

Development of Module in Cookery: Focused at Soups, Stocks, and Sauces

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Abstract

This study was about the Developed Module in Cookery: Focused at Soups, Stocks and Sauces. The purpose of the study is to determine the validity and acceptability of the developed module in cookery.

The researcher employed the survey approach to collect information. The researcher collected data and information from respondents using the survey approach. In addition, the researcher was able to obtain information from people polls regarding the component level of the produced module, its level of characteristics, and the relationship between the module's components and characteristics and student performance.

The degree of the acceptability of the developed module among students was determined by the researcher using the survey approach, and to determine its validity using the ratings of teachers with similar specializations. The developed module can be enhanced in accordance with the criteria in line with the fundamental learning competencies and the demands of the students by properly analyzing the data acquired.

The Level of Components of Module in Cookery in terms of objectives, contents, activities and assessment are highly accepted by the respondents. As to the Level of Characteristics of the Module, in regards to usefulness, relevance, adaptability and design it has been presented that it is highly accepted. The result of the effect of the components of module to the performance of learners was significant in preparing stocks in terms of objectives and content and not significant on activities and assessment and not significant for preparing soups and sauces. On the other hand, the result on the effect of the characteristics to the performance of learners was not significant in all practical tests.

It therefore concluded that the components of the module have a partially significant effect on the performance of learners in cookery, which indicates that the hypothesis was partially accepted. Furthermore, the characteristics of the module have no significant effect on the performance of the learners in cookery, which implies that the hypothesis was accepted.

Based on the findings and conclusion, the researcher recommends that the topics and sub-topics of the module to be reviewed again since it got the lowest mean from the results of the gathered data. It must be arranged chronologically and logically and the module's objectives must be practical, reasonable, logical, and easy to understand.

Keywords: component level of the module in cookery, objectives, content, activities, assessment, level of characteristics of the module in cookery, usefulness, relevance, adaptability, design

1. Main text

Introduction

Despite the temporary closure of the schools, teaching and learning continue utilizing different learning modalities. Most learners in Masico National High School chose modular distance learning because of the unavailability of devices and access to the internet connection that they can use for online learning or blended learning. Due to the shift to Modular distance learning, learners are now taking more initiative in their education and learning process.

In line with this, the development of modules in different subjects has been implemented and reinforced to students. There are standards and guidelines followed in the development of modules such as the Most Essential Learning Competencies. The MELCs were created by the Department of Education to serve as a primary resource for all schools, schools division offices, and regional offices in determining and implementing learning delivery approaches that are appropriate for the local context and diversity of learners while adapting to the new learning modality. (GovPh, 2020)

The integration of the self-learning module in the subject of TLE not just focuses on learning but also the application. Its goal is to strengthen the skills training of the students which will expose the learner to different learning experiences that are meaningful and relevant to their life skills development.

Learners should be provided an effective learning material that will help them develop skills in cookery in the new learning modality. With this, the researcher got interested to conduct a study on the development and validation of self-learning module in Cookery that focus in soups, stocks and sauces.

The researcher believes that the use of modules in teaching and as well as the development of modules in cookery that focus in soups, stocks and sauces will facilitate the learning process. Hence it makes teaching more effective. Moreover, by using this module, the students would benefit to have a better grasp of the lesson presented to them.

Background of the Study

Teaching and learning process requires materials that play an important role in the process itself. The function of module is a supplement that will help educators in conveying the information in the learning process.

The SLMs and the other alternative learning delivery modalities are in place to address the needs, situations, and resources of each and every learner and will cover all the bases in ensuring that education will be accessible.

Due the sudden change of the delivery of education to learners, TLE is one of the subjects that was not provided complete modules for each specialization, and one of those specializations was cookery which is currently offered to the grade 10 learners of Masico National High school. In response to this, teachers create self-learning materials that are guided by the given Most essential learning competencies.

