

Learning Delivery Modality in Technology and Livelihood Education Cookery Instruction Basis for Contextualized Practical Learning Activities

Remelda N. Egano

Submitted: 10/03/2024 Revised: 25/04/2024 Accepted: 02/05/2024

Abstract: This research assessed the modular approach in teaching Grade 7 learners of TLE Cookery instructions as basis for contextualized practical learning activities of the identified secondary schools at Cebu City Division, Cebu City during the Academic Year 2020-2021. This was conceptualized to determine the significant relationship between the learners' academic performance and the challenges met in using the modular learning delivery modality. Questionnaires were emailed to the respondent-groups in October 2021. This research employed a descriptive-quantitative method of research. Data were gathered thru the use online modality. For respondent-teachers, 15 of them belonged to 41-50 years old, 7 belonged to 20-30, while 3 of them belonged to 51 years above, where 20 of them are married, 5 are single and 2 are widowed. Majority of them with 10 teachers are Bachelor's degree, 5 earned units with Master's Degree, 4 earned a full pledge Masteral's Degree, 3 completed Academic Requirement for Master's Degree, 2 earned in Doctoral Degree and 1 of them completed the Academic Requirement for the Doctoral Degree. For respondent - learners, 56 of the belonged to 11-14 years old, 29 belonged to 15-19 years old and 15 belonged to 20 years old where 68 are female and 32 are males, a total of 100. The data gathered were analyzed using descriptive statistical analysis. Based on the findings, that learning Grade 7 TLE - cookery instructions using the Modular Learning Delivery modality is harder for the learners compared to the actual face to face conduct of classes, as proven by the academic performance of the learners. Due to the findings, it was suggested to propose a contextualized practical learning activities to enhance and improve the learner's academic performance in the new normal.

Keywords: Administration & Supervision, Learning Delivery Modality, Descriptive-Quantitative Survey, Questionnaire,

1. Introduction

The COVID-19 pandemic has severely disrupted educational progress by impacting governments' efforts to increase education budgets, necessitating urgent, collective action from all sectors. Millions of children are missing school due to ongoing emergencies and humanitarian crises, with the pandemic worsening the situation for learners in conflict-affected and disaster-stricken areas. Education, a fundamental right, must be prioritized even during emergencies. The suspension of traditional face-to-face learning has led to the adoption of alternative modalities, such as modular and media-based instruction, as highlighted by the Global Campaign for Education (GCE) in 2020. Save the Children Philippines emphasizes the need for support in implementing adaptive learning methods to ensure continued education while protecting children from COVID-19. Atty. Alberto Muyot, CEO of Save the Children Philippines, calls for proactive measures from the Department of Education (DepEd), government agencies, and Local Government Units (LGUs) to safeguard children's learning and well-being amid quarantine measures. The Basic Education – Learning Continuity Plan (BE-LCP), developed with input from various stakeholders, includes streamlining the K to 12 Curriculum into the Most Essential Learning Competencies (MELCs) and using multiple learning modalities like distance and blended

learning. Teachers will be trained to effectively implement these modalities, supported by capacity-building initiatives. Teaching Technology and Livelihood Education (T.L.E.) has become particularly challenging due to its hands-on nature, prompting innovative approaches such as video demonstrations and localized materials. This research aims to explore the relationship between learners' academic performance and the challenges of modular learning in Grade 7 T.L.E., proposing practical, contextualized activities for the Department Cebu City Division to adapt education strategies to current needs and ensure continued learning.

2. Related Works

This research is anchored in the K to 12 Basic Education Program (Republic Act No. 10533, 2013), which promotes pedagogical approaches that are constructivist, inquiry-based, reflective, collaborative, differentiated, and integrative. Constructivism views learners as active builders of meaningful knowledge, with positive feedback helping them navigate the learning process despite challenges. Inquiry-based learning emphasizes questioning and investigation, allowing teachers to gain insights into students' problem-solving methods. Reflective learning provides opportunities for students to connect lessons to their own lives and think critically about their learning experiences. Collaborative approaches foster cooperation

and respect among learners, while differentiation addresses diverse learning styles and intelligences. Integrative pedagogy focuses on connecting ideas across disciplines and engaging students with their community to acquire life skills. Contextualized learning, rooted in constructivist theory, involves presenting information in ways that relate to students' experiences, thereby enhancing their ability to acquire new skills and knowledge.

