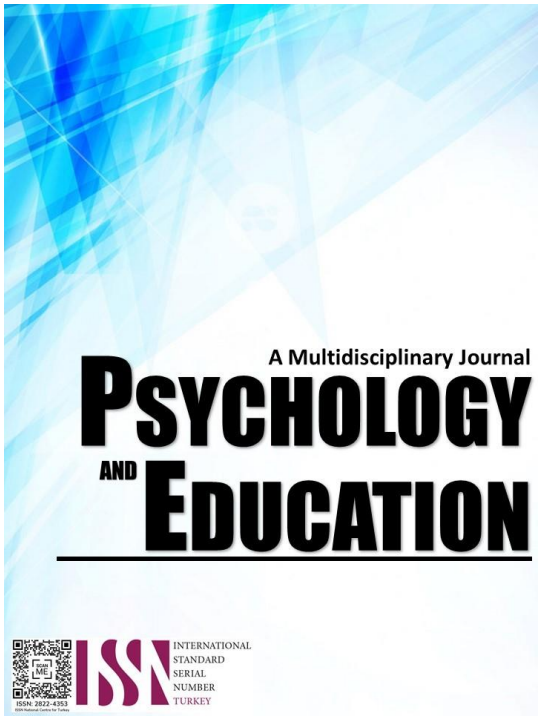
SENIOR HIGH SCHOOL STUDENTS' LEARNING STYLES: BASIS FOR DEVELOPING ANDEVALUATING READING & WRITING SKILLS ENHANCEMENT MATERIALS FOR GRADE 11 FOOD TECHNOLOGY STUDENTS



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Research Article

Senior High School Students' Learning Styles: Basis for Developing and Evaluating Reading & Writing Skills Enhancement Materials for Grade 11 Food Technology Students

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Abstract

This study aimed to identify the SHS students' learning styles as basis for developing and evaluating reading and writing skills enhancement materials for TVL students.Descriptive research design was used in the study. The developed Learning Style- Based Instructional Material for Reading and Writing Skills were evaluated by thirty (30) English teachers and fifteen (15) expert teachers in English from different schools in Antipolo City. The participants of the study were 180 TVL Students from Mayamot National High School-Seinor High School. The data gathering instruments the researcher used were a survey checklist, VARK Learning Style Inventory Test, and survey questionnaire. The statistical tools to treat the data were weighted mean, frequency and ranking, and t-test. Based on the results, the researcher included 10 most difficult lessons in reading and writing based on MELCs and perceptions of English teachers. In addition, the preferred learning styles of G11 were Kinesthetic and Auditory. Moreover, both English Teachers and the Expert Teachers evaluated the developed learning material with the mean scores of 4.83 & 4.91 and interpreted as "Strongly Agree" in terms of its appropriateness, authenticity, clarity, usefulness, and technical quality. Furthermore, there was no significant difference between the evaluation of Expert Teachers and English Teachers to the developed Learning Style-Based Instructional Material for the Enhancement of Reading and Writing Skills of Grade 11 Students. Comments and suggestions were also provided by the respondents to further improve the materials.

Keywords: *senior high school, learning style, reading, writing, enhancement materials*

Introduction

It is said that outcomes are best when instructional techniques are aligned with learning styles. An article titled, "Different Learning Styles—What Teachers Need To Know" (2022) said there should be an attempt to consider student's learning style preferences in instruction, which is also supported in the study conducted in PUP-LHS that the teaching and learning process is useless if no learning styles are employed (Castolo & Rebusquillo, 2017). The study of Newton & Salvi (2020) also shows that an estimated 89% of teachers believe in matching instruction to a student's preferred learning style.

Matching learning style and teaching style affects the students' English proficiency and learning motivation (Toyama and Yamazaki, 2020). When students learn through the way that they really like, it makes their learning performance optimal and will eventually result on higher achievement (Rinekso, 2021). On the contrary, the study of Husmann and Loughlin (2018) found out that there is no correlation between the learning style with subject outcomes which accepts the idea that learning styles should be rejected by educators. But since the students are in online and modular classes, students will learn lessons on their own. It increases the possibility that learning styles do matter and a match between students' learning styles and their study strategies is crucial to get the best outcomes (May, 2018).

Dunn (2003) as cited in the study of Buan, et.al. (2017) found out that one of the problems encountered by students is that the approach provided to them is not in line with their nature of learning. This affirms to the statement of DepEd Secretary Briones during the launch of DepEd's advocacy "Sulong EduKalidad" where she pointed out the biggest challenge facing basic education in our country today: quality (DepEd, 2019). This is evident in an article published by Philippine Institute for Development Studies (PIDS) where they said that senior high school students have difficulty writing in English which is particularly evident in research projects (Philippine Institute for Development Studies, 2020). They also said that students were submitting projects for compliance only which prevents them from applying their learning from the SHS curricula.

The personal reasons of researchers that prompted her to conduct the study are the following: First, the activities and tasks given to the students do not match with their interest, how they want to learn, and how they want to submit outputs. For example, the task in the instructional material asks them to draw but they

do not know how to draw. In this case, low quality outputs are being received by teachers or worse they will not do the activities and tasks. In the given example, students are not motivated and do not have an interest in the activities or the subject similar to the study of Wright (n.d.) Also, tasks in the current learning material are mostly done through writing and illustrations only since the current modality is modular distance learning.