The module's development is supposed to provide alternative options and create a successful learning environment in which learners can use their skills and knowledge with competence as they master the module's courses throughout the learning process. A module is a method of arranging instructional materials. This packed material methodically incorporates a series of planned learning experiences and is designed to assist learners in mastering meaningful, relevant, adaptive, and well-crafted learning goals.

The module consists contextually, with the material presented in accordance with the learners' setting, task or activity, and environment. The module must have a clear learning aim and be able to articulate the competency criteria and basic competencies. Because the learning resources are packed into one unified whole, the module includes all of the necessary learning materials, giving learners the opportunity to learn the content entirely. Each instruction and exposure to the learner's material in the module is beneficial and user-friendly.

According to Paragas et. al (2020) Technology and Livelihood Education (TLE) is one of the learning topics covered by the Philippine Secondary Education Curriculum. TLE is required to involve community-based practical job experience that may extend beyond the school day. For conventional high schools, there are two sorts of curriculums available (private and public).

Home economics includes Cookery as one of its instructional areas or contents. Instructions are provided to TLE - Cookery which K-12 students will be expose to various opportunities to learn, comprehend and master the concepts and core competencies presented TESDA Training Regulation in Cookery. It is responsive to the ever-changing market of food, restaurant, and hotel industries. The growth of food and hospitality industries demand qualified people to accommodate these needs of customers.

Under the topics being studied in cookery 10 are the soups, stocks and sauces where learners are expected to perform and demonstrate understanding on preparing stocks for menu items, prepare soups required for menu items, prepare sauces required for menu items and store stock, soups and sauces.

This research aimed to develop module in cookery that focus in stocks, soups and sauces and test its acceptability and validity towards the students. There are competencies and self-paced lessons with relevant activities and assessments anchored in Department of Education's most essential learning competencies which will hone the knowledge, values and skills of the learners.

Statement of the Problem

The main purpose of the study is to evaluate the validity and acceptability of the developed learning module in Cookery 10 which is focused at soups, stocks and sauces. Specifically, it seeks to answer the following questions:

1. What is the component level of the module in cookery with regards to:
 - 1.1 objectives;
 - 1.2 content;
 - 1.3 activities; and
 - 1.4 assessment?
2. What is the level of characteristics of the module in Cookery relative to

- 2.1 usefulness;
- 2.2 relevance;
- 2.3 adaptability; and
- 2.4 design?

3. What is the level of performance of learners in Cookery as to practical test?

4. Do the components of the module in cookery has significant effect to the performance of learners in cookery?

5. Do the characteristics of the module in cookery has significant effect to the performance of learners in cookery?

Research Methodology

Research Design

The researcher design used in the present study were descriptive and experimental methods of research since the study involves the acceptability and validity of the developed module in Cookery focused in stocks, soups and sauces.

Experimental design refers to how participants are allocated to the different conditions in an experiment. Probably the commonest way to design an experiment in psychology is to divide the participants into two groups, the experimental group then introduce a change to the experimental group and not the control group. (McLeod, 2017)

Respondents of the Study

In determining the validity and acceptability of the developed module in cookery focused in soups, stocks and sauces. The respondents are purposely selected under the Modular Distance Learning. These selected Grade 10 students were currently undertaking the Technology and Livelihood Education (TLE) subject at Masico National High School, School Year 2021-2022. The researcher also selected teachers specializing in TLE to determine the validity of the developed module. Moreover, the chosen student-respondents were students of the teacher-researcher for the purposes of convenient respondent consolidation.

Research Procedure

In order to come out with a reliable study, the researcher followed the following research procedures. A title was selected based on the identified problem by the researcher. It was then proposed and approved by the panelist. Upon the approval of the title, the researcher conducted a preliminary research to have background information of the topic which was followed by the development of conceptual framework. The research methodology was then identified based what study demands. A questionnaire checklist was constructed and validated and was used as a standardized module evaluation to assess its components such as objectives, contents, activities and assessment and characteristics which include usefulness, adaptability and design and practical test. After the validation of the research instruments, the study was conducted to respondents along with the permission of the Schools Division Supervisor of Laguna and the Principal of Masico National High School. All collected data from the respondents were tabulated and interpreted. The remaining chapters were made and the revisions were made to conclude the study.