In response to the COVID-19 pandemic, DepEd Order No. 012, s. 2020, and DM-CI-2020-162 outline guidelines for implementing distance learning modalities to ensure education continues while safeguarding health. The Department of Education has distributed Self-Learning Modules (SLMs) to support these modalities. Contextualized Teaching and Learning (CTL) strategies, such as creating online simulated work environments and relevant quizzes, are proposed to improve modular learning in TLE-Cookery. This research aims to assess these theories and develop effective contextualized practical learning activities for Grade 7 TLE in Cebu City Division, ensuring that the instructional methods meet the current educational needs and context.

3. Literature Review

A related study by Quijano and Santos (2021) explores the effectiveness of contextualized teaching approaches in the Philippine educational system amidst the COVID-19 pandemic. Their research emphasizes the importance of adapting pedagogical strategies to fit the unique needs and contexts of learners, particularly when traditional classroom settings are not feasible. The study highlights how contextualized learning, which integrates real-life experiences and local relevance into the curriculum, has proven beneficial in enhancing student engagement and comprehension. By examining various distance learning modalities and their implementation in diverse educational contexts, Quijano and Santos found that approaches such as inquiry-based learning and differentiated instruction significantly improve learner outcomes. Their findings support the notion that integrating contextually relevant content and practical applications into learning materials can bridge gaps created by the shift to remote education.

Similarly, a study by Ramirez and Gomez (2022) investigates the impact of modular learning delivery in the Technology and Livelihood Education (TLE) subject during the pandemic. Their research focuses on the adaptation of pedagogical strategies to maintain educational continuity despite the constraints imposed by COVID-19. The study evaluates how modular learning, combined with innovative techniques such as video demonstrations and localized materials, affects student performance and engagement in TLE. Ramirez and Gomez found that contextualized and

practical learning activities, tailored to the students' home environments, enhanced their ability to grasp complex skills and concepts. Their results underscore the importance of developing relevant, context-specific instructional strategies to support effective learning outcomes in challenging circumstances, aligning with the principles of constructivist and integrative pedagogy outlined in the K to 12 Basic Education Program.

4. Research Objectives

This research assessed the performance level of the TLE learners in Cookery instruction of the identified public secondary schools Division of Cebu City School Year 2021-2022 in order to come up with contextualized practical learning activities for the learners.

Specifically, this answered the following questions:

4.1 Statement of the Problem

1. What is the demographic profile of the respondent groups as to:

1.1. Teachers

- 1.1.1. age and gender;
- 1.1.2. marital Status;
- 1.1.3. length of service as teachers;
- 1.1.4. highest educational attainment;
- 1.1.5. seminar-workshop/trainings attended;
- 1.1.6. teaching- learning delivery modality used?
- 1.1.7. Performance Rating, and
- 1.1.8. Platform used?

1.2. Learners

- 1.2.1 age and gender;
- 1.2.2 average household income of parents;
- 1.2.3 residence;
- 1.2.4 gadget used for supplemental learning

2. As perceived by the respondents on the status of the acceptability of TLE - Cookery Instruction Modular Approach as to the following aspects:

- 2.1 Content
- 2.2 Delivery
- 2.3 resources, and
- 2.4 parental involvement

3. What is the academic performance of the learners in learning Grade 7 TLE cookery in the 1st Quarter of SY 2020-2021?

3.1 use and maintenance of equipment in cookery

3.1.1 types of tools, equipment, and paraphernalia,

3.1.2 clean and sanitize kitchen tools and equipment

3.2 demonstrate an understanding performing menstruation and calculation in cookery,

3.2.1 give the abbreviations and equivalents of measurements

3.2.2 measure ingredients according to recipe requirement,

3.2.3 calculate cost of production

4. What are the challenges encountered in learning Cookery utilizing the modular learning delivery modality?

5. Is there a significant relationship between the learners' academic performance and the challenges in utilizing modules?

6. Based on findings, what contextualized teaching-learning activities can be proposed?

4.2 Statement of the Null Hypothesis

The given null hypothesis was tested at .05 level of significance.

H01: There is a significant relationship between the academic performance and the challenges met in learning Grade 7 TLE Cookery using the modular learning modality.

5. Research Methodology

The research utilized the Systems Model Approach, which facilitated the exploration of various potentials and served as a communication tool for detailed design and implementation. This model is process-oriented, focusing on the flow of information between modules rather than the specifics of process implementation. The input phase involved gathering data on the demographic profiles of respondent-teachers and learners, their perceptions of the modular learning delivery approach in Technology and Livelihood Education-Cookery Instruction—including aspects such as content, delivery, learning resources, and parental involvement—and assessing the academic performance of learners using the Most Essential Learning Competencies (MELCs). Additionally, challenges encountered and their impact on learners' performance were examined. The process phase included the preparation of transmittal letters and survey questionnaires, data collection, statistical analysis, and summarization of findings to derive conclusions and recommendations. The output phase presented proposed contextualized practical learning activities designed to address identified challenges

and improve educational outcomes.

