highest Educational Attainment

Half of the teacher-respondents were baccalaureate graduates with MA units at fifteen (15) teachers or fifty percent (50%), whereas teachers with bachelor degree only has ten (10) or thirty-three percent (33.33%) of the total sample population.

2. **Teaching Strategies of TLE Teachers in the New Normal**

2.1. Entrepreneurial

In terms of the assessment of the teacher-respondents in teaching strategies of TLE teachers in the new normal in terms of entrepreneurial, the indicator, "Develop students' understanding on Technological and Livelihood Education concepts", was ranked the highest with weighted mean of 4.77 indicates as highly practiced teaching strategy under entrepreneurial. Ranked last with mean score of 4.33 was indicator, "Introduce the students on business concept so as to develop their business sense and open their mind on business opportunities", which practiced strategies based from teacher-respondents.

In terms of the assessment of the student-respondents in teaching strategies of TLE teachers in the new normal in terms of entrepreneurial, the indicator, "Develop the students' self-confidence and resiliency to prepare them on facing problems, risks and even failure", was ranked the highest with weighted mean of 4.43 indicates as highly practiced teaching strategy under entrepreneurial. Ranked last with mean score of 4.26 was indicator, "Equip the students with knowledge on solving business problems and turned problems into opportunities", which practiced strategies based from student-respondents.

2.2. Contextualized

In terms of the assessment of the teacher-respondents in teaching strategies of TLE teachers in the new normal under contextualized, the indicator, "Encouraged students to share their personal experiences and background to interact and collaborate with their classmates during the group activity", "Motivate learners to perform independently about proper maintenance of electrical tools and equipment, kitchen wares and utensils, computer accessories and the like", and "Learners were asked to internalize the health and safety procedures through safety measures", were ranked the highest with weighted mean of 4.67 indicates as highly practiced teaching strategies under contextualized based from teacher-respondents.

In terms of the assessment of the student-respondents in teaching strategies of TLE teachers in the new normal in terms of contextualized, the indicator, "Learners were asked to internalize the health and safety procedures through safety measures", and "Encouraged students to share their personal experiences and background to interact and collaborate with their classmates during the group

activity", were ranked first and second with weighted mean of 4.41 and 4.34, respectively, indicates as highly practiced teaching strategies under contextualized based from student-respondents.

2.3. Experiential

In terms of the assessment of the teacher-respondents in teaching strategies of TLE teachers in the new normal in terms of experiential, the indicator, "Utilize video lessons and activities", was ranked the highest with weighted mean of 4.73 indicates as highly practiced teaching strategy under experiential. Ranked second with mean score of 4.70 was indicator, "Listen and ask questions to the students in order to gauge their level of understanding", which practiced strategies based from teacher-respondents.

In terms of the assessment of the student-respondents in teaching strategies of TLE teachers in the new normal in terms of experiential, the indicator, "Wearing personal protective equipment and considering Japanese 5 S Productivity Philosophy", was ranked the highest with weighted mean of 4.45 indicates as highly practiced teaching strategy under experiential. Ranked last with mean score of 4.12 was indicator, "Use indigenous materials in teaching TLE", which practiced strategies based from student-respondents.

2.4. Constructivist

In terms of the assessment of the teacher-respondents in teaching strategies of TLE teachers in the new normal in terms of constructivist, the indicator, "Encourage students to use appropriate local materials as substitute for listed materials that are not available", was ranked the highest with weighted mean of 4.67 indicates as highly practiced teaching strategy under constructivist based from teacher-respondents.

In terms of the assessment of the student-respondents in teaching strategies of TLE teachers in the new normal in terms of constructivist, the indicator, "Allow the students or the team to do the task entirely on their own, the teacher's provide help and assistance as needed", was ranked the highest with weighted mean of 4.34 indicates as highly practiced teaching strategy under constructivist which practiced strategy based from student-respondents.

2.5. Authentic

In terms of the assessment of the teacher-respondents in teaching strategies of TLE teachers in the new normal in terms of authentic, the indicator, "Relate TLE to current technology", was ranked the highest with weighted mean of 4.67 and followed by "Encourage students to practice working if they have the materials/equipment/tools/utensils at home", with 4.63 mean score, indicates as highly practiced teaching strategies under authentic based from teacher-respondents.

In terms of the assessment of the student-respondents in teaching strategies of TLE teachers in the new normal in terms of authentic, the indicator, "Relate TLE to current technology", was ranked the highest with weighted mean of 4.67, was ranked the highest with weighted mean of 4.41 indicates as highly practiced teaching strategy under authentic which practiced strategy based from student-respondents.

3. Learning Performance

3.1. Deep Understanding

In terms of the assessment of the teacher-respondents in their students' learning performance based from deep-understanding, the indicator, "The students able to apply their knowledge on cooking practices, tasting and plating", was ranked the highest with weighted mean of 4.57. Whereas, indicator "The students recognize the hardware and understand the software", received the lowest mean score of 4.23, both indicate an outstanding valuation from the respondents on their students' learning performance based from deep-understanding.

3.2. Reasoning

In terms of the assessment of the teacher-respondents in their students' learning performance based from reasoning, the indicator, "The students can express themselves and effectively reasoned out on some issues on TLE and during activity application" and "The students can easily understand and interpret verbal questions from their TLE teachers", were ranked the highest with weighted mean of 4.47. Whereas, indicator "The students can directly inform their groupmates if there is too much careless on their working project", received the lowest mean score of 4.20, both indicate an outstanding valuation from the respondents on their students' learning performance based from reasoning.

3.3. Skills

In terms of the assessment of the teacher-respondents in their students' learning performance based from skills, the indicator, "Gain livelihood experience through training", was ranked the highest with weighted mean of 4.67. Whereas, indicator "Understanding of the basic life skills in lettering" and "Do the task entirely on their own", received the lowest mean score of 4.43, both indicate an outstanding valuation from the respondents on their students' learning performance based from skills.

3.4. Products

In terms of the assessment of the teacher-respondents in their students' learning performance based from products, the indicator, "The students are frequently informed about the progress of projects or products" and "The students are requested to document lessons learned and apply them to future projects or products", were ranked the highest with weighted mean of 4.43. Whereas, indicator "Projects meet their schedule objectives", received the lowest mean score of 4.30, both indicate an outstanding valuation from the respondents on their students' learning performance based from reasoning.

4. Relationship Between the Teaching Strategies of TLE Teachers and Learning Performance of the Students

The test of relationship between the teaching strategies of TLE teachers and learning performance of the students was tested by using Pearson r. The Pearson correlation between the teaching strategies of TLE teachers and learning performance of the students based on the teacher-respondent perception was computed at 0.75 which indicates that there is a high correlation between the teaching strategies of TLE teachers and learning performance of the students.

5. Difference on the teaching strategies of the TLE teachers in the new normal when grouped according to demographic profile

The test of difference on the teaching strategies of the TLE teachers in the new normal when grouped according to their demographic profiles was tested by using One-way ANOVA.

5.1. In terms of the respondents' age, the F-computed value of, 2.553 was lower than the F-critical value of ±2.975 at 5% level of significance indicate the acceptance of the null hypothesis. Thus, there is no significant difference on the extent of teaching strategies of TLE teachers in the new normal when grouped according to age.