Research Instrument

The study made use of a designed module created by the researcher and validated by the teachers with the Technology and Livelihood Education expertise and based on the Department of Education's curriculum. Learners in the field of TLE - Cookery were given a checklist questionnaire to determine the acceptability and validity of the proposed module. The questionnaire checklist consists of 45 items, with five (5) items each facet.

Survey question on the personal profile of the learners' respondent was given before the conduct of the module administration. They were exposed to the developed module and the validated practical test were used to ascertain the performance of the learners.

The research study utilized one section of Grade 10 which was composed of forty-five (45) learners taking up cookery and under the Modular Distance Learning (MDL) Modality of Masico national High School, School Year 2021-2022. The researcher used purposive sampling and the sample that will be used in the incumbent research work was taken from the population of one hundred seventy-six (176) utilized statistical tools of frequency, percentage distribution, weighted mean to determine the significant effect of the component level and characteristics of the developed module in cookery towards the performance of the students within the experimental setups was analyzed through the Analysis of Variance (ANOVA).

The final version of the questionnaire incorporates all recommendations and criticisms. Permission to conduct the study was obtained after the amendment. A formal letter was written to the principal of Masico National High School to administer the study's conduct. The designed module was used by the forty-five Grade 10 TLE Learners when the request was approved. The results of three (3) practical tests were kept track of. Following the use of the designed

module, the learners were given the questionnaire via an online platform.

Statistical Treatment of Data

Learning modules are one of the learning tools used in distant learning, particularly by those who study in a modular approach. The development of the Cookery learning module intends to assist students in studying at their own pace.

In this study, the components of the module in Cookery were described in terms of objectives, content, activities and assessment as well as the characteristics of the module described in terms of usefulness, relativeness, adaptability and design and were determined by the weighted mean and standard deviation. The questionnaire checklist consists of 45 items, with five (5) items each facet. The following scale was used to evaluate the checklist questionnaire.

Scale	Range	Description	Verbal Interpretation
5	4.20 – 5.00	Strongly Agree	Highly Acceptable
4	3.40 – 4.19	Agree	Very Acceptable
3	2.60 – 3.39	Moderately Agree	Acceptable
2	1.80-2.59	Disagree	Less Acceptable
1	1.00-1.79	Strongly Disagree	Not Acceptable

To determine the learner's performance in their practical test, frequency, percent, weighted mean, standard deviation and mean percentage score were utilized with the use of the scaling below.

Student's Performance in Preparing Stocks, Soups and Sauces			
Scale	Range	Performance Level	Verbal Interpretation
5	4.20 – 5.00	Can perform the skill excellently without supervision and with initiative and adaptability to problem situations.	Outstanding
4	3.40 – 4.19	Can perform the skill satisfactorily without supervision and with initiative and adaptability to problem situations.	Very Satisfactory
3	2.60 – 3.39	Can perform the skill satisfactorily without assistance or supervision.	Satisfactory
2	1.80-2.59	Can perform the skill satisfactorily but requires some assistance and/or supervision.	Unsatisfactory
1	1.00-1.79	Can perform parts of the skill satisfactorily, but requires considerable assistance and/or supervision	Poor

Lastly, to determine the significant difference on the performance of the learners in the practical test results Minitab 14 was used in computing the data gathered and treated them statistically using Analysis of Variance. The computed p-values were compared to the level of significance at 0.05 to determine the significant effect of components and characteristics of the module on students' performance.

Theoretical Framework

The following theories supports the concept and idea of this study which is the Development of Module in Cookery: Focused in Stocks, Soups and Sauces.

As cited by Brau (2018), the learner is viewed as multifaceted and complex. Social constructivism not only recognizes the learner's individuality and complexity, but also fosters, employs, and celebrates it as an important aspect of the learning process. Education, like the rest of the world, is evolving. Access to learning opportunities is currently higher than it has ever been.