5.1 Population and Sampling

The research involved a sample of one hundred Grade 7 learners and twenty-five Grade 7 Technology and Livelihood Education (TLE) teachers. Random sampling was used to select participants from a pool of one hundred twenty-six public school heads, resulting in a distribution of respondents across various school sizes: seven teachers from small schools, eight from medium schools, and ten from large schools. The distribution of respondents was as follows: Oprra National High School provided 7 teachers and 20 learners, Don Sergio Osmena MNHS contributed 8 teachers and 20 learners, Mabolo NHS had 5 teachers and 40 learners, and Lahug NHS included 5 teachers and 20 learners. This sampling approach ensured a representative selection of both teachers and learners for the study.

5.2. Conceptual Models

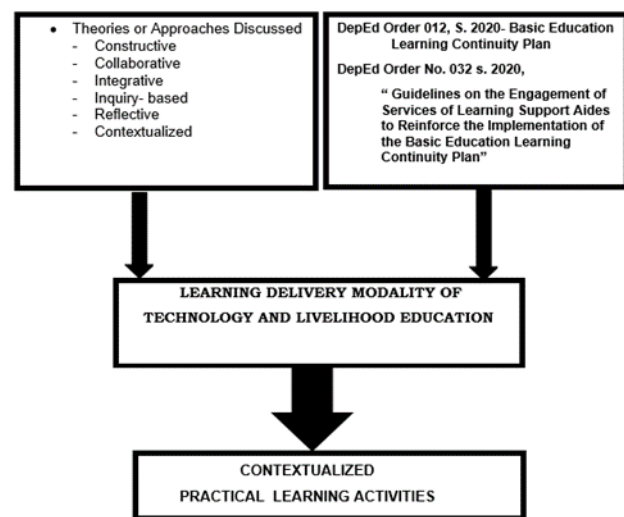


Figure 1 – Theoretical Framework

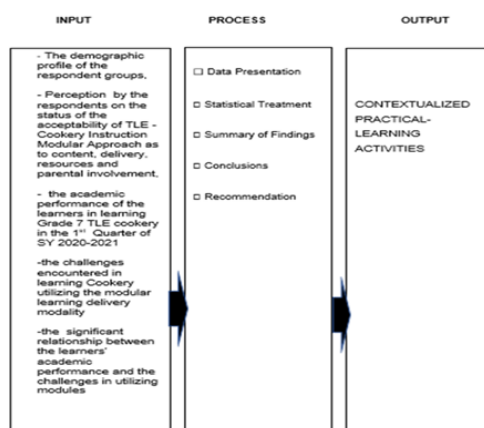
5.3. Data Collection Methods

The data for this study were collected using a comprehensive questionnaire divided into four parts, each targeting different aspects of the research. Part I gathered demographic information from the teacher-respondents, including their age, gender, educational background, teaching experience, relevant training, and the learning delivery modality used for Grade 7 Technology and Livelihood Education (TLE). It also collected similar data from learners, such as their age, gender, household income, residence, and the gadgets used for supplemental learning. Part II assessed the respondents' perceptions of the acceptability of the TLE-Cookery Instruction Modular Approach, focusing on content, delivery, resources, and parental involvement. Part III evaluated the performance level of teachers based on students' academic performance in Grade 7 TLE Cookery for the 1st Quarter of the 2020-

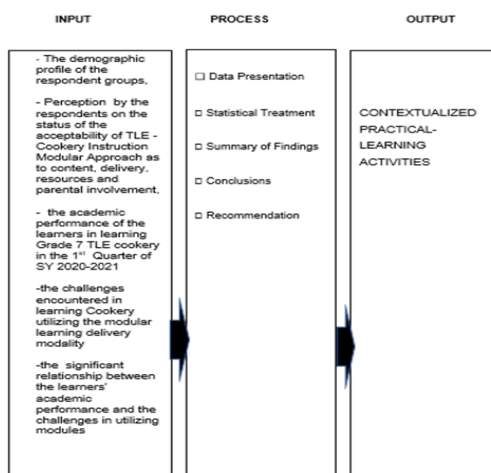
2021 school year, while Part IV identified the challenges faced in utilizing the modular learning delivery modality.

The research procedure involved requesting approval from the Schools Division Superintendent of Cebu City to conduct the study and distribute questionnaires to the selected schools. The data collection was carried out both online and via hard copies with minimal physical contact. After receiving the completed questionnaires within three days, informal interviews were conducted with the twenty-five selected Grade 7 TLE teachers. The data were then analyzed using various statistical methods: simple percentages for demographic profiles, Likert Scale for perceptions and performance levels, Chi-Square test for challenges encountered, and t-test for the significance of relationships between academic performance and challenges. The responses were quantified using a 5-point scale to interpret the levels of performance, ranging from "Outstanding" to "Needs Improvement."