Second, students do not understand the tasks (Arguel, 2018). When students are experiencing this, they have the tendency to submit outputs that are just copied from others, low quality, not do their tasks, or worse, withdrawing from the class. The researcher also noticed that the students are not learning from the lessons found in the modules which is evident in the study of Jalava (2021) wherein scores in the summative tests of the students are not that high. Third, the school setting in Philippines during the pandemic is in the modular/online distance learning, there is a deficiency in instructional materials which was really highlighted during the start of the pandemic that there is a shortage of modules and books. Wherein, an article published by Malipot (2020) said that ACT teachers are receiving "myriad of issues" by teachers concerning the modular learning preparations during the pandemic school year saying that the promised materials by Central Office (CO) remain unavailable.Fourth, since the students are in distance learning and students are learning at their own pace and style, considering learning style in crafting learning material will be significant. In the study of Cabual (2021), it is said that since the pandemic situation is not over yet, asynchronous learning should follow the basic principle that learning should occur at various time and place considering that the curriculum is student-centered approach and that incorporating learning style in instruction will be significant. Fifth, in teaching and learning, variety and engagement matters. Wood (2021) said that when learning style is mixed, multi-modal learning benefits all students because it promotes variety and engagement especially when being used in a traditional classroom. In this study, since the current modality is distance learning either online or modular, engagement will be easier if the content of instructional materials considers the learners' learning preferences.This study was conducted to develop a learning style-based learning material as a supplementary learning material to be used with Self-Learning Module of Grade 11 Students of Mayamot National High School to enhance their reading and writing skills.

Research Questions

This study aimed to identify the SHS students' learning styles as a basis for developing and evaluating reading and writing skills enhancement materials for TVL students. Specifically, this study sought answers to the following questions:

1. What were the top ten (10) most difficult lessons in reading and writing lessons based on the Most Essential Learning Competencies (MELC) which were developed into reading and writing skills enhancement skills activities for Grade 11 TVL Students as perceived by Grade 11 English Teachers?
2. What were the preferred learning style of Grade 11 students based on Fleming's VARK (visual, auditory, reading and writing, kinesthetic) learning style inventory test?
3. What was the evaluation of Expert Teachers and English Teachers to the developed Learning Style-Based Instructional Materials for Reading and Writing Skills Enhancement in terms of the following criteria?
   3.1 Appropriateness;
   3.2 Authenticity;
   3.3 Clarity;
   3.4 Usefulness; and
   3.5 Technical quality?
4. Was there any significant difference between the evaluation of Expert Teachers and English Teachers to the developed learning style-based instructional material for the enhancement of reading and writing skills of grade 11 students?
5. What comments and suggestions were given to improve the developed material?

Literature Review

Learning Styles

This study made use of Fleming's learning style inventory as a basis for developing learning material for food technology students. Neil Fleming in his theory named the different components of VARK learning style model which are as follows: aural mode students learn best through discussion and listening. Reading mode students can accept and interpret printed information easily. Visual mode students learn best through interpreting charts, graph figures, and pictures. While kinesthetic learners lean more towards accepting learning based on behavior such as touch, feel, see, and listen. VARK Learn Limited (2021) listed the components of VARK Learning Styles namely: visual, aural, reading, and kinesthetic.

In line with this, the theory of Howard Gardner about the Multiple Intelligence Theory said that people are

not born with all the intelligence they will ever have. Specifically, he identified the multiple intelligences as: spatial, naturalist, musical, bodily-kinesthetic, logical-mathematical, interpersonal, intrapersonal, and linguistic (Marenus, 2020). Considering that Fleming's VARK Learning Style is composed of learning style varieties such as visual, auditory, reading/writing, and kinesthetic, Howard Gardner's theory of multiple intelligence will support this study.

In addition, Jean Piaget's Cognitive Development which believes that children play an active role in the learning process who act like little scientists as they perform experiments, make observations, and learn about the world. As an individual interacts with the world around them, they continually add new knowledge, build upon existing knowledge, and adapt previously held ideas to accommodate new information (Cherry, 2022). Since this study deals with learning styles and how an individual prefers how to take knowledge, the cognitive theory of Jean Piaget will support this study.

Learning Style-Based Learning Materials

This study aimed to develop a learning style-based learning material for the enhancement of reading and writing skills of food technology students. In the study of Arsyad (2018), the objective is to describe the distribution of Senior High School students' learning style and the perception of on local oriented and learning style-based English learning materials in Bengkulu Province in Indonesia. It was concluded in his article that local-oriented and learning style-based learning materials can be not only more effective but also preferred by the students. Similarly, the analyses of the article by Hosseini & Mehraein (2022) shows that knowing the different learning styles could make it easier for students to choose the tasks they prefer. It is stated that for learners to get the most out of the instructional materials, online instructors might employ assignments with distinct features based on the learners' learning styles and assist them in becoming aware of their traits. The two mentioned studies pose possible effectiveness of learning style-based learning materials similar to this study.