This theory supports the concept of this study because as what is mentioned above that the world is changing and so is education. From the usual process that the teacher feeds every detail of the lesson to the students, the self-learning module are now developed. In the age gap of learners from Grade 15-16 years old, the cognitive ability copes with the self-learning process. By this means, the learning opportunity of a learner is greater now since they can extend their learning up to the time, they wanted because of the flexibility held by self-learning modules. The development of module in cookery that focused in stocks, soups and sauces aims to give lessons, activities, assessment and application which is comprehensible and reasonable to the learners.

The Schema Theory based from Zhao et. al (2012) point out, one of the most obvious reasons why a content

schema might not exist for a reader is that the schema is culturally unique and not part of the reader's cultural background. Readers' cultures are assumed to influence everything from how individuals interpret reading to the content and formal schemata they possess, all the way down to their grasp of specific concepts. The schema theory's central premise is that written word does not convey meaning on its own. Rather, a book solely instructs readers on how to obtain or construct meaning from previously acquired information.

This explains that the knowledge of a learner to a single word probably improves when the learner connects their prior knowledge to the new one and later on stored in their memory. And this is the goal of the development modules, all students can learn and succeed, but not on the same day in the same way. Schools control many of the conditions that directly affect successful school learning. What and whether students learn is more important than when and how they learn. The purpose of school is to equip students for their lives after school. Students can learn best when they have a clear picture of what is expected of them and when they are given adequate time to accomplish these things and in-depth learning of significant things is more useful than superficial learning about things of little consequence.

Thorndike was one of the early psychologists who tried to interpret learning by connecting links or linking stimuli and responses. He saw that the most distinctive forms of science in man and animal alike is learning by trial and error. This type of learning is evident when the learner encounters a problematic situation that must be solved and overcome to a goal. Taain, (2017)

This theory is anchored in individualizing instruction through modules. Individualizing instruction plays a big role in modular instruction. Its main attributes include the individual assuming responsibility for their own learning, proceeding with activities and materials for their own level and studying at their own pace.

Results and Discussion

Component Level of the Module in Cookery

Learning modules are one of the learning materials that are being utilized in distance learning specifically by those in a modular mode. With this, the development of the learning module in Cookery aims to aid students learning at their own pace.

In this study, the components of the module in Cookery was described in terms of objectives, content, activities and assessment and was determined by the weighted mean and standard deviation.

Table 1. Component Level of the Module in Cookery with Regards to Objectives

The objectives...	Mean	SD	Remarks	Verbal Interpretation
...are composed of information that is in line with the Most Essential Learning Competencies.	4.27	0.69	Strongly Agree	Highly Acceptable
...consist of a comprehensible scheme of the course content and goals.	4.31	0.73	Strongly Agree	Highly Acceptable
...contain the three areas which are knowledge, skills, and attitude.	4.33	0.74	Strongly Agree	Highly Acceptable
...are realistic and reasonable.	4.24	0.65	Strongly Agree	Highly Acceptable
...are logical and easy to understand.	4.24	0.74	Strongly Agree	Highly Acceptable
Grand Mean	4.28		Strongly Agree	Highly Acceptable

The table 1 shows that the components of the module in Cookery in terms of its objectives was evaluated highly acceptable denoted by the grand (M=4.28). This further implies that respondents strongly agree that the objectives were realized in the developed module.

The respondents strongly agree that the objectives contain the three areas which are knowledge, skills, and attitude as it gained the highest (M=4.33, SD=0.74). Similarly, they strongly agree that the objectives "are realistic and reasonable and are logical and easy to understand" though it bears the least (M=4.24, SD=0.65 & 0.74).

This explains more that the objectives, as one of the components of the developed module, conform with the desired principles which was manifested by the respondents.

As to Adam (2017) Learning objectives are written statements of what the successful student/learner is expected to be able to achieve at the end of the programme module/course unit or qualification. This are statements of what a learner is expected to know, understand and/or be able to demonstrate after completion of a process of learning. The following results have been supported by this statement.