5.4. Research Flow



Flow of the Study



5.5 Instrument

The study employed two primary instruments: a

Questionnaire for Teachers and Informal Interviews. The questionnaire was divided into four parts: Part 1 gathered demographic data such as age, gender, educational background, teaching experience, relevant trainings, and learning delivery modalities used, alongside parental information; Part 2 assessed perceptions of the TLE-Cookery Instruction Modular Approach regarding content, delivery, resources, and parental involvement; Part 3 evaluated teachers' performance based on the academic achievement of Grade 7 TLE Cookery students for the 1st Quarter of SY 2020-2021; and Part 4 identified challenges in modular learning. Following the questionnaire, informal interviews were conducted with a sample of twenty-five teachers from small, medium, and large schools to provide deeper insights into their responses.

5.6 Environment

This research was conducted at Cebu City Division, Region VII, Central Visayas. DepEd Cebu City Division is categorized as medium size division with a total population of 7,000 personnel including all teaching, teaching related and non-teaching. This Schools Division is composed of sixteen (16) Districts – Eight (8) from the North and eight (8) from the South.

The Schools Division Office is located at New Imus St. Barangay Day-as, Cebu City. The sixteen (16) districts are managed by sixteen competent Public Schools District Supervisors where respective schools are managed by the one hundred twenty-six (126) Public School Heads and two hundred (200) Private School Administrators.

Of the 126 public schools, only four secondary schools have been chosen as schools involved in the study which include : Opra National High School, Mabolo National High School, Don Sergio Osmena Memorial National High School, and Lahug Night High School.

5.7 Map of the Research Environment



6.Statistical Treatment of Data

The gathered data were tallied and subjected to various

statistical treatments to analyze the study's results. To determine the respondents' personal profiles, simple percentage computation was used. The perception of respondents regarding the acceptability of the TLE-Cookery Instruction Modular Approach—encompassing content, delivery, resources, and parental involvement—was evaluated using the Likert Scale. Similarly, the performance level of teachers in relation to learners' academic performance in Grade 7 TLE Cookery during the 1st Quarter of SY 2020-2021 was assessed with the Likert Scale. Challenges encountered in learning Cookery through the modular approach were analyzed using the Chi-Square test for two unequal variances. Additionally, the relationship between learners' academic performance and challenges faced with module utilization was examined using the t-test formula. For quantifying responses in Parts II and III, a 5-point scale was employed with the following values: 4.21–5.00 as Outstanding (85%-100%), 3.41–4.20 as Very Good (VG, 75%-84%), 2.61–3.40 as Good (G, 65%-74%), 1.81–2.60 as Fair (F, 55%-64%), and 1.00–1.80 as Needs Improvement (NI), indicating performance levels that have not been satisfactorily met.

6.1 Presentation, Analysis and Interpretation of Data

This chapter provides information about the data gathered from the survey questionnaires. The data have been analyzed and interpreted. The results are shown in tabular and textual forms to facilitate better understanding. The data of this study is used to determine what contextualized practical learning activities can be proposed.

7.1 Profile of the Respondents

7.1.1 Age Profile of the Teacher Respondents

This part presented the data gathered based on the age profile of the teacher respondents. Table 1

Age Bracket	f	%	Rank
20-30 years old	7	28	2
31-40 years old	15	60	1
41-50 years old	3	12	3
51 years and up	0	0	4
Average	35	60	

Table 1 shows that there fifteen (15) or 60 percent Grade 7 TLE teachers whose ages ranged from 31-40 years old; while there are seven (7) or twenty-eight 28 percent ranged from 20-30 years old, and three (3) or twelve (12) percent who are 41-50 years old which means the average age of the teacher-respondents is 35 years old which comprise fifteen (15)

7.1.2 Gender Profile of the Teacher Respondents

Gender	F	%	Rank
Male	5	20	2
Female	20	80	1
Total	25	100	

Table 2 reveals that among the Grade 7 TLE teachers, only five, or 20%, were male, while the majority, totalling twenty or 80%, were female. This distribution highlights a significant gender disparity, with female teachers overwhelmingly comprising the larger proportion of the teaching staff in this group.

7.1.3 Marital Status of the Teacher Respondents

Status	F	%	Rank
Single	5	20	2
Married	18	72	1
Widowed	2	8	3
Total	25	100	

The data in Table 3 indicates that the marital status of the Grade 7 TLE teachers is predominantly married, with eighteen teachers, or 72%, falling into this category. In contrast, five teachers, or 20%, are single, and two teachers, or 8%, are widowed. This distribution shows that the majority of the respondents are married, reflecting a significant proportion of experienced individuals in the teaching staff.