5.2. In terms of the respondents' gender, the F-computed value of, 0.950 was lower than the F-critical value of ±4.196 at 5% level of significance indicate the acceptance of the null hypothesis. Thus, there is no significant difference on the extent of teaching strategies of TLE teachers in the new normal when grouped according to gender.

5.3. In terms of the respondents' civil status, the F-computed value of, 0.129 was lower than the F-critical value of ±3.354 at 5% level of significance indicate the acceptance of the null hypothesis. Thus, there is no significant difference on the extent of teaching strategies of TLE teachers in the new normal when grouped in terms of civil status.

5.4. In terms of the respondents' highest educational attainment, the F-computed value of, 0.245 was lower than the F-critical value of ±2.759 at 5% level of significance indicate the acceptance of the null hypothesis. Thus, there is no significant difference on the extent of teaching strategies of TLE teachers in the new normal when grouped in terms of highest educational attainment.

6. Difference in the Teaching Strategies of the TLE teachers as rated by the Students and the TLE Teachers

The test of difference on the extent of teaching strategies of TLE teachers in the new normal as rated by the students and the TLE teachers themselves was tested by t-test, wherein the computed value of 5.702 which was greater than the t-critical value of ±3.885 indicate the rejection of the null hypothesis. Therefore, there is a significant difference in the perception of the two groups of respondents on the teaching strategies of the TLE teachers.

7. Problems encountered by the respondents' in relation to teaching strategies in the new normal

Problems encountered by the teacher-respondents in relation to teaching strategies in the new normal as assessed by themselves, was rated as serious. From the list, "Lack of trainings related to area of specialization", and "Unrepaired equipment due to absence or lack of budget and inadequate facilities", with 3.73 weighted mean, "Lack of internet connection in accessing Learning Resources

Management and Development System", with 3.67 mean score, 'Lack of technology skills to support the students when they use technology in the subject", with 3.60 mean grade, "Inadequacy of business and industry connection with technology education", with 3.53 average score, and "Lack of instructional materials align with pedagogical approaches", with 3.47 weighted score, were all considered by the teacher-respondents as serious problems.

8. Suggested solutions by the respondents in the problems, in relation to relation to teaching strategies in the new normal

The list of suggested solutions by the teacher-respondents in relation to teaching strategies in the new normal as assessed by themselves, was rated with 4.31 weighted mean, indicating all suggestions were highly recommended. From the list, "Conduct more on seminars and trainings related to area of specialization" and "Interact with different expert in the field which will teach them to understand the different activities under various pedagogical approaches", were rated with 4.40, as the highest ranked indicators. "Provide a seminar-workshop which will make the teacher aware on the different teaching strategies on TLE", received 4.37 weighted score. Indicators "Provide time management seminars to the faculty to develop their time management skills and prioritization" and "Provide the teachers with internet connection allowance from any available budget to perform better teaching performance and manage to access LRMDS", with 4.33 mean score, were the top five suggested solutions considered by the teacher-respondents which all defined as highly recommended solutions on the problems encountered on teaching strategies in the new normal.

CONCLUSIONS

The main purpose of the study was to determine the relationship between the teaching strategies of the Technology and Livelihood education (TLE) of teachers and the learning performance of the Senior High School students from the selected schools of Division of City Schools of Valenzuela.

It will also determine the difference on the teaching strategies of the TLE teachers when grouped according to their demographic profile. Based on the data and findings that were gathered, the following conclusions were drawn:

1. The teacher-respondents were matured, female, married, a graduate of their baccalaureate, and pursued graduate studies.

2. The assessment on the perception of the respondents on the teaching strategies of TLE teachers in the new normal in terms of five sub-variables namely: entrepreneurial, contextualized, experiential, constructivist, and authentic were all described as highly practiced.
   - 2.1. The teacher-respondents highly practiced developing of students' understanding on Technological and Livelihood Education concepts. This will help to develop their students' confidence and prepare them to TLE different tasks and activity. This was supported by the students through their response under entrepreneurial which revealed that their teachers develop the students' self-confidence and resiliency to prepare them on facing problems, risks and even failure.
   - 2.2. In terms of contextualized, the teacher-respondents highly practiced encouraging their students to share their personal experiences and background to interact and collaborate with their classmates during the group activity. This was reflected also from the students' response under entrepreneurial which revealed that their teachers asked them to internalize the health and safety procedures through safety measures and encouraged them to share their personal experiences and background.
   - 2.3. In line with the experiential, the teachers highly practiced the utilization of video lessons and activities for their students and interact with their students to gauge their level of understanding. Whereas the students acknowledged their teachers' effort on the utilization of video lessons and activities and listening to their questions. This will make them feel smooth and agile on performing their tasks and developed the teaching-learning process.
   - 2.4. Based on the constructivist, the teacher-respondents highly practiced to encourage their students to use appropriate local materials as substitute for listed materials that are not available. On the other hand, the students highly enjoyed the practiced of their teacher in allowing them to the task on their own, in turn, it boosted students' confidence.
   - 2.5. In line with authentic, the teachers highly practiced relating TLE to current technology which is the ultimate effect of the pandemic. This allows them grow on the technical side of

teaching. This was also recognized by their students through different activities provided by their teachers.

3. The assessment on the perception of the respondents on their learning performance in terms of four sub-variables namely: deep-understanding, reasoning, skills, and products were rated as outstanding.
   - 3.1. In line with deep-understanding, the teacher-respondents rated their students' outstanding in terms of applying their knowledge on cooking practices, tasting, plating, utensils and equipment identification and creation of sweet and other dessert.
   - 3.2. In terms of reasoning, the teacher-respondents valued their students' outstanding in terms of expressing themselves and effectively reasoned out on some issues on TLE and during activity application and understanding verbal questions from their TLE teachers.
   - 3.3. In line with the skills, the teachers evaluated their students' outstanding in terms of gaining livelihood experience through training.
   - 3.4. Based on products, the teacher-respondents evaluated their students' with outstanding in terms of their students religiously requesting to document lessons learned and apply them to future projects or products. Their willingness to do their shares of responsibility, and motivates independent learning in time of pandemics.

4. There is a significant relationship between the teaching strategies of TLE teachers and learning performance of the students. It only implies that the teaching strategies were considered as determinants on learning performance of the students. A quality and effective teaching strategies will definitely enhance and develop learning performance of the students.

5. There is no significant difference on the perception of the respondents' in teaching strategies of the TLE teachers in the new normal when grouped according to their demographic profiles. It only suggests that the perception of the respondents was the same, common and similar when grouped according to their demographic profiles.

6. There is a significant difference between the perception of teachers and students on the extent of teaching strategies of TLE teachers in the new normal. It only denotes the statistically difference of perception between the two groups. The teachers and the students perceived that the TLE teachers' highly practiced their teaching strategies to achieved its lesson targets and objectives.

7. The top problems encountered by the teacher-respondents in relation to teaching strategies in the new normal as assessed by themselves were, lack of trainings related to area of specialization, insufficient quantities of qualified technology education teachers, unrepaired equipment due to absence or lack of budget and inadequate facilities, lack of internet connection and lack of technology skills to support the students when they use technology in the subject. This means that in relation to the application of teaching strategies in the new normal, related trainings, qualified teachers, technology skills and internet connection are vital in the effective delivery of lessons and application of teaching strategies.