Table 2. Component Level of the Module in Cookery with Regards to Contents

The contents...	Mean	SD	Remarks	Verbal Interpretation
...are appropriate for the students of cookery.	4.38	0.78	Strongly Agree	Highly Acceptable
...are arranged logically and chronologically in terms of topics and sub-topics.	4.13	0.66	Agree	Very Acceptable
...scopes and coverage consistently ensemble for the needs and interests of cookery students.	4.20	0.66	Strongly Agree	Highly Acceptable
...are appropriate for the level of understanding of the cookery students.	4.40	0.65	Strongly Agree	Highly Acceptable
...are aligned and have depth knowledge in the subject matter.	4.22	0.70	Strongly Agree	Highly Acceptable
Grand Mean	4.27		Strongly Agree	Highly Acceptable

Table 2 shows that with the results of $M=4.38$, $SD=0.78$, it has been strongly agreed that the contents are appropriate for the students in cookery. As most of them are also appropriate for the level of understanding of cookery with the $M=4.40$, $SD=0.65$.

In addition, the contents of the module is highly accepted to have depth knowledge in the subject matter ($M=4.22$, $SD=0.70$) and has coverage and scopes consistently ensemble for the needs and interests of cookery students ($M=4.20$, $SD=0.66$). Lastly, with the lowest result in regards with contents, it is still agreed and very accepted that the module's contents are arranged logically and chronologically in terms of topics and sub-topics with the results of $M=4.13$, $SD=0.66$.

The table below shows that the components of the module in Cookery in terms of its contents was evaluated very high denoted by the grand ($M=4.27$). This further implies that respondents strongly agree that the contents were realized in the developed module and was highly accepted by the respondents.

The clear and comprehensive learning objectives of the developed module in cookery will help students understand things that they will learn and what will be the teacher expects from them.

According to Creager (2017) To obtain a valid module item that has five characteristics: module content that meets the population target; module content that can be implemented perfectly; module content that changes over time; module content that successfully increases the level of student goodwill gesture; module content that can change the student's self-concept to a more brilliant way. This means that good modules must have these characteristics in order to be validated which have been shown from the following results.

Table 3. Components Level of the Module in Cookery with Regards to Activities

The activities...	Mean	SD	Remarks	Verbal Interpretation
...are interesting, fruitful and motivate the students.	4.29	0.63	Strongly Agree	Highly Acceptable
...are easy to follow and understand.	4.09	0.59	Agree	Very Acceptable
...utilize localized or alternative products, materials, and equipment available in the students' houses.	4.22	0.58	Strongly Agree	Highly Acceptable
...consist application of knowledge and skills.	4.29	0.53	Strongly Agree	Highly Acceptable
...develop complete growth in the physical, social and mental aspects of the students.	4.09	0.56	Agree	Very Acceptable
Grand Mean	4.20		Strongly Agree	Highly Acceptable

The table above showed that the components of the module in Cookery in terms of its activities was evaluated highly acceptable by the grand ($M=4.20$). This further implies that respondents strongly agree that the activities were realized in the developed module.

The respondents strongly agree that the activities of the module are interesting, fruitful and motivate the students, as well as it consists application of knowledge and skills, as it gained the highest $M=4.29$, $SD=0.63$ & 0.53 . The activities were also strongly agreed by the respondents that it utilize localized or alternative products, materials, and equipment available in the students' houses with the $M=4.22$, $SD=0.58$. Similarly, they agreed that the activities are easy to follow and understand and develop complete growth in the physical, social and mental aspects of the students with $M=4.09$, $SD=0.63$ & 0.56 .

The focus of the developed module in cookery is not only giving activities to students as a requirement but also providing them with interesting activities that will motivate and encourage them to learn and understand the content of the module.

Active learning through doing/processing/reflecting/planning, building on learning, and creating connections through activities is vital, according to Jackson (2017), which this designed module most certainly does.