7.1.4 Educational Attainment of the Teacher Respondents

The educational attainment of teacher respondents provides insight into their qualifications and preparedness for their teaching roles. This data usually includes several key levels of education:

Table 4 Level of attitudes of the respondents towards inclusive education			
SN	Indicators	WM	Verbal Description
1	All students with autism should be fully educated in regular classrooms with non-handicapped peers possible.	2.63	Neutral
2	It is seldom necessary to remove students with autism from regular classrooms to meet their educational needs.	3.49	Positive
3	Most or all separate classrooms that exclusively serve students with autism should be eliminated.	2.17	Neutral
4	Most or all regular classrooms can be modified to meet the needs of students with autism.	3.73	Positive
5	Students with autism can be more effectively educated in regular classrooms as opposed to special education classrooms.	2.49	Neutral
6	Inclusion is a more efficient model for educating students with autism because it reduces transition time (i.e. the time required to move from one setting to another).	3.46	Positive
7	Students with autism should not be taught in regular classes with non-disabled students because they will require too much of the teacher's time.	3.63	Positive
8	I have doubts about the effectiveness of including students with autism in regular classrooms because they often lack the academic skills necessary for success.	3.46	Positive
9	I have doubts about the effectiveness of including students with autism in regular classrooms because they often lack the social skills necessary for success.	3.44	Positive
10	I find that general education teachers often fail with students with autism, even when they try their best.	3.20	Neutral
11	I would welcome the opportunity to team-teach as a model for meeting the needs of students with autism in regular classrooms.	3.78	Positive
12	All students benefit from team teaching; that is, the pairing of a general and a special education teacher in the same classroom.	3.76	Positive
13	The responsibility for educating students with autism in regular classrooms should be shared between general and special education teachers.	3.78	Positive
14	I would welcome the opportunity to participate in a consultant teacher model (i.e. regular collaborative meetings between special and general education teachers to share ideas, methods and materials) as a means of addressing the needs of students with autism in regular classrooms.	4.15	Positive
Aggregate Weighted Mean		3.37	Neutral

Legend: 4.21-5.00-Very Positive; 3.41-4.20-Positive; 2.61-3.40-Neutral; 1.81-2.60-Negative; 1.00-1.80-Very Negative

Degree	f	%	Rank
Doctorate Degree	0	0	
Completed Academic Requirements for Doctorate Degree	1	4	6
Earned units earned for Doctorate Degree	2	8	5
Master's Degree	4	16	3
Completed Academic Requirements for Master's Degree	3	12	4
Earned units earned for Master's Degree	5	20	2
Bachelor's Degree	10	40	1
Total	25	100	

Table 4 shows that there are ten (10) or forty percent Grade 7 TLE teachers who were only Bachelor's Degree holders, five (5) or twenty percent earned units for Master's Degree, three (3) or twelve percent have completed academic requirements for Master's Degree, four (4) or twenty-eight (28) percent were graduates of Master's Degree, two (2) or eight percent have earned Doctorate units, one (1) or four percent had completed academic requirements for Doctorate Degree.

The teachers' teaching experience is expressed in terms of years they have served the Department of Education, from the first day to the present, as shown in the following table.

7.1.5 Teacher Respondents' Number of Years Teaching

Experience

Experience	F	%	Rank
1-5 years	13	52	1
6-10 years	4	16	2
11-15 years	3	12	3.5
16-20 years	3	12	3.5
21 years and up	2	8	5
Average	8	16	

Experience	F	%	Rank
1-5 years	13	52	1
6-10 years	4	16	2
11-15 years	3	12	3.5
16-20 years	3	12	3.5
21 years and up	2	8	5
Average	8	16	

Table 5 shows that there thirteen (13) or fifty-two percent Grade 7 TLE teachers who have been teaching the subject from 1-5 years, four (4) or sixteen percent have been teaching from 6-10 years, three (3) or twelve percent have been teaching from 11-15 years, another three (3) or twelve

percent have been teaching from 16-20 years, and two (2) or eight percent have been teaching from 21 years and up.