8. The solutions done to address the problems encountered by the respondents in relation to teaching strategies in the new normal as assessed by themselves were to conduct more on seminars and trainings related to area of specialization, interact with different expert in the field which will teach them to understand the different activities under various pedagogical approaches, and to provide a seminar-workshop which will make the teacher aware on the different teaching strategies on TLE. Administration supports on investing in seminars, presenting new education technologies or pedagogical theories will greatly benefit not only the teachers but the students and the school.

RECOMMENDATIONS

1. For the School administrators, they should realize that in order to have maximum job performance and application of teaching strategies of the Technology and Livelihood education (TLE) of teachers, financial and material resources and adequate in-service trainings and workshops will have to be provided. They should also further enhance their interpersonal relation and supervision to their TLE teachers in the new normal so as to further motivate them intrinsically and lead to the improvement of

teachers' performance. The provision of these, would definitely promote motivation in the teaching profession, which may result to enhanced learning performance of the Senior High School students.

2. School head may ensure adequate budget for professional development of teachers to ensure the increase of their knowledge, skills and talent. It will not only benefit the TLE teachers but more on students. Teacher training should focus on prioritized teachers' needs. School administrators may practice proper recognition of well-done work and opportunities to growth and become promoted are also prioritized as an effective method for motivation fulfilment.

3. TLE teachers should utilize an appropriate supervision style and effective communication. They should also be more committed in their teaching by improving peer teaching, experimentation method, chart and table presentation and improving their questions and answer method techniques and teaching strategies. In addition, they should be encouraged to explore and view other effective teaching strategies that would result in the improve learning performance of the secondary school students taking up Technology and Livelihood Education.

4. Teachers should be encouraged to explore and view other effective teaching strategies and find more ways to entice other students challenge themselves to create their own strategies to use in the field and to become more global in perspective.

5. For the information technologist, they should provide help and assistance on the use computer technology to become an effective teaching strategy in the new normal, especially when students are given information specific to their own situation rather than general information.

6. For the future researcher, it is recommended to have a replication of this study that will cover all public secondary schools in the Division of Valenzuela to generate more accurate and valid generalization.

7. The future researcher can also take into account other school division to have a comparative study or a private and public schools TLE teachers and students as respondents.

8. The future researches may do a qualitative research focusing on the experiences of TLE teachers in the new normal and take into account best practices that will improve their teaching strategies and teaching performance.

BIBLIOGRAPGHY

Journals

Baran, E., Canbazoglu Bilici, S., Albayrak Sari, A., & Tondeur, J. (2017). Investigating the impact of teacher education strategies on preservice teachers' TPACK. *British Journal of Educational Technology*, *50*(1), 357–370. https://doi.org/10.1111/bjet.12565

Cahapay, M. B. (2020). *Rethinking Education in the New Normal Post-COVID-19 Era: A Curriculum Studies Perspective*. ResearchGate. https://www.researchgate.net/publication/341827574_Rethinking_Education_in_the_New_Normal_Post-COVID-19_Era_A_Curriculum_Studies_Perspective

Cardino, J. M., & Ortega-Dela Cruz, R. A. (2020). Understanding of learning styles and teaching strategies towards improving the teaching and learning of mathematics. *LUMAT: International Journal on Math, Science and Technology Education*, *8*(1). https://doi.org/10.31129/lumat.8.1.1348

Carreon, J. R. (2018). Facebook as Integrated Blended Learning Tool in Technology and 2 Livelihood Education Exploratory. *International Journal of Educational Technology*, *5*(2), 19–25. https://eric.ed.gov/?id=EJ1197714

Dziuban, C., Graham, C. R., Moskal, P. D., Norberg, A., & Sicilia, N. (2018). Blended learning: the new normal and emerging technologies. *International Journal of Educational Technology in Higher Education*, *15*(1). https://doi.org/10.1186/s41239-017-0087-5

Gregorio, M. S. (2016). Technology and Livelihood (TLE) Instruction of Technical Vocational and Selected General Secondary Schools in Catanduanes. *International Journal of Learning, Teaching and Educational Research*, *15*(4). http://ijlter.org/index.php/ijlter/article/view/671

Hew, K. F., Jia, C. Gonda, D. E. & Bai, S. (2020). Transitioning to the "new normal" of learning in unpredictable times: pedagogical practices and learning performance in fully online fipped classrooms. *International Journal of Educational Technology in Higher Education*. https://doi.org/10.1186/s41239-020-00234-x

Jacolbia, R. B (2016). Future educators' perceptions on technology and livelihood education status and development of work skills. *Journal of Advances in Humanities and Social Sciences, 2*(2). https://doi.org/10.20474/jahss-2.2.3

Naelga, S. C. & Sonsona, M. M. (2017). *The Competencies of the Grade 9 Technology and - ProQuest. International Journal of Economic Perspectives*; Mersin, 11(2), 780-787. https://www.proquest.com/docview/2038222149?pq-origsite=gscholar&fromopenview=true

Tan, M. C. (2021). Technology and Livelihood Education (TLE) Instruction in the Secondary Schools in Northern Samar Division, Eastern Philippines. *Asian Journal of Advanced Research and Reports*, 75–84. https://doi.org/10.9734/ajarr/2021/v15i230369

Torio, V. A. & Torio, M. A. (2015). *Whole brain teaching in the Philippines: Teaching strategy for addressing motivation and academic performance*. ResearchGate; Consortia Academia Publishing. https://www.researchgate.net/publication/283619226_Whole_brain_teaching_in_the_Philippines_Teaching_strategy_for_addressing_motivation_and_academic_performance

Theses/Dissertations

Aquino, S. D. & Manolito, M. C. (2021). *View of Work Attitude and Competency of Technology and Livelihood Education Teachers*. Psurj.org. *1*(2). https://www.psurj.org/psurj/online/index.php/mrj/article/view/124/88

Deslauriers, L., et al. (2019). Measuring actual learning versus feeling of learning in response to being actively engaged in the classroom. Proceedings of the National Academy of Sciences, 116(39), 19251–19257. https://doi. org/10.1073/pnas.1821936116

Fayombo, G. (2015). Learning Styles, Teaching Strategies and Academic Achievement among some Psychology Undergraduates in Barbados. Caribbean Educational Research Journal the University of the West Indies, 3(2), 46–61. https://www.cavehill.uwi.edu/fhe/education/publications/past-issues/volume-3-number-2-september-2015/articles/article-grace-fayombo.aspx

Hodges, C., Moore, S., Lockee, B., Trust, T. & Bond, A. (2020). The diference between emergency remote teaching and online learning. Educause Review. https://er.educause.edu/articles/2020/3/the-diference-between-emergency-remot e-teaching-and-online-learning

Rose, S. (2020). Medical Student Education in the Time of COVID-19. *JAMA*, *323*(21), 2131. https://doi.org/10.1001/jama.2020.5227

Valle, A., Regueiro, B., Núñez, J. C., Rodríguez, S., Piñeiro, I., & Rosário, P. (2016). Academic Goals, Student Homework Engagement, and Academic Achievement in Elementary School. *Frontiers in Psychology*, *7*. https://doi.org/10.3389/fpsyg.2016.00463

Xiu, Y., & Thompson, P. (2020). Flipped university class: a study of motivation and learning. J Inform Technol Educ, 19, 41–6.