With a different output, the article published by Interactive Learning Environments by Hassan & Habiba (2021) said that millions of students have been drawn to e-learning platforms, however there is a high drop-out rate on these platforms. The learners' lack of motivation as a result of the identical learning experience supplied to them in spite of their different learning preferences is one of the main causes of this issue. They put forth a framework that analyzes how students engage with the system to determine their learning preferences and offers an adaptive gamification experience in line with those preferences. The experiments' findings demonstrate a 25% increase in student motivation and a 26% decrease in the dropout rate. The finding of their study is also the reason why there is a need to develop the learning style-based learning material of this study: to increase the motivation of the food technology students.

Lastly, an article published by Nguyen, Mosier, & Hines (2022), the authors advise primary educators to reexamine learning styles and pertinent literature, investigate how children's minds learn, and take into account the multimodal learning approach in their instructional strategies. This advice should be taken into consideration because the majority of the TVL students' indicated learning styles that are multimodal.

Basis in Developing the Criteria for Material Evaluation

The researcher modified the criteria in evaluating instructional materials of Bandara (2006) and Bugler, et.al. (2017). Bandara (2006) on his book names: Selection and Organization of Content, level, physical appearance, content, exercises and activities, vocabulary, and grammar, supporting sources, development of learner autonomy, consideration of learning styles, and teacher's book are needed to make it more appropriate based from the material to be developed. In line with this, Bugler, et. al. (2017) elaborated the basis for modified criteria to be used in the evaluation of material will also be supported by the Teachers' Criteria for Determining the Quality of Instructional Materials. The criteria are as follows: accuracy & visual appeal, alignment to standards & depth of knowledge, ease of use & support, engagement & ability to meet student's needs, and trusted sources for instructional materials.The mentioned criteria by Bugler, et. al. (2017) is also like the paper of Kabir (2018) where he said that in selecting instructional material for instruction, one must consider the following: learning objectives, instructional method, learner characteristics, teachers' characteristics, course characteristics, media characteristics, and any practical issues concerning the material. The mentioned book and journals listed criteria to evaluate learning material for classroom. The criteria above were combined then modified to form the valuation tool of the researcher for the developed material. Hence, they served as support and basis for the evaluation tool to be used in this study.

Learning Style Preferences of Students in the Philippines

The study of Magulod (2018) found out that most of the students of applied science courses particularly BS Information Technology and BS Industrial Technology students learn best through visual, collaborative, and experiential learning. In addition, this study showed that students manifest learners' learning preferences with the appeal of graphical, contextualized, experiential and collaborative teaching strategies.In addition, Cabual (2021) also found out in his study where he used Fleming's learning style inventory that vast majority of his respondents are visual learners, followed by auditory, kinesthetic, then read/write. In addition to this, the participants of his study preferSelf-Learning Kit/module as learning modality during the New Normal.

Criteria for Material Evaluation

Atmazaki (2018) also developed a context-based reading materials and it was proven effective in terms of its authenticity. In the study, the majority of respondents claimed that the instructional materials were appropriate for usage since they matched the situation. The students' understanding of the learning processes, easily understandable language, to provide answers and use it in practical situations.

Meanwhile, in the study conducted by Garcia (2022), it was mentioned that the developed material achieved clarity because the said Self-Learning Module (SLM) have a clear and basic procedure that are easy to follow and examples, structure and style promote independent learning among the learners. In addition, the developed material of Mabbayad (2018) in his study proven shows clarity, because the procedures are well-stated and simple to understand. The concepts and language used in the developed instructional material are clear, straightforward, and understandable.When it comes to usefulness of the developed material, the developed material of Morelos (2021) was evaluated based on its objectives, contents, vocabulary, usefulness, and presentation. In terms of usefulness, the reading learning resources have been designed as suitable and useful. The developed material achieved usefulness because it has activities that activates students' prior knowledge to help them understand the text and be able to relate to students will have opportunities to acquire knowledge and skills. Similarly, this study also made use of usefulness as a criterion to evaluate material same as how Morelo's identified his learning material as a useful one.

Lastly, Edejer (2022) developed a material and was proven to achieve its technical quality because it has simple graphical presentation and videos, can be used both online and offline modality, observe correct mechanics, meet the needs of the learners, and can be easily accessed through digital devices. Though his developed learning material is for Mathematics, both made use of technical quality as a criterion in evaluating developed materials in study. Both regarded easily access of material and correctness of grammar as to its technical quality.

Methodology

The method of research used in this study is Descriptive Research Design. Dulock, the proponent of this research design, as cited in Endeavor Library Guides (2021) defined Descriptive research as a design which typically aims to identify the characteristics of an individual, situation, or group. This research design will be more applicable when the researcher offers a hypothesis after collecting the data and typically will provide an accurate or systematic description of the variable. This study aimed to describe a population, situation, or phenomenon that is being studied. It focused on answering the how, what, when, and where questions If a research problem, rather than the why (Form plus, 2022). In this study, before the development and evaluation of the learning material was crafted, the researcher described the situation of the respondents and why there is a need for material development. After the material was developed, it was further analyzed and evaluated to make sure that the material was able to solve the existing problem in the situation.