7.1.6 Teacher Respondents' Relevant Trainings

Attended

Residence	f	%	Rank
Central Poblacion	20	20	4.5
Mountain Areas	30	30	1.5
Along the road	30	30	1.5
Along Coastal Areas	20	20	4.5
Total	100	100	

Title	f	%
Teaching the Digital Generation	25	100
Seminar-workshop on Teaching TLE	25	100
Teaching TLE in the new normal	25	100
National Leadership Seminar	25	100
Teaching for Improving student learning in TLE	25	100
In-service Training Webinar on 21 st century Education	25	100
Total	25	100

Table 6 shows that all the twenty-five (25) or one hundred percent have attended all the training-seminars listed in the following: Teaching the Digital Generation, Seminar-Workshop on Teaching TLE, Teaching TLE in the new normal,, National Leadership Seminar, Teaching for Improving student learning in TLE, and In-service training on 21st century education.

7.1.7 Learning Delivery Modality used by Teacher Respondents

Modality	f	%
Face to face	0	0
Modular	25	100
Blended	0	0
Online	0	0
Radio based	0	0
TV based	0	0
Total	25	100

Modality	f	%
Face to face	0	0
Modular	25	100
Blended	0	0
Online	0	0
Radio based	0	0
TV based	0	0
Total	25	100

Table 7 shows that twenty-five (25) or one hundred percent have utilized the Modular Learning Delivery Modality.

The teacher-respondents' performance in teaching Grade 7 TLE-Cookery is measured using the following numerical scale and descriptive rating.

7.1.8 Performance Rating of Teacher Respondents

Table 6
Degree of burnout experienced by the respondents in terms of depersonalization

S/N	Indicators	WM	Verbal Description
1	I feel I look after certain patients/clients impersonally, as if they are objects.	1.93	Low
2	I feel tired when I get up in the morning and must face another day at work.	2.93	Moderate
3	I have the impression that my patients/clients make me responsible for some of their problems.	2.44	Low
4	I am at the end of my patience at the end of my workday.	2.49	Low
5	I really don't care about what happens to some of my patients/clients.	1.88	Low
6	I have become more insensitive to people since I've been working.	2.10	Low
7	I'm afraid that this job is making me uncaring.	1.73	Very Low
Aggregate Weighted Mean		2.21	Low

Legend: 4.21-5.00-Very High; 3.41-4.20-High; 2.61-3.40-Moderate; 1.81-2.60-Low; 1.00-1.80-Very Low

Numerical Rating	Adjectival Rating	f	%
4.23 - 5.00	Outstanding	7	28
3.43 - 4.23	Very Satisfactory	18	72
2.62 - 3.42	Satisfactory	0	0
1.81 - 2.61	Unsatisfactory	0	0
1.80 and below	Poor	0	0
Average	Very satisfactory	3.8	72

Table 8 shows that eighteen (18) or seventy-two percent have performed Very Satisfactorily.

7.1.9 Platform used by Teacher Respondents

Table 9 shows that all the twenty-five (25) or one hundred percent of teachers are using Skillshare, Google Meet, Kahoot, Zoom, Remind platforms to supplement the modules in teaching Grade 7 TLE subjects.

7.1.10 Age Profile of the Learner Respondents

Age Bracket	f	%	Rank
20 years and above	15	15	3
15-19 years old	29	29	2
11-14 years old	56	56	1
Average	12	56	

Table 10 shows that there were fifteen Grade 7 TLE learners whose ages ranged from twenty (20) years and above, twenty-nine (29) were fifteen to nineteen years old, fifty-six (56) who were eleven to fourteen years old

7.1.11 Gender Profile of the Learner Respondents

Gender	f	%	Rank
Male	32	32	2
Female	68	68	1
Total	100	100	

Table 11 shows that there are thirty-two (32) of the Grade 7 TLE learners who were males, and sixty-eight (68) were females.

7.1.12 Average Household Income of Parents

Income	F	%	Rank
P20,000-Above	5	5	5
P 15,001-20,000	10	10	4
P10,001-15,000	13	13	3
P 5001-10,000	32	32	2
Below P 5,000	40	40	1
Average	P 2,500	40	

Table 12 shows that average household income of the majority is below P5,000.

10.1.13 Residence Profile of the Learner Respondents

Proficiency Level	F	%	Rank
90-99 Advanced	9	9	4
85-89 Proficient	14	14	3
80-84 Approaching Proficiency	33	33	2
75-79 Developing	42	42	1
Below 75 Beginning	02	02	5
Total	100	100	

Table 13 shows that there were twenty Grade 7 TLE learners who were residing at the Central Poblacion, thirty (30) in the mountain areas, another thirty (30) along the road, and twenty (20) along the coastal areas.

7.1.14 Gadgets Used by the Learner Respondents to Supplement Learning

Gadgets	f	%	Rank
Desktop	03	3	4
Laptop	10	10	3
Tablet	02	2	5
Own Cellphone	35	35	2
Parent's Cellphone	40	40	1
Total	100	100	

Table 14 shows that there were forty (40) Grade 7 TLE

learners who were using their parents' cellphones, thirty-five (35) used their own cellphones, two(2) used tablets, ten (10) used laptops, three (3) used desktops.