Websites

Adams Becker, S., Cummins, M., Davis, A., Freeman, A., Hall Giesinger, C. & Ananthanarayanan, V. (2017). NMC horizon report: 2017 Education Edition. Austin: The New Media Consortium.

EDUCAUSE. (2017). Key issues in teaching & learning. Retrieved from https://www.EDUCAUSE.edu/eli/initiatives/key-issues-in-teaching-and-learning

Gamiao, J. (2020). *Innovative teaching methods in the new normal*. The Manila Times; The Manila Times. https://www.manilatimes.net/2020/07/28/public-square/innovative-teaching-methods-in-the-new-normal/746919

Jorge, C. (2020). *PH education and the new normal*. INQUIRER.net. https://opinion.inquirer.net/129286/ph-education-and-the-new-normal

Latheef, Z. I. (2020). Synchronous Strategies for the "New Normal" | Faculty Focus. Faculty Focus | Higher Ed Teaching & Learning. https://www.facultyfocus.com/articles/online-education/online-course-delivery-and-instruction/synchronous-strategies-for-the-new-normal/

Mateo, J. (2020). *22 million back to school under "new normal."* Philstar.com; Philstar.com. https://www.philstar.com/headlines/2020/10/05/2047267/22-million-back-school-under-new-normal

Mateo, J. (2021). *CHED: Flexible learning to stay even after pandemic*. Philstar.com; Philstar.com. https://www.philstar.com/headlines/2021/05/23/2100234/ched-flexible-learning-stay-even-after-pandemic

Mateo, J. (2020). *Various learning strategies eyed for basic education*. Philstar.com; Philstar.com. https://www.philstar.com/headlines/2020/05/03/2011471/various-learning-strategies-eyed-basic-education

Pomerantz, J., & Brooks, D. C. (2017). ECAR study of faculty and information technology. Research report. Louisville, CO: ECAR. https:// library.educause.edu/-/media/fles/library/2017/10/facultyitstudy2017.pdf

PressReader.com - Your favorite newspapers and magazines. (2021). Pressreader.com; PressReader. https://www.pressreader.com/philippines/sunstar-pampanga/20201021/281659667527527

PressReader.com - Your favorite newspapers and magazines. (2021). Pressreader.com; PressReader. https://www.pressreader.com/philippines/sunstar-pampanga/20201018/281651077587820

Prodigygame.com. (2019). *5 Effective Teaching Strategies to Help Your Students in School*. https://www.prodigygame.com/main-en/blog/5-effective-teaching-strategies-to-help-your-students-in-school/

Razalan, A. F. (2020). *Commitment beyond the old classroom*. INQUIRER.net. https://opinion.inquirer.net/133081/commitment-beyond-the-old-classroom

Sabalo, W. (2020). *Special Report: Distance learning in the new normal*. Yahoo.com; Yahoo News. https://ph.news.yahoo.com/special-report-distance-learning-normal-170800460.html

Santhanam, S. P. (2020). A Reflection on the Sudden Transition: Ideas to Make Your Synchronous Online Classes More Fun - Faculty Focus | Higher Ed Teaching & Learning. Faculty Focus | Higher Ed Teaching & Learning. https://www.facultyfocus.com/articles/online-education/ideas-to-make-your-synchronous-online-classes-more-fun/

The Star Online. (2020). *Learning strategies for the new normal*. The Star. https://www.thestar.com.my/news/education/2020/11/15/learning-strategies-for-the-new-normal

Wehler, M. (2018). Five Ways to Build Community in Online Classrooms - Faculty Focus | Higher Ed Teaching & Learning. Faculty Focus | Higher Ed Teaching & Learning. https://www.facultyfocus.com/articles/online-education/five-ways-to-build-community-in-online-classrooms/

GOVERNOR ANDRES PASCUAL COLLEGE
1045 M. Naval St., San Jose, Navotas City

RECEIVED VALENZUELA
AUG 26 2021
BY: TIME: 12:24

DR. MELITON P. ZURBANO
Assistant Schools Division Superintendent
Division of City Schools, Valenzuela
Marulas, Valenzuela City

Dear Sir:

I am presently enrolled in Governor Andres Pascual College, M. Naval Street, Navotas City, taking Master of Arts in Education, Major in Administration and Supervision and at present conducting a research study entitled **"RELATIONSHIPS OF TEACHING STRATEGIES OF TECHNOLOGY AND LIVELIHOOD EDUCATION (TLE) TEACHERS IN THE NEW NORMAL AND LEARNING PERFORMANCE OF THE SENIOR HIGH SCHOOL STUDENTS IN SELECTED HIGH SCHOOLS IN THE DIVISION OF VALENZUELA".**

In line with this, I would like to ask permission to conduct a study through distribution of survey questionnaires to the principals, school teacher librarian and selected teachers in your division as the respondents of my study. Rest assured that all data that will be gathered will be treated with utmost confidentiality and will only be used for the endeavors of this study.

Very truly yours,

RUTH P. COLLANO
Researcher
09991960191
ruthcollano@gmail.com

NOTED:

SOCORRO P. ABADIANO, Ed. D.
Dissertation Adviser

ESTELLA L. LIWANAG, Ed. D.
Dean

GOVERNOR ANDRES PASCUAL COLLEGE
1045 M. Naval St., San Jose, Navotas City

August 3, 2021

DR. VIRGINIA O. ALACON
Principal IV
Caruhatan National High School
Division of City Schools, Valenzuela
Marulas, Valenzuela City

Ma'am:

Great day!

I am presently enrolled in Governor Andres Pascual College, M. Naval Street, Navotas City, taking Master of Arts in Education, Major in Administration and Supervision and at present conducting a research study entitled **"RELATIONSHIP OF TEACHING STRATEGIES OF TECHNOLOGY AND LIVELIHOOD EDUCATION (TLE) TEACHERS IN THE NEW NORMAL AND LEARNING PERFORMANCE OF THE SENIOR HIGH SCHOOL STUDENTS IN SELECTED HIGH SCHOOLS IN THE DIVISION OF VALENZUELA"**.

In connection with this, may I request your good office to allow me to distribute and administer questionnaire to the TLE teachers of Secondary schools under your supervision.

I am hoping that this request will be granted with utmost consideration.

Thank you.

Very truly yours,

RUTH P. COLLANO
Researcher
09991960191
ruthcollano@gmail.com

GOVERNOR ANDRES PASCUAL COLLEGE
1045 M. Naval St., San Jose, Navotas City

August 3, 2021

CESAR C. VILLAREAL. Ed.D.
Principal
Gen T. National High School
Division of City Schools, Valenzuela

Sir:

Great day!

I am presently enrolled in Governor Andres Pascual College, M. Naval Street, Navotas City, taking Master of Arts in Education, Major in Administration and Supervision and at present conducting a research study entitled **"RELATIONSHIP OF TEACHING STRATEGIES OF TECHNOLOGY AND LIVELIHOOD EDUCATION (TLE) TEACHERS IN THE NEW NORMAL AND LEARNING PERFORMANCE OF THE SENIOR HIGH SCHOOL STUDENTS IN SELECTED HIGH SCHOOLS IN THE DIVISION OF VALENZUELA"**.