Participants of the Study

The sources of data of the study included 180 students who answered the VARK learning style inventory test to determine their Learning Style Preference. The 180 students were chosen using Slovin's formula from 328 total population of TVL Food Technology students of Mayamot National High School. These 328 respondents were from five (5) sections of Food Technology Strand comprising 60-65 students per class.

Next, 20 English Teachers from different schools in District 1-D of Antipolo City were purposively chosen to determine the ten (10) most difficult lessons in Reading and Writing Skills. This set of respondents were English Teachers from Mayamot National High School, Cupang National High School, Mambugan

High School, Antipolo National High School, Dela Paz National High School, and Antipolo City Senior High School who were able to handle Reading and Writing Subject.

There were also 15 Expert Teachers and 30 English Teachers involved in this study to evaluate the developed material of the researcher. The 30 English Teachers and 15 Expert Teachers were purposively chosen and are Senior High School English Teachers from Mayamot National High School, Cupang National High School, Mambugan High School, Antipolo National High School, Dela Paz National High School, and Antipolo City Senior High School. The 15 Expert Teachers were already able to teach Reading and Writing Skills to Food Technology or TVL students while the 30 English Teachers were Senior High School English Teachers who were able to teach Reading and Writing Skills to any strand of Senior High School.

Instruments of the Study

Three different instruments were used in the study. The first instrument was the survey checklist, this was used to determine the ten (10) most difficult lessons in the subject Reading and Writing Skills and was validated by 20 English Teachers.The second instrument, which is the VARK Learning Style Inventory Test was used by 180 grade 11 food technology students of Mayamot National High School to determine the learning style of the respondents. Leite, Svinicki, & Shi (2010) looked at the VARK learning styles inventory's dimensionality. The study discovered early evidence that VARK scores are valid. (Leite, Svinicki, & Shi, 2010 as cited in, Flatt et. al., 2023) The authors looked at the VARK learning styles inventory's dimensionality in terms of its validity. Four perceptual preferences are measured by the VARK: visual (V), aural (A), read/write (R), and kinesthetic (K). Because respondents can choose from a variety of options inside a question, VARK questions can be thought of as testlets. Furthermore, they clarify that Cronbach's alpha would significantly underestimate the reliability of the VARK scores since it presumes that all items are parallel measures of the construct, which is not the case with the VARK. As a result, they offer reliability estimates based on confirmatory factor analysis. Given that the VARK is not utilized for high-stakes judgments, the reliability estimates for the VARK subscale scores were.85,.82,.84, and.77 for the visual, aural, read/write, and kinesthetic subscales, respectively.

The third instrument was used to evaluate the developed instructional material in Reading and Writing Skills. The survey questionnaire was used for the series of validation before the 15 Expert teachers and 30 English teachers were able to evaluate the material.

Procedure

A letter was sent from the Department of Education-Division of Antipolo and School Head of Mayamot National High School, and validators for the approval of the conduct of study to the participants. After the letter was received by the researcher, a survey checklist was distributed to 20 English Teachers to who were purposely selected by the researcher containing the lessons and readings in the subject reading and writing skills and 180 Grade 11 Students to answer the VARK learning style inventory test. The researcher will be using mean to determine the ten (10) most difficult lessons in the subject and the learning style preferences of learners.After determining the ten (10) most difficult lessons in Reading and Writing Skills and the Learning Styles of Learners, the researcher started developing the Learning Style-Based Instructional Material for Reading and Writing Skills. After the development of instructional material, the researcher looked for 15 Expert teachers and 30 English teachers to evaluate the material. After looking for respondents, the researcher constructed a survey questionnaire which was the tool for evaluation. The construction of the evaluation tool/ survey questionnaire undergoes validation. After the survey questionnaire validation, the researcher started letting the respondents evaluate the learning material.

Ethical Considerations

The researcher herself explained and gave the informed consent to each participant before the conduct of the study. She ensured them that the information would be used with utmost confidentiality and within the purpose of the study only.

Results and Discussion

This section presents the findings according to the study's research questions.

Top Ten Most Difficult Lessons in Reading and Writing Skills

It can be seen in Table 1 that the Top Ten (10) Most Difficult Lessons in Reading and Writing Skills based on the Most Essential Learning Competencies (MELC)

as perceived by the English Teachers were: (1) Research Report; (2) Explicit and Implicit Claims in Written Text; (3) Literature Review; (4) Paragraph by Problem and Solution; (5) Paragraph by Persuasion; (6) Project Proposal; (7) Paragraph by Exemplification and Classification; (8) Paragraph by Cause and Effect; (9) Paragraph by Comparison and Contrast; and (10) Book Article/Article Critique.