7.1.15 Status of Acceptability of Cookery Instruction Modular Approach

Variable	W	Sd	Verbal Description
Contents of the SLMs	3.5	0	Agree
Distribution & Retrieval	3.5	0	Agree
Resources at home to supplement the SLMs	3.5	0	Agree
Parental Involvement	3.5	0	Agree
Average	3.5	0	Agree

Table 15 shows that one hundred percent of the Grade 7 TLE learners have the same feedback as to acceptability of TLE-Cookery instruction Modular Approach as to the Content, Delivery, Resources, and Parental Involvement which means therefore, the average acceptability level of the respondents in terms of the status of the acceptability of the Grade 7 TLE-Cookery Instruction Modular Approach is 3.5 which means all respondents agree that the use of the modules is teaching and learning Grade 7 TLE-Cookery is less effective.

7.1.16 Academic Performance of the Learner Respondents

Proficiency Level	F	%	Rank
90-99 Advanced	9	9	4
85-89 Proficient	14	14	3
80-84 Approaching Proficiency	33	33	2
75-79 Developing	42	42	1
Below 75 Beginning	02	02	5
Total	100	100	

Table 16 shows that there were nine Grade 7 TLE learners who have Advanced, fourteen Proficient, thirty-three Approaching Proficiency, forty-two Developing, and two are Beginning.

7.1.17 Challenges Encountered in Teaching TLE-Cookery Modular Approach

Challenges	Rating	f	Rank
Lack of Training on how to create quality learning module	5	12	1
Lack of availability of the printed modules	4	3	4
Force to print substandard modules	3	6	2
Absence of quality assurance	5	4	3
Average	4.25	25	

Table 17 shows that all the 25 or one hundred per cent of the teachers met the same challenges in teaching Grade 7 TLE which included the following: absence of quality assurance, forced to print substandard modules, lack of availability of the printed modules, and, lack of training on how to create quality learning modules.

7.1.18 Significant Relationship between the Academic Performance of the Learners and the Challenges they met

Variance	Critical p value	Chi-square value	Decision
Learners' academic performance and the challenges met	.05	.0765	H ₀ accepted

Table 18 reveals that Using the independent chi-square test with two tailed distribution and two sample unequal variance, the Chi Square TEST (B2:B6,C2:C6,2,2) is 1. Since the p- value is greater than 0.05 significance level, there is an evidence to accept the null hypothesis. Therefore, there is high correlation which means that it is highly significant.

8.Summary

This study aimed to determine the challenges in using the modular learning delivery modality in teaching Grade 7 Technology and Livelihood Education in the public secondary schools of the Division of Cebu City for the S.Y. 2009-2010 towards the development of the contextualized teaching-learning activities. As a matter of procedure, it commended on identifying the demographic profile of the teachers which include age and gender, marital status, length of service, highest educational attainment, and trainings, seminar-workshops attended. It also identified the demographic profile of the learners that include age and gender, average income of parents, residence and gadgets used at home. This study utilized the descriptive-correlation method. It aimed to establish the relationship between the

academic performance of the learners and the challenges they met when utilizing modular learning delivery modality

FINDINGS

The following are the salient findings of the investigation: On the teacher respondents' profile, 15 or 60% aged 31-40 years old, 20 or 80% are females, 18 or 72% are married, 10 or 40% have Bachelor's Degree only, 13 or 52% served DepEd for 1-5 years, and, 25 or 100% have attended the same trainings on Teaching the Digital generations, Seminar-workshop on the teaching of Technology and Livelihood Education, Teaching TLE in the new normal, National Leadership Seminar, Teaching for improving student learning in TLE, and, In Service Training on 21st Century Education.

On the learner respondents, 56% are 11-14 years old, 68% are females, 42% are Developing in terms of Academic Proficiency level, 60% are residing in the mountain areas and along the road, and 100% met the same challenges when using the modules in learning Grade 7 TLE.

It was found out that there is significant relationship between the academic performance of the Grade 7 TLE learners for the SY 2020-2021 and the challenges they met.

CONCLUSION

Based from the findings, the following conclusions are made and was noted that learning of Grade 7 TLE learners using the Modular Learning Delivery modality is a bit difficult for the learners, as proven by the academic performance of the learners; furthermore the Grade 7 TLE learners met a number of challenges in learning the subject using the Modular Learning Delivery.