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Thank you.

Very truly yours,

RUTH P. COLLANO
Researcher
09991960191
ruthcollano@gmail.com

GOVERNOR ANDRES PASCUAL COLLEGE
1045 M. Naval St., San Jose, Navotas City

August 3, 2021

JAIME S. DE VERA, JR.
Principal
Valenzuela School of Mathematics and Science
Division of City Schools, Valenzuela

Sir:

Great day!

I am presently enrolled in Governor Andres Pascual College, M. Naval Street, Navotas City, taking Master of Arts in Education, Major in Administration and Supervision and at present conducting a research study entitled **"RELATIONSHIP OF TEACHING STRATEGIES OF TECHNOLOGY AND LIVELIHOOD EDUCATION (TLE) TEACHERS IN THE NEW NORMAL AND LEARNING PERFORMANCE OF THE SENIOR HIGH SCHOOL STUDENTS IN SELECTED HIGH SCHOOLS IN THE DIVISION OF VALENZUELA"**.

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Thank you.

Very truly yours,

RUTH P. COLLANO
Researcher
09991960191
ruthcollano@gmail.com

GOVERNOR ANDRES PASCUAL COLLEGE
1045 M. Naval St., San Jose, Navotas City

August 3, 2021

RONALD A. TRONO
Principal
Dalandanan National High School
Division of City Schools, Valenzuela

Sir:

Great day!

I am presently enrolled in Governor Andres Pascual College, M. Naval Street, Navotas City, taking Master of Arts in Education, Major in Administration and Supervision and at present conducting a research study entitled **"RELATIONSHIP OF TEACHING STRATEGIES OF TECHNOLOGY AND LIVELIHOOD EDUCATION (TLE) TEACHERS IN THE NEW NORMAL AND LEARNING PERFORMANCE OF THE SENIOR HIGH SCHOOL STUDENTS IN SELECTED HIGH SCHOOLS IN THE DIVISION OF VALENZUELA"**.

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Thank you.

Very truly yours,

RUTH P. COLLANO
Researcher
09991960191
ruthcollano@gmail.com

Republic of the Philippines
Department of Education
National Capital Region
Division of City Schools - Valenzuela

August 31, 2021

DEPED VALENZUELA
RECEIVED
SEP 01 2021
BY: TIME:

RUTH P. COLLANO
Researcher
Governor Andres Pascual College
Navotas City

Dear **Ms. Collano:**

In response to your letter-request, this Office hereby grants permission to conduct your research entitled: **"RELATIONSHIPS OF TEACHING STRATEGIES OF TECHNOLOGY AND LIVELIHOOD EDUCATION (TLE) TEACHERS IN THE NEW NORMAL AND LEARNING PERFORMANCE OF THE SENIOR HIGH SCHOOL STUDENTS IN SELECTED HIGH SCHOOLS IN THE DIVISION OF VALENZUELA"**, on conditions that:

1. content of **DepEd Order No. 9 s. 2005** titled **"Instituting Measures to Increase Engaged Time-On-Task and Ensuring Compliance Therewith,"** shall be strictly observed;
2. ethical considerations related to the conduct of the research shall be strictly observed as stipulated in **DepEd Order No. 16, s. 2017, Research Management Guidelines;**
3. the conduct of the study shall not interrupt the regular program of the schools, with the teaching duties of the teachers and will not disrupt regular classes;
4. necessary arrangements shall be made with the School Heads concerned; and
5. this Office shall furnish a copy of the findings and recommendations of the research.

Very truly yours,

MELITON P. ZURBANO
Assistant Schools Division Superintendent
Officer-In-Charge
Office of the Schools Division Superintendent

080131 SGOD ALP

Pio Valenzuela St., Marulas, Valenzuela City
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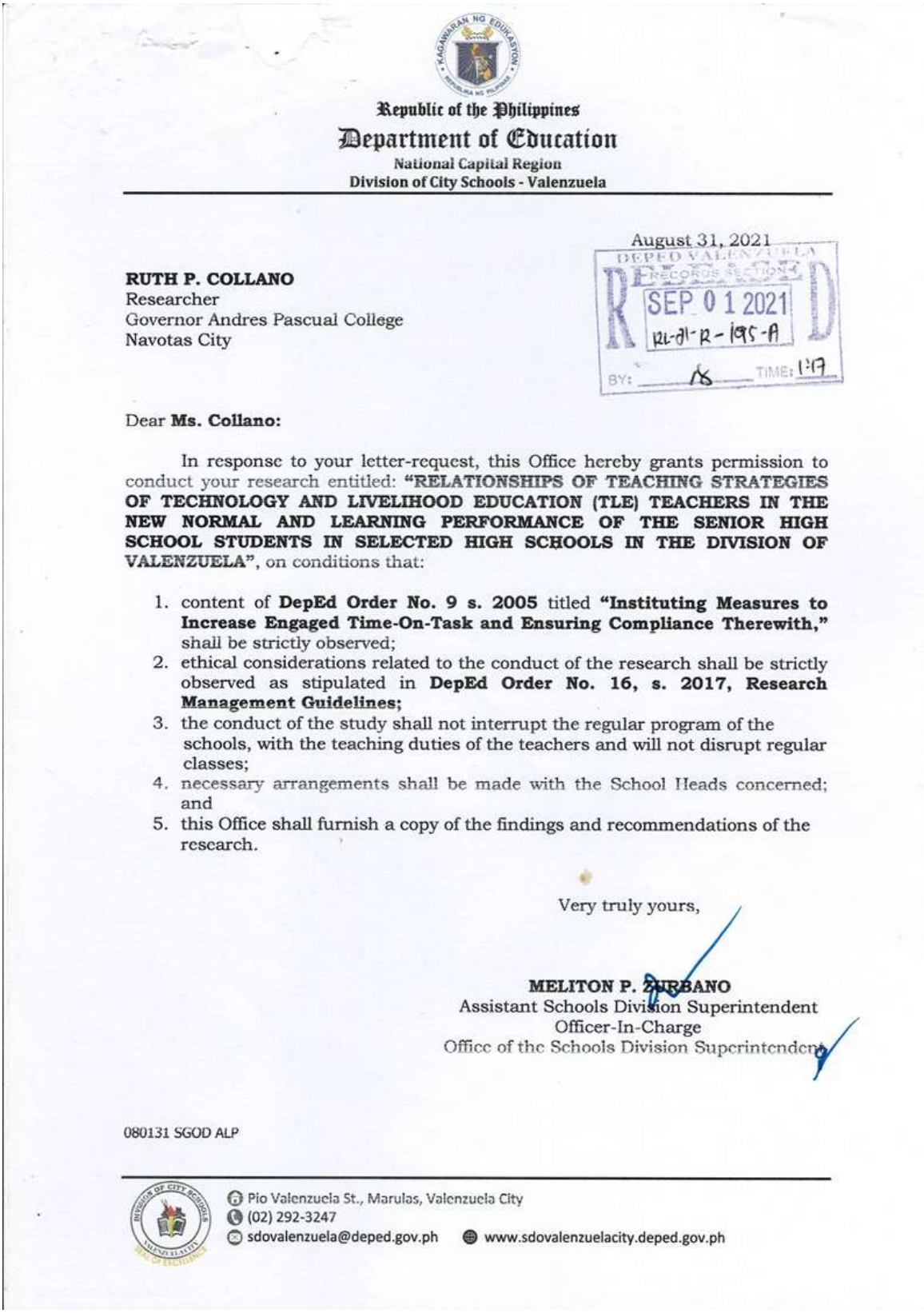