Table 1. *Top Ten (10) Most Difficult Lessons in Reading and Writing Skills based on the Most Essential Learning Competencies (MELC) as Perceived by TVL Students*

Lessons from Most Essential Learning Competencies	*Average*	*Rank*
Paragraph by Narration	7.67	17
Paragraph by Description	7.27	14
Paragraph by Definition	7.53	15
Paragraph by Exemplification/Classification	4.73	7
Paragraph by Comparison and Contrast	5.10	9
Paragraph by Cause and Effect	4.83	8
Paragraph by Problem and Solution	4.23	4
Paragraph by Persuasion	4.33	5
Properties of a Well-Written Texts	5.73	11
Explicit and Implicit Claims in Written Text	3.57	2
Hypertext	10.23	23
Intertext	9.83	22
Assertions	9.23	21
Counterclaims	8.16	20
Determining Textual Evidences	7.93	19
Book Articles or Article Critique	5.20	10
Literature Review	4.17	3
Research Report	3.40	1
Project Proposal	4.43	6
Position Paper	5.80	12
Composing a Resume	7.53	16
Writing Application Letters	7.07	13
Various Forms of Office Correspondence	7.90	18

This then means that the material to be developed for TVL Food Technology students contains the Ten (10) identified most difficult lessons based on the perception of their teachers.

Preferred Learning Styles of Grade 11 Students based on the Flemming's VARK Learning Style Inventory Test

Based on the next table, the most preferred learning style of TVL students based on their frequency of their raw scores is Kinesthetic Learning Style, the second is Auditory. Third, is the Reading and Writing and the least preferred learning style is Visual.

Table 2. Preferred Learning Style of Grade 11 Students Based on Fleming's VARK (Visual, Auditory, Reading and Writing, Kinesthetic) Learning Style Inventory Test

Single Preferences (Based on raw scores)	*Frequency*
Visual	1017
Auditory	1332
Reading and Writing	1298
Kinesthetic	1415
Preferences (Based on the results of Questionnaire)	Frequency
Mild Aural	5
Mild Kinesthetic	13
Mild R/W	11
Mild Visual	1
Multimodal	132
Strong Aural	4
Strong Kinesthetic	7
Strong R/W	4
Very Strong Kinesthetic	1
Very Strong R/W	2

On the other hand, when ranked according to their results, most of the TVL students were multimodal with 132 students out of 180 respondents. Second are the identified 13 Mild Kinesthetic learners, third are those Mild R/W with 11 respondents, and the 7 Strong Kinesthetics learners out of 180 respondents.

Since the majority of them are kinesthetics and aural learners, the material to be developed contained activities which will mostly cater the needs of kinesthetic and auditory learners. The developed material then provided more speaking activities for auditory learners and collaborative and hands-on activities for kinesthetic learners.

It can be observed in Table 3 that both English Teachers and Expert Teachers strongly agreed on the Appropriateness of the learning material with an overall weighted means of 4.86 and 4.92, and standard deviation of 0.20 and 0.16.

Table 3. *Respondents' Evaluation on the Developed Learning Style-Based Instructional Material for the Enhancement of Reading and Writing Skills of Grade 11 Students as to Appropriateness*

Indicators	*Respondents*			
	Teachers		*Experts*	
	WM	*VI*	*WM*	*VI*
1. Lesson Forecast includes objectives that are suited to the target learning goals needed by the learners.	4.90	SA	5.00	SA
2. Start Up contains drills and activities that are aligned to the learning objectives.	4.83	SA	4.73	SA
3. Kick Start has texts and activities appropriate to the culture of the target learners.	4.80	SA	4.93	SA
4. Chalk talk has contents that are suitable to the cognitive level of the learners.	4.70	SA	4.87	SA
5. Tune Up provides varied learning activities suited to the TVL learners identified learning styles capable in maintaining learners' interest and attention.	4.97	SA	5.00	SA
6. Tie In provides learning activities that are applicable in real-life.	4.87	SA	4.93	SA
7. Check Up has assessment strategies are in line with the objectives/ learning competencies.	4.93	SA	5.00	SA
8. Wrap Up has additional activities appropriate to enrich the lesson learned by the target learners.	4.87	SA	4.87	SA
Overall Weighted Mean	4.86	SA	4.92	SA
Standard Deviation	0.20		0.16	

Table 3 shows that the developed material was able to achieve appropriateness of content based on the evaluation of the two groups of respondents. This means that the developed material has suitable target learning goals to the target learners, activities, content, and assessment strategies that were aligned to the learning objectives.

It can be seen in Table 4 that both English Teachers and Expert Teachers strongly agreed on its Authenticity with an overall weighted means of 4.83 and 4.95, and standard deviation of 0.23 and 0.11.

This means that the developed material is authentic based on the evaluation of the two groups of respondents. The developed material was able to achieve all of indicators regarding authenticity including having drills and activities related to TVL Food Technology students, activities promoting real-life situations as examples, and activities that will let the target learners participate in authentic communication.