9.Recommendation

Anchored on the findings of the study, the following are highly recommended:

1. Since majority of the learners have Developing proficiency level in learning Grade 7 TLE using the Modular Learning Delivery modality, teachers should become more "aware of their own use of strategies". Teachers must find other ways to supplement the modules for higher proficiency.
2. The TLE teachers, who are expected to be computer literates, should develop a contextualized learning activities for the TLE learners based on competencies per grade level.
3. Similar studies maybe conducted in teaching secondary TLE in the higher grade levels
4. A further study maybe conducted using the same parameters when implementing other Learning Delivery modalities.

Acknowledgements

I am deeply grateful to all the individuals and organizations who have played a crucial role in the successful completion of my research on the Learning Delivery Modality in Technology and Livelihood Education (TLE) Cookery Instruction, which serves as a foundation for creating contextualized practical learning activities. Your unwavering support, guidance, and encouragement have been essential throughout this academic journey. Special thanks are due to our supervisor for their invaluable support, expertise, and dedication, which have greatly influenced the direction and quality of this research. Their insightful feedback and consistent motivation have profoundly enhanced this work. In summary, the completion of this research would not have been possible without the collective efforts and support of everyone involved. We extend our heartfelt appreciation to each of you for contributing significantly to our academic endeavour.

Author contributions

In the study on Learning Delivery Modality in Technology and Livelihood Education (TLE) Cookery Instruction, Remelda N. Egano spearheaded the research with a comprehensive approach that included conceptualization, methodology, field study execution, data visualization, investigation, and strategic plan development. Her efforts were complemented by the collaborative initiative of all the authors. Together, they handled tasks such as data curation, original draft writing, validation, and review/editing. This collective effort from theoretical foundations to survey questionnaire development, data collection, and analysis was essential in shaping the study's outcomes and ensuring its success.

Conflicts of interest

The authors declare no conflicts of interest.

References

- [1] Abdulla, M. (2021). Factors affecting student engagement in self-directed online learning modules. Proceedings of the Australian Conference on Science and T.L.E Education (ACSME), Brisbane, 2021. Retrieved from https://www.researchgate.net/publication/311768724_Factors_affecting_student_engagement_in_self-directed_online_learning_module
- [2] Agarín, M. A. L. (2021). The challenges and status of modular learning: Its effect on students' academic behavior and performance. *EPRA International Journal of Multidisciplinary Research*.
- [3] Bayod, R., & Bayod, C. (2021). Laying the groundworks for the education of children in the new normal: The case of DepEd Southern Mindanao. *Eubios Journal of Asian and International Bioethics*,

30(8), 443-449.

- [4] Cassarino, C. (2003). Instructional design principles for an e-learning environment. *Quarterly Review of Distance Education*, 4(4), 455-461.
- [5] Department of Education (DepEd). (2020). DepEd Order No. 012, s. 2020: Adoption of the Basic Education Learning Continuity Plan for School Year 2020-2021 in light of the COVID-19 public health emergency. Retrieved from https://authdocs.deped.gov.ph/deped-order/do_s2020_012-adoption-of-the-be-lcp-sy-2020-2021/
- [6] Ellis, R. (2019). Towards a modular language curriculum for using tasks. *Language Teaching Research*, 23(4), 454-475. Retrieved from <https://journals.sagepub.com/doi/abs/10.1177/136216881876531>
- [7] Finnegan, D. (2005). Keeping 'learning' in e-learning. Chief Learning Officer. Retrieved June 22, 2006.
- [8] Kolb, D. A. (1984). *Experiential learning*. Englewood Cliffs: Prentice Hall.
- [9] Llego, M. A. (2021). DepEd interim guidelines on the giving of awards and recognition in light of the Basic Education Learning Continuity Plan for School Year 2020-2021. Retrieved from <https://www.teacherph.com/deped-interim-guidelines-awards-and-recognition-basic-education-learning-continuity-plan/>
- [10] Lorbis, J. C. C. (2021). Utilization of contextualized teaching and learning (CTL) approach in Grade Two Araling Panlipunan. Online Submission. Retrieved from <https://files.eric.ed.gov/fulltext/ED603874.pdf>
- [11] Lucero, A. I. (2020). Instructional strategies of teachers and academic performance of intermediate learners in Araling Panlipunan. *International Journal of Research and Practice*, 2582-7421.
- [12] McFarland, D., & Hamilton, D. (2005). Factors affecting student performance and satisfaction: Online versus traditional course delivery. *Journal of Computer Information Systems*, 46(2), 25-32.
- [13] Sukowati, S., Sartono, E. K. E., & Pradewi, G. I. (2021). The effect of self-regulated learning strategies on primary school students' independent learning skills. *Psychology, Evaluation, and Technology in Educational Research*, 2(2), 81-89.