Table 4. Component level of Module in Cookery with Regards to Assessment

The assessments...	Mean	SD	Remarks	Verbal Interpretation
...states clearly the basis of the evaluation in each student.	4.29	0.73	Strongly Agree	Highly Acceptable
...provides an evaluation that improves their full potential.	4.24	0.65	Strongly Agree	Highly Acceptable
...composes of learning tasks acquired from the target competency.	4.11	0.68	Agree	Very Acceptable
...is consistent, fair, and reliable.	4.00	0.67	Agree	Very Acceptable
...provides students with effective feedback and potentially improves their motivation or self-esteem.	4.29	0.66	Strongly Agree	Highly Acceptable
Grand Mean	4.19		Agree	Very Acceptable

Table 4 shows the results of the acceptability of the assessments in the developed module. With the highest $M=4.29$, it is strongly agreed that the assessment states clearly the basis of the evaluation in each student and provides students with effective feedback and potentially improves their motivation or self-esteem. With lowest mean which is 4.00 with the $SD=0.67$, it is agreed that the assessment is fair and reliable. It is also agreed that the assessment composes of learning tasks acquired from the target competency with $M=4.11$, $SD=0.68$.

The discussed results implies that respondents agree that the assessment were realized in the developed module and was very acceptable with grand $M=4.19$.

The assessments provided in the developed module in cookery are not just for subject compliance but to radiate the potential of the students. After the students take their assessments, the teacher assures to provide the necessary feedback regarding the results of the assessment.

Each learner's knowledge of the module competencies is assessed using a combination of module tests/assessments, assignments, and work sheets. In this produced module in cookery, this statement from Okcareertech.org (2018) was realized.

Level of Characteristics of the Module

In this study, level of characteristics of the module was described in terms of usefulness, relevance, adaptability and design and was determined by the weighted mean and standard deviation.

Table 5. Level of Characteristics of the Module relative to Usefulness

STATEMENT	Mean	SD	Remarks	Verbal Interpretation
The way the module was presented helped to maintain interest in the subject.	4.24	0.68	Strongly Agree	Highly Acceptable
The lectures contained in the module make learning easier.	4.33	0.71	Strongly Agree	Highly Acceptable
The module can be used and understood easily.	4.20	0.76	Strongly Agree	Highly Acceptable
The module effectively engages the user toward learning.	4.13	0.69	Agree	Very Acceptable
The module demonstrates opportunities to practice new concepts in skills that can be applied in a real-life setting.	4.24	0.77	Strongly Agree	Highly Acceptable
Grand Mean	4.23		Strongly Agree	Highly Acceptable

In relation to the usefulness of the developed module in cookery, Table 5 expresses that the respondents highly accepted its usefulness with the grand $M=4.23$.

As to the respondents, the lectures contained in the module make the learning easier as it gets the highest mean which is 4.33 with $SD=0.71$. The way the module was presented helped to maintain interest in the subject as it also

demonstrates opportunities to practice new concepts in skills that can be applied in a real-life setting ($M=4.24$, $SD=0.77$). However, with the lowest mean 4.13, it is shown that the usefulness of the developed module in terms of engaging the user in towards learning is very accepted by the respondents.

The developed module in cookery intends to make the learning of cookery (stocks, soups, and sauces) easier and more accessible to the students. The content was made easy for the learners to cope with it effectively, which promotes independent learning for learners in the modular learning setting. Learning tasks were easy to follow and understand, which helps the learners learn new concepts and better acquire the new learning skills, which leads to a great learning opportunity.

The utilization of modules promotes independent learning. One of the advantages of employing modules for instruction is that pupils develop greater self-study or learning skills. Students actively participate in understanding the concepts provided in the module. They gain a sense of responsibility as they complete the tasks in the module. The students progress on their own with little or no help from others. They are empowered when they learn how to learn. (Nardo, 2017) In light of this remark, and based on the findings, this developed cookery module can be deemed beneficial to learners.