Table 4. *Respondents' Evaluations on the Developed Learning Style-Based Instructional Material for the Enhancement of Reading and Writing Skills of Grade 11 Students as to Authenticity*

Indicators	*Respondents*			
	Teachers		*Experts*	
	WM	*VI*	*WM*	*VI*
1. Lesson Forecast state purposive goals to be achieved at the end of the lesson.	4.93	SA	5.00	SA
2. Start Up contains meaningful drills/activities to activate prior knowledge.	4.93	SA	5.00	SA
3. Kick Start makes use of texts, images, and video selections related to TVL learner's context.	4.80	SA	5.00	SA
4. The content of Chalk Talk is localized to the culture and needs of the target learners.	4.77	SA	5.00	SA
5. Tune Up has learning activities that are engaging among TVL students.	4.83	SA	4.93	SA
6. Tie In includes real-life situations as examples.	4.90	SA	4.93	SA
7. Check Up makes use of strategies that promotes critical thinking.	4.63	SA	4.87	SA
8. Wrap Up activities allow the TVL learners to participate in an authentic communication.	4.83	SA	4.87	SA
Overall Weighted Mean	4.83	SA	4.95	SA
Standard Deviation	0.23		0.11	

It can be observed in Table 5 that both English Teachers and Expert Teachers strongly agreed on the Clarity of the learning material with an overall weighted mean of 4.79 and 4.88, and standard deviation of 0.30 and 0.22.The indicators of this study regarding clarity had the same indicators of clarity as the mentioned study. Both were able to achieve clarity because both made use of understandable and clear concepts and languages to easily follow the instructions of the tasks. In here, both the respondents had their own standard as regard to quality of learning material yet here, both agreed that clarity is present in the lessons and activities provided.

On the other hand, expert teachers yield higher evaluation rating as to clarity than the evaluation of the English teachers since they were exposed to the language longer than the English teachers since they have been teaching using the language for more than 10 years.

The developed material then has drills, activities, contents, and assessment that are easy to work on, clear, and free from vague and ambiguous terms that will enable the target users to use the material easily and independently.

Table 5. *Respondents' Evaluations on the Developed Learning Style-Based Instructional Material for the Enhancement of Reading and Writing Skills of Grade 11 Students as to Clarity*

Indicators	*Respondents*			
	Teachers		*Experts*	
	WM	*VI*	*WM*	*VI*
1. Lesson Forecast includes objectives that are specific, measurable, attainable, realistic, and timely.	4.80	SA	5.00	SA
2. Start Up includes drills and activities that are easy to work on.	4.73	SA	5.00	SA
3. Kick Start makes use of reading texts that has clear and simple words/phrases free from vague and ambiguous terms.	4.83	SA	4.80	SA
4. Chalk Talk provides a brief discussion of the lesson keeping the information digestible to the learners.	4.77	SA	4.87	SA
5. Tune Up provides varied and focused activities to ensure mastery of the lesson.	4.80	SA	4.87	SA
6. Tie In provides activities where the connection of the lesson to real-life situation is clearly seen.	4.77	SA	4.87	SA
7. Check Up use exam-style questions and mark schemes to show students the importance of key words.	4.83	SA	4.73	SA
8. Wrap Up provides additional activities to ensure lesson enrichment and retention among learners.	4.77	SA	4.93	SA
Overall Weighted Mean	4.79	SA	4.88	SA
Standard Deviation	0.30		0.22	

It can be observed in Table 6 that both English Teachers and Expert Teachers strongly agreed on the usefulness of the learning material with an overall weighted mean of 4.84 and 4.92 respectively, and standard deviation of 0.25 and 0.19.

The developed material achieved usefulness because it has activities that activate students' prior knowledge to help them understand the text and be engaged on the tasks provided, giving them the opportunities to acquire new knowledge and skills. This implies that the developed material manifested benefits among its users since it was able to achieve its purpose to be usable in enhancing reading and writing skills.

Table 6. *Respondents' Evaluations on the Developed Learning Style-Based Instructional Material for the Enhancement of Reading and Writing Skills of Grade 11 Students as to Usefulness*

Indicators	*Respondents*			
	Teachers		*Experts*	
	WM	*VI*	*WM*	*VI*
1. Lesson Forecast gives idea of the skills or objective you are expected to learn in the lesson.	4.77	SA	5.00	SA
2. Start Up activities allow the learners to connect with their previous knowledge.	4.73	SA	4.87	SA
3. Kick Start makes use of varied ways/strategies to introduce the lesson.	4.93	SA	4.93	SA
4. Chalk Talk provides brief discussion of the lesson that helps the learners understand and discover new concept/skill.	4.80	SA	4.93	SA
5. Tune Up is comprised of learning-style based activities for independent practice to solidify the learners' understanding and skills of the topic	4.80	SA	4.87	SA
6. Tie In provides activities that connects the new lesson to real life situation or concerns.	4.90	SA	4.93	SA
7. Check Up includes a short task/quiz that will be able to evaluate the level of mastery of the learner to the lesson.	4.90	SA	4.93	SA
8. Wrap Up gives additional activities to enrich the knowledge and skill of the lesson learned.	4.87	SA	4.87	SA
Overall Weighted Mean	4.84	SA	4.92	SA
Standard Deviation	0.25		0.19	

It can be observed in Table 7 that both English Teachers and Expert Teachers strongly agreed on the Technical Quality of the learning material with an overall weighted mean of 4.82 and 4.90, and standard deviation of 0.32 and 0.17.

This implies that the researcher had met the quality of learning material in terms of technical aspects as evaluated by the experts and English teachers which was helpful in enhancing reading and writing skills of grade 11 students.