Republic of the Philippines
Department of Education
National Capital Region
Division of City Schools - Valenzuela

August 31, 2021

DEPED VALENZUELA RECORDS SECTION RECEIVED SEP 01 2021 BY: TIME:

RUTH P. COLLANO
Researcher
Governor Andres Pascual College
Navotas City

Dear **Ms. Collano:**

In response to your letter-request, this Office hereby grants permission to conduct your research entitled: **"RELATIONSHIPS OF TEACHING STRATEGIES OF TECHNOLOGY AND LIVELIHOOD EDUCATION (TLE) TEACHERS IN THE NEW NORMAL AND LEARNING PERFORMANCE OF THE SENIOR HIGH SCHOOL STUDENTS IN SELECTED HIGH SCHOOLS IN THE DIVISION OF VALENZUELA"**, on conditions that:

1. content of **DepEd Order No. 9 s. 2005** titled **"Instituting Measures to Increase Engaged Time-On-Task and Ensuring Compliance Therewith,"** shall be strictly observed;
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3. the conduct of the study shall not interrupt the regular program of the schools, with the teaching duties of the teachers and will not disrupt regular classes;
4. necessary arrangements shall be made with the School Heads concerned; and
5. this Office shall furnish a copy of the findings and recommendations of the research.

Very truly yours,

MELITON P. ZURBANO
Assistant Schools Division Superintendent
Officer-In-Charge
Office of the Schools Division Superintendent

080131 SGOD ALP

Pio Valenzuela St., Marulas, Valenzuela City
(02) 292-3247
sdovalenzuela@deped.gov.ph www.sdovalenzuelacity.deped.gov.ph

Greetings!

I am Ruth Paraso-Collano, and I am currently conducting a study entitled **"RELATIONSHIP OF TEACHING STRATEGIES OF TECHNOLOGY AND LIVELIHOOD EDUCATION (TLE) TEACHERS IN THE NEW NORMAL AND LEARNING PERFORMANCE OF THE SENIOR HIGH SCHOOL STUDENTS IN SELECTED HIGH SCHOOL IN THE DIVISION OF VALENZUELA"** in

partial fulfillment of the requirements for the Degree of Master of Arts in Education Major in Administration and Supervision. I am respectfully requesting for a few minutes of your precious time to answer the following questions as honestly as possible.

Kindly answer each of the following questions by marking an "x" in the corresponding box provided.

Rest assured that your responses will be kept confidential, and will be utilized solely for research purposes.

For TLE TEACHERS

Part I: DEMOGRAPHIC PROFILE

Name: _____ (optional)

Age: □ 21-30 years old □ 31-40 years old □ 41-50 years old □ 51-above years old

Gender: □ Female □ Male

Civil Status: □ Single □ Married □ Separated □ Widowed

Educational Attainment: □ Baccalaureate □ Baccalaureate with MA units

□ Master's Degree □ with Doctorate units

□ Doctorate Degree

Part II: TEACHING STRATEGIES

Direction: Please read the statement in each item carefully. Check the box which applies to your level of motivation. Use the scale below to guide you in answering.

5 – Highly Practiced
4 - Practiced
3 – Moderately Practiced
2 – Less Practiced
1 – Not Practiced

QUESTIONS	5 HP	4 P	3 MP	2 LP	1 NP
Entrepreneurial					
1. Introduce the students on business concept so as to develop their business sense and open their mind on business opportunities.					
2. Equip the students with knowledge on solving business problems and turned problems into opportunities.					
3. Develop the students self-confidence and resiliency to prepare them on facing problems, risks and even failure.					
4. Inculcate the spirit of hard work to the students to lead them to give their best shot on every endeavors, projects, and products.					
5. Provide the students with basic knowledge on costing, pricing, purchasing, profiting and resourcing of materials and/or ingredients to prepare them for a business opportunity.					
6. Develop their skills on baking/masonry/electrical/electronics to uplift their confidence on their work output.					
7. Inspire the students to be creative so as to maximize available materials and able to find ways on resolving missing ingredients and/or absence of materials.					
8. Develop students' understanding on Technological and Livelihood Education concepts.					

9. Motivate students to explore business opportunities based on their TLE learnings.					
10. Prepare students on the actual world of business by providing them real training exercises even in the new normal.					
Contextualized	**5 HP**	**4 P**	**3 MP**	**2 LP**	**1 NP**
1. Consider the students with different racial and ethnic origin to serve as a source of first-hand information on the topic related to their culture.					
2. Consider students' diversity in bringing their different point of view and varied approaches to the learning process.					
3. Encourage students to share their personal experiences and background to interact and collaborate with their classmates during the group activity.					
4. Motivate learners to perform independently about proper maintenance of electrical tools and equipment, kitchen wares and utensils, computer accessories and the like.					
5. Ask learners to internalize the health and safety procedures through safety measures.					
6. Require the students to prepare a sketch and layout of their own kitchen at home, electrical wiring diagram, or computer specifications design.					
7. Teach learners to use appropriate tools, utensils and the likes, for the job required					
8. Teach learners to perform correct methods of calculations to get accuracy on measurement.					
9. Perform correct methods of calculations to get accuracy of measurement.					
10. Take into account students' prior knowledge when planning class program for TLE lessons.					
Experiential	**5 HP**	**4 P**	**3 MP**	**2 LP**	**1 NP**
1. Let the students learn by doing mostly in workplace like kitchen laboratory, welding/electronic facilities, and/or computer laboratory.					
2. Instruct students on wearing personal protective equipment and apply Japanese 5 S Productivity Philosophy					
3. Listen and ask questions to the students in order to gauge their level of understanding.					
4. Utilize video lessons and activities.					
5. Expose the class to the use of investigative strategies.					
6. Use indigenous materials in teaching TLE.					
7. Give students hands-on experience in choosing equipment/tools/utensils appropriately.					
8. Develop the students' motor skills in using scientific, industrial tools or creative media.					
9. Enable students to design and create objects or equipment in different physical media.					
10. Apply combination of synchronous tools such as web conferencing, asynchronous tools such as discussion forms and/or social media for group work, e-portfolio's and multimedia for reporting and remote labs for experimental works.					
Constructivist	**5 HP**	**4 P**	**3 MP**	**2 LP**	**1 NP**
1. Motivate the students to create scenarios of their learning experiences by writing reflective journals or creating personal blogs through digital portfolios (cooking books,					