Table 7. *Respondents' Evaluations on the Developed Learning Style-Based Instructional Material for the Enhancement of Reading and Writing Skills of Grade 11 Students as to Technical Quality*

Indicators	*Respondents*			
	Teachers		*Experts*	
	WM	*VI*	*WM*	*VI*
1. The content of the instructional material has little to no errors in grammar, spelling, capitalizations, and punctuation marks.	4.67	SA	4.67	SA
2. The material makes use of graphic organizers and figures that are visible and understandable.	4.87	SA	5.00	SA
3. The material has equal number of activities per lesson.	4.73	SA	4.73	SA
4. The material follows the DepEd Manual of Style across the lessons/learning activities.	4.87	SA	4.87	SA
5. The material makes use of font style and font size enough for learners to clearly read the material.	4.87	SA	5.00	SA
6. The material makes use of language that is gender-neutral and politically correct.	4.87	SA	5.00	SA
7. The material cites all the quoted or reference materials correctly in a footnote and in the reference page.	4.90	SA	5.00	SA
Overall Weighted Mean	4.82	SA	4.90	SA
Standard Deviation	0.32		0.17	

Table 8. *Summary of Respondents' Evaluations on the Developed Learning Style-Based Instructional Material for the Enhancement of Reading and Writing Skills of Grade 11 Students*

Criteria	*Respondents*			
	Teachers		*Experts*	
	OWM	*VI*	*OWM*	*VI*
Appropriateness	4.86	SA	4.92	SA
Authenticity	4.83	SA	4.95	SA
Clarity	4.79	SA	4.88	SA
Usefulness	4.84	SA	4.92	SA
Technical Quality	4.82	SA	4.90	SA
Grand Weighted Mean	4.83	SA	4.91	SA

As reflected on the table, the two groups of respondents had the same evaluations of the Learning Style-Based Instructional Material for the Enhancement of Reading and Writing Skills of Grade 11 TVL Food Technology Students based on Appropriacy, Authenticity, Clarity, Usefulness, and Technical Quality as revealed by the grand weighted means of 4. 83 and 4.91.

It can be clearly seen that both groups strongly accepted the totality of quality of the developed learning material considering the five used criteria which implicitly stated the benefits its target learners even the English Teachers will gain on its utilization.

Significant Difference Between the Evaluations of the Two Groups of Respondents on the Developed Learning Style-Based Instructional Material for the Enhancement of Reading and Writing Skills of Grade 11 Students

Table 9. *Test of Difference in the Evaluation of the Two Groups of Respondents on the Developed Learning Style-Based Instructional Material as to Appropriateness*

Respondents	*n*	*OWM*	*s*	*Computed t Value*	*Critical t value*	*Decision*	*Interpretation*
Teachers	30	4.86	0.20	0.96	2.02	Fail to reject the H_0	Not Significant
Experts	15	4.92	0.16				

At 5% significance level, the critical t value is 0.96 and the computed t value is 2.02 as reflected in Table 9 with 43 degrees of freedom. Since the computed t value is less than the critical t value, the statistical decision is not to reject the null hypothesis. This means that there is no significant difference in the evaluation of the two groups of respondents on the developed learning style-based instructional material for the enhancement of Reading and Writing Skills pertaining to appropriateness.

This implies that the learning style-based instructional material achieved appropriateness. This means that the learning objectives are suited to the leaning goals needed by learners, the content including the drills, activities, and texts were aligned to the objectives as well as applicable in real-life.

Table 10. *Test of Difference in the Evaluation of the Two Groups of Respondents on the Developed Learning Style-Based Instructional Material for the Enhancement of Reading and Writing Skills as to Authenticity*

Respondents	*n*	*OWM*	*s*	*Computed t Value*	*Critical t value*	*Decision*	*Interpretation*
Teachers	30	4.83	0.23	1.91	2.02	Fail to reject the H_0	Not Significant
Experts	15	4.95	0.11				

It is noticeable in Table 10 that the computed t value of 1.91 is lower than the critical t value of 2.02. So, the statistical decision is to fail to reject the null

hypothesis at 5% level of significance level. Hence, there is no significant difference in the evaluation of the two groups of respondents on the developed learning style-based instructional material for the enhancement of Reading and Writing Skills pertaining to authenticity.

This means that the Learning Style-Based Instructional Material achieved authenticity. This can be seen through the purposive goals to be attained at the end of each lesson, drill and activities that activates prior knowledge of the target learners, content is localized and contains real-life situations as examples.

Table 11. *Test of Significant Difference in the Evaluation of the Two Groups of Respondents on the Developed Learning Style-Based Instructional Material as to Clarity*

Respondents	*n*	*OWM*	*s*	*Computed t Value*	*Critical t value*	*Decision*	*Interpretation*
Teachers	30	4.79	0.30	1.09	2.02	Fail to reject the H_0	Not Significant
Experts	15	4.88	0.22				

As depicted, the computed t value of 1.09 is below the critical t value of 2.02. This indicates that the null hypothesis cannot be rejected at a 5% significance level. Thus, there is no significant difference in the evaluation of the two groups of respondents on the developed learning style-based instructional material for the enhancement of Reading and Writing Skills pertaining to clarity.

The table shows that the learning style-based instructional material achieved clarity. This indicates that the content establishes goals that are specific, measurable, attainable, realistic, and timely. The exercises, activities, lesson content, and evaluations are simple to complete because they use straightforward language that is free of unclear or vague concepts.