	recipe blogs, food plating videos, demo videos).					
2.	Provide real world case based learning environments rather than pre-determined instructional events.					
3.	use technology to come up with something new and unique through product innovation considering proper nutrition and availability of ingredients or raw materials needed for production.					
4.	Allow students to work in group.					
5.	Motivate the students to use instructional tool as a primary source rather than a textbook.					
6.	Allow the students or the team to do the task entirely on their own, the teacher's provide help and assistance as needed.					
7.	Encourage students to use appropriate local materials as substitute for listed materials that are not available.					
8.	Diagnose and troubleshoot computer system. Able to diagnose and configure computer system and network. Able to adjust flavors on baking and cooking. Able to detect wiring problems.					
9.	The students relate what they have learned in TLE class to their life outside of school.					
10.	The students able to work at the speed which suits their ability and adjust depending on the activity needs.					
Authentic		**5 HP**	**4 P**	**3 MP**	**2 LP**	**1 NP**
1.	Students' tasks focus on contextualizing rather than abstracting.					
2.	Students rate their works by comparing their output with the evaluation sample or based on the rubric for scoring.					
3.	Relate the concept of TLE to other disciplines like Science, Mathematics and Languages.					
4.	Relate TLE to current technology.					
5.	Guide students in applying technology in launching business/livelihood program.					
6.	Allow the use of calculator/computers/LCD projector for drills and practices and to collect and analyze data.					
7.	Encourage students to practice working if they have the materials/equipment/tools/utensils at home.					
8.	Develop skills and confidence by encouraging them to present demo presentation.					
9.	Engage in a role play of a particular TLE activity. Described what might happen if one element of the activity missing. Be able to present solution.					
10.	Develop a business/marketing/sales plan for an imaginary or real company in a student area of interest.					

Part III. LEARNING PERFORMANCE OF THE STUDENTS

Direction: Please read the statement in each item carefully. Check the box which applies to your perception on rewards and recognition. Use the scale below to guide you in answering.

5 – Outstanding
4 - Very Satisfactory
3 – Satisfactory
2 – Fair
1 – Poor

QUESTIONS	5 O	4 VS	3 S	2 F	1 P
Deep Understanding					
1. The students have a hands-on activities every week.					
2. The students learned the process of cooking viands and other foods through TLE.					
3. The students learned to identify the usage of different kitchen utensils and equipment.					
4. The students learned to identify computer parts and accessories and understand their usage and functions.					
5. The students recognize the hardware and understand the software.					
6. The students able to apply their knowledge on cooking practices, tasting and plating.					
7. The students able to adjust on actual problem situations like measurement adjustments during cooking activities and taste adjustments, wiring adjustments and computer manipulations.					
8. The students able to create sweet and other dessert that can be a source of income.					
9. The students able to make or prepare food from scratch.					
10. The students understand the concepts of TLE lessons and manifest on their asynchronous activity through video presentation.					
Reasoning	**5 O**	**4 VS**	**3 S**	**2 F**	**1 P**
1. The students can express themselves and effectively reasoned out on some issues on TLE and during activity application.					
2. The students can set-up meetings with their groupmates and review their progress.					
3. The students can easily understand and interpret verbal questions from their TLE teachers.					
4. The students can set-up short term objectives in relation to TLE projects.					
5. The students can do brainstorming for project planning.					
6. The students can directly inform their groupmates if there is too much careless on their working project.					
7. The students can establish foundation plan for an effective outcome of project proposal on TLE subject.					
8. The students can take responsibility for their tasks and defend their works or projects.					
9. The students can work with their TLE teams, express their thoughts for the development of their project even in the new normal.					
10. The students can express their thoughts and ideas based on information on hand through letters or memos, manifesting preparedness on formal transaction.					
Skills	**5 O**	**4 VS**	**3 S**	**2 F**	**1 P**
The students…					
1. Gain livelihood experience through training					
2. Acquire working knowledge of the materials, tools, equipment used in the TLE subject					
3. Understand the processes and products of production					
4. Explore various business opportunities and make intelligent choice of entrepreneurial activity					
5. Demonstrate knowledge and skills in selecting materials/ingredients and applying art principles in recycling, plating, cooking and the likes					
6. Demonstrate managerial and manipulative skills on the					

principles, practice and techniques in growing crops					
7. Understanding of the basic life skills in lettering					
8. Develop safety working habits					
9. Do the task entirely on their own					
10. Use appropriate local materials as substitute for listed materials that are not available.					
Products	**5 O**	**4 VS**	**3 S**	**2 F**	**1 P**
1. The students are aware of the methodology used for managing projects or products					
2. The students decide the projects or products that have to be developed					
3. The students are frequently informed about the progress of projects or products					
4. The students project or product management processes are well documented and controlled					
5. All projects are using a projects or products management plan					
6. The students are requested to document lessons learned and apply them to future projects or products					
7. The students have to ensure compliance with Japanese 5 S Productivity Philosophy, school and teacher's policies and any regulatory requirements					
8. Projects meet their schedule objectives					
9. The students able to design and create objects, equipment and/or plans.					
10. The students are requested to presents their work output and allow them to answer questions from critiques.					

Part IV: PROBLEMS ENCOUNTERED BY THE TEACHER RESPONDENTS IN RELATION TO THEIR TEACHING STRATEGIES IN THE NEW NORMAL

Direction: Please read the statement in each item carefully. Check the box which applies to your level of motivation. Use the scale below to guide you in answering.

5 – Extremely Serious
4 - Serious
3 – Moderately Serious
2 – Less Serious
1 – Serious

Problems Encountered	**5 ES**	**4 S**	**3 MS**	**2 LS**	**1 NS**
1. Lack of trainings related to area of specialization.					
2. Insufficient quantities of qualified technology education teachers					
3. Unrepaired equipment due to absence or lack of budget and inadequate facilities					
4. Lack of teaching strategies					
5. Unaware of the benefits of using various approaches					
6. Inadequacy of business and industry connection with technology education					
7. Lack of time to prepare technology based lessons					
8. Lack of technology skills to support the students when they use technology in the subject					
9. Lack of internet connection in accessing Learning Resources Management and Development System (LRMDS)					

10. Lack of instructional materials align with pedagogical approaches					

Part V: SUGGESTED SOLUTIONS TO THE PROBLEMS ENCOUNTERED BY THE TEACHER RESPONDENTS IN RELATION TO THEIR TEACHING STRATEGIES IN THE NEW NORMAL

Direction: Please read the statement in each item carefully. Check the box which applies to your level of motivation. Use the scale below to guide you in answering.

5 –Highly Recommended
4 - Recommended
3 –Moderately Recommended
2 –Less Recommended
1 –Not Recommended

Suggested Solutions	**5 HR**	**4 R**	**3 MR**	**2 LR**	**1 NR**
1. Conduct more seminars and trainings related to area of specialization					
2. Undertake significant efforts aimed at recruiting and preparing new TLE educators at all levels					
3. Improvised tools and equipment that can be fabricated at a lower cost to comply with the needed tools and equipment.					
4. Provide a seminar-workshop which will make the teacher aware on the different teaching strategies on TLE					
5. Interact with different expert in the field which will teach them to understand the different activities under various pedagogical approaches.					
6. Established linkage with partner industries which can support the purchased/ donate the needed facilities					
7. Provide time management seminars to the faculty to develop their time management skills and prioritization					
8. Invest on technology skills trainings and workshops for the TLE faculty to become an effective teacher and facilitator during TLE class					
9. Provide the teachers with internet connection allowance from any available budget to perform better teaching performance and manage to access LRMDS					
10. Identify and communicate a clear and understandable purpose of pedagogical approaches to obtain the necessary instructional materials					

Thank you and Godspeed!