Table 12. *Test of Difference in the Evaluation of the Two Groups of Respondents on the Developed Learning Style-Based Instructional Material for the Enhancement of Reading and Writing Skills as to Usefulness*

Respondents	*n*	*OWM*	*s*	*Computed t Value*	*Critical t value*	*Decision*	*Interpretation*
Teachers	30	4.84	0.25	1.09	2.02	Fail to reject the H_0	Not Significant
Experts	15	4.92	0.19				

Based on Table 12, the computed t value of 1.09 is smaller than the critical t value of 2.02. Therefore, the statistical decision is not to reject the null hypothesis. At 5% level of significance, this means that there is no significant difference in the evaluation of the two groups of respondents on the developed learning style-based instructional material for the enhancement of Reading and Writing Skills pertaining to usefulness.

This means that the Learning-Style Based Learning Material achieved usefulness. This is evident on the varieties of activities that are useful to the TVL food technology students through providing learning-style based activities for independent practice to solidify the learners' understanding and skills of the topic.

Table 13. *Test of Significant Difference in the Evaluation of the Two Groups of Respondents on the Developed Learning Style-Based Instructional Material as to Technical Quality*

Respondents	*n*	*OWM*	*s*	*Computed t Value*	*Critical t value*	*Decision*	*Interpretation*
Teachers	30	4.82	0.32	0.82	2.02	Fail to reject the H_0	Not Significant
Experts	15	4.90	0.17				

It can be seen in Table 13 that the computed t value of 0.82 is less than the critical t value of 2.02. Hence, at 5% level of significance, the statistical decision is to fail to reject the null hypothesis. This shows that there is no significant difference in the evaluation of the two groups of respondents on the developed learning style-based instructional material for the enhancement of Reading and Writing Skills pertaining to technical quality.

This only means that the developed learning material contained technical characteristics that met no error in grammar, spelling, capitalization, punctuation marks, and other technical aspects of the material.

Table 14. *Summary of Test of Difference in the Evaluation of the Two Groups of Respondents on the Developed Learning Style-Based Instructional Material for the Enhancement of Reading and Writing Skills*

Criteria	*Teachers*		*Experts*		$t_{computed}$ *Value*	*Decision*	*Interpretation*
	OWM	*s*	*OWM*	*S*			
Appropriateness	4.86	0.20	4.92	0.16	0.96	Fail to Reject the H_0	Not Significant
Authenticity	4.83	0.23	4.95	0.11	1.91	Fail to Reject the H_0	Not Significant
Clarity	4.79	0.30	4.88	0.22	1.09	Fail to Reject the H_0	Not Significant
Usefulness	4.84	0.25	4.92	0.19	1.09	Fail to Reject the H_0	Not Significant
Technical Quality	4.82	0.32	4.90	0.17	0.82	Fail to Reject the H_0	Not Significant

Presented in table 14 is the evaluation of English teachers and the expert respondents on the developed learning style-based instructional material which do not show any significant difference as exhibited in the corresponding computed t value of 2.02 which are lesser than the critical t value 0.82. This concludes that the respondents' evaluations were similar.
This indicates that both of them agreed that the developed learning style-based instructional material for the enhancement of reading and writing skills for TVL food technology learners achieved appropriateness, authenticity, clarity, usefulness, and technical quality which implies that it can be effective to the target learners.

Comments And Suggestions of the Respondents for the Improvement of the Learning Style-Based Instructional Material for the Enhancement of Reading and Writing Skills of the TVL Food Technology Students

Comments: (1) The developed material is suited to the level of the students. (2) The learning material is interesting, engaging, and well-constructed. (3) The Learning material are interactive, authentic, and valid. (4) The exercises were really interesting and excellent for the intended audience. The learners may find graphics and layout of the information to be very imaginative and appealing, which may contribute to their perception that learning is enjoyable. (5) The learning material was masterfully designed to suit the needs of the target learners. (6) The learning material is good which may lead students be engaged in the activity. (7) The material is well-crafted for food technology students.; (8) The material seems appropriate to the TVL students. The words and illustrations are clear and easy to understand for the target learners.

Suggestions: (1) More critical thinking activities may be added to encourage deeper understanding and students' engagement. (2) May still adjust font size a little bigger and may use other font style that may attract learners to read. (3) On pages 5, 10, and 15, link may be provided other than the QR for easy access by students. (4) Answer keys may also be provided per lesson.

Conclusion

Based on the results of the study, the conclusion derived was: (1) The developed Learning Style-Based Instructional Material for the Enhancement of Reading and Writing Skills of Grade 11 TVL Food Technology Students can be an effective tool in enhancing the reading and writing skills of Grade 11 TVL Food Technology Students.

In the light of findings and conclusions mentioned, the following are hereby recommended: (1) The developed material may be recommended for a district-wide utilization, not just a school-wide.(2) The developed instructional material may be published for a wider user on the same subject. (3) Teachers were encouraged to develop reading and writing learning materials based on the needs and interests of their learners.(4) Future researchers were encouraged to conduct parallel study in the same subject area targeting other strands of TVL in developing communication skills.

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