Greetings!

I am Ruth Paraso-Collano, and I am currently conducting a study entitled **"RELATIONSHIP OF TEACHING STRATEGIES OF TECHNOLOGY AND LIVELIHOOD EDUCATION (TLE) TEACHERS IN THE NEW NORMAL AND LEARNING PERFORMANCE OF THE SENIOR HIGH SCHOOL STUDENTS IN SELECTED HIGH SCHOOL IN THE DIVISION OF VALENZUELA"** in partial fulfillment of the requirements for the Degree of Master of Arts in Education Major in Administration

and Supervision. I am respectfully requesting for a few minutes of your precious time to answer the following questions as honestly as possible.

Kindly answer each of the following questions by marking an "x" in the corresponding box provided.

Rest assured that your responses will be kept confidential, and will be utilized solely for research purposes.

For TLE STUDENTS

Part I: DEMOGRAPHIC PROFILE

Name: _____ (optional)

Age: □ 16-17 years old □ 18-19 years old □ 20-above years old

Gender: □ Female □ Male

Part II: TEACHING STRATEGIES

Direction: Please read the statement in each item carefully. Check the box which applies to your level of motivation. Use the scale below to guide you in answering.

5 – Highly Practiced
4 - Practiced
3 – Moderately Practiced
2 – Less Practiced
1 – Not Practiced

QUESTIONS					
Entrepreneurial	**5 HP**	**4 P**	**3 MP**	**2 LP**	**1 NP**
1. My TLE teacher introduces to us the business concept so as to develop our business sense and open our mind on business opportunities.					
2. My TLE teacher equips us with knowledge on solving business problems and turned problems into opportunities.					
3. My TLE teacher develops our self-confidence and resiliency to prepare us on facing problems, risks and even failure.					
4. My TLE teacher inculcates the spirit of hard work to the students so that we give our best shot on every endeavors, projects, and products.					
5. My TLE teacher provides us with basic knowledge on costing, pricing, purchasing, profiting and resourcing of materials and/or ingredients to prepare us for a business opportunity.					
6. My TLE teacher develops our skills on baking/masonry/electrical/electronics to uplift our confidence on our work output.					
7. My TLE teacher inspires us to be creative so as to maximize available materials and able to find ways on resolving missing ingredients and/or absence of materials.					
8. My TLE teacher develops students' understanding on Technological and Livelihood Education concepts.					
9. My TLE teacher motivates us to explore business opportunities based on their TLE learnings.					
10. My TLE teacher prepares us on the actual world of business by providing them real training exercises even in the new normal.					
Contextualized	**5 HP**	**4 P**	**3 MP**	**2 LP**	**1 NP**

1. My TLE teacher considers us with different racial and ethnic origin to serve as a source of first-hand information on the topic related to their culture.					
2. My TLE teacher considers students' diversity in bringing their different point of view and varied approaches to the learning process.					
3. My TLE teacher encouraged us to share our personal experiences and background to interact and collaborate with our classmates during the group activity.					
4. My TLE teacher motivates us to perform independently about proper maintenance of electrical tools and equipment, kitchen wares and utensils, computer accessories and the like.					
5. My TLE teacher asks us to internalize the health and safety procedures through safety measures.					
6. My TLE teacher requires the students to prepare a sketch and layout of their own kitchen at home, electrical wiring diagram, or computer specifications design.					
7. My TLE teacher teaches us to use appropriate tools, utensils and the likes, for the job required					
8. My TLE teacher teaches us to perform correct methods of calculations to get accuracy on measurement.					
9. My TLE teacher performs correct methods of calculations to get accuracy of measurement.					
10. My TLE teacher takes into account students' prior knowledge when planning class program for TLE lessons.					
Experiential	**5 HP**	**4 P**	**3 MP**	**2 LP**	**1 NP**
1. My TLE teacher let the students learn by doing mostly in workplace like kitchen laboratory, welding/electronic facilities, and/or computer laboratory.					
2. My TLE teacher reminds us to wear personal protective equipment and consider Japanese 5 S Productivity Philosophy					
3. My TLE teacher listens and asks the students with questions in order to gauge their level of understanding.					
4. My TLE teacher utilizes video lessons and activities.					
5. My TLE teacher exposes the class to the use of investigative strategies.					
6. My TLE teacher uses indigenous materials in teaching TLE.					
7. My TLE teacher gives students hands-on experience in choosing equipment/tools/utensils appropriately.					
8. My TLE teacher develops the students' motor skills in using scientific, industrial tools or creative media.					
9. My TLE teacher enables students to design and create objects or equipment in different physical media.					
10. My TLE teacher applies a combination of synchronous tools such as web conferencing, asynchronous tools such as discussion forms and/or social media for group work, e-portfolio's and multimedia for reporting and remote labs for experimental works.					
Constructivist	**5 HP**	**4 P**	**3 MP**	**2 LP**	**1 NP**
1. My TLE teacher motivates the students to create scenarios of their learning experiences by writing reflective journals or creating personal blogs through digital portfolios (cooking books, recipe blogs, food plating videos, demo videos).					
2. My TLE teacher provides real world case based learning					

	environments rather than pre-determined instructional events.					
3.	My TLE teacher uses technology to come up with something new and unique through product innovation considering proper nutrition and availability of ingredients or raw materials needed for production.					
4.	My TLE teacher allows the students to work in group.					
5.	My TLE teacher motivates the students to use instructional tool as a primary source rather than a textbook.					
6.	My TLE teacher allows the students or the team to do the task entirely on their own, the teacher provides help and assistance as needed.					
7.	My TLE teacher encourages the students to use appropriate local materials as substitute for listed materials that are not available.					
8.	My TLE teacher teaches us to diagnose and troubleshoot computer system, diagnose and configure computer system and network, adjust flavors on baking and cooking and/or detect wiring problems.					
9.	My TLE teacher listened to what the students relate what they have learned in TLE class to their life outside of school.					
10.	My TLE teacher wants her students able to work at the speed which suits their ability and adjust depending on the activity needs.					
Authentic		**5 HP**	**4 P**	**3 MP**	**2 LP**	**1 NP**
1.	My TLE teacher practices on students' tasks focus on contextualizing rather than abstracting.					
2.	My TLE teacher practices the students rate their works by comparing their output with the evaluation sample or based on the rubric for scoring.					
3.	My TLE teacher relates the concept of TLE to other disciplines like Science, Mathematics and Languages.					
4.	My TLE teacher relates the TLE to current technology.					
5.	My TLE teacher guides the students in applying technology in launching business/livelihood program.					
6.	My TLE teacher allows the use of calculator/computers/LCD projector for drills and practices and to collect and analyze data.					
7.	My TLE teacher encourages the students to practice working if they have the materials/equipment/tools/utensils at home.					
8.	My TLE teacher develops the skills and confidence by encouraging them to present demo presentation.					
9.	My TLE teacher allows her students to engage in a role play of a particular TLE activity. Described what might happen if one element of the activity missing. Be able to present solution.					
10.	My TLE teacher lead us to develop a business/marketing/sales plan for an imaginary or real company in a student area of interest.					