Table 6. Level of Characteristic of the Module in Cookery relative to Relevance

STATEMENT	Mean	SD	Remarks	Verbal Interpretation
The module comprises lessons that demonstrate an understanding of core concepts and principles in cookery.	4.29	0.66	Strongly Agree	Highly Acceptable
The module discusses understanding basic concepts and underlying theories in preparing stocks, sauces, and soups	4.36	0.80	Strongly Agree	Highly Acceptable
The activities and performance tasks in the module are related to the subject.	4.56	0.59	Strongly Agree	Highly Acceptable
The module supplements the absence of teaching-learning resources in cookery.	4.38	0.61	Strongly Agree	Highly Acceptable
The module inspires an environment that aims to develop the learner's independence.	4.18	0.68	Agree	Very Acceptable
Grand Mean	4.35		Strongly Agree	Highly Acceptable

Relevance of the module realizes the students how useful all knowledge can be. In relation to this study, relevance is a factor that makes the developed module in cookery be highly acceptable to the respondents as it results with grand $M=4.35$.

The respondents strongly agreed that the activities and performance tasks in the module are related to the subject. Understanding basic concepts and underlying theories in preparing stocks, sauces, and soups is relevant to the module as it also supplements the absence of teaching-learning resources in cookery with the highest mean 4.56 and with $SD=0.59$.

The developed module also comprises lessons that demonstrate an understanding of core concepts and principles in cookery ($M=4.29$, $SD=0.66$) and been agreed that the module inspires an environment that aims to develop the learner's independence ($M=4.18$, $SD=0.68$).

The content of the developed module in cookery has been highly accepted by the respondents that it is relevant to the subject matter. Given that the MDL focuses on independent learning, it is important that the content of the module is relevant to the objectives and to the subject matter itself.

As the central instrument of this new norm, its material must meet a student's standard learning capacity. Given that pupils will be evaluating these educational resources on their own, (Chin, 2020), demonstrating that this developed module in cookery was seen as relative in the subject matter.

Table 7. Level of Characteristic of Module in Cookery relative to Adaptability

STATEMENT	Mean	SD	Remarks	Verbal Interpretation
The learners can adapt to the language used in the module.	4.40	0.72	Strongly Agree	Highly Acceptable
The module reduces the feeling of isolation and motivates student engagement towards self-learning.	4.27	0.69	Strongly Agree	Highly Acceptable
The learners can easily follow the directions instructed in the activities and performance tasks.	4.24	0.61	Strongly Agree	Highly Acceptable
The module encourages and motivates the students in learning the concepts presented in the module.	4.20	0.69	Strongly Agree	Highly Acceptable
The learners attain desired academic goal and growth and are linked with a positive outcome.	4.18	0.61	Agree	Very Acceptable
Grand Mean	4.26		Strongly Agree	Highly Acceptable

English was the medium of language used in the module, and it is strongly strongly agreed with $M=4.40$, $SD=0.72$ that the learners can adapt to it. It is also strongly agreed that the module reduces the feeling of isolation and motivates student engagement towards self-learning and encourages & motivates the students in learning the concepts presented in the module. ($M=4.27$ & 4.20 , $SD=0.69$). Being agreed by the respondents that the learners attain desired academic goal and growth and are linked with a positive outcome got the lowest $M=4.18$, $SD=0.61$.

As to the increased adaptability of the students to instructional materials specifically to modules, this developed module in cookery was highly accepted by the respondents in terms of adaptability meaning that they can adapt well to the wholeness of the module.

Table 8. Level of Characteristic of Module in Cookery relative to Design

STATEMENT	Mean	SD	Remarks	Verbal Interpretation
The font style and size of the module are appropriate.	4.24	0.68	Strongly Agree	Highly Acceptable
The illustration of the module is appealing to the learner.	4.29	0.63	Strongly Agree	Highly Acceptable
The module uses well define language which is easy to understand	4.36	0.68	Strongly Agree	Highly Acceptable
Designs and layout are simple and not destructive.	4.44	0.62	Strongly Agree	Highly Acceptable
The module is properly labeled and references are cited.	4.24	0.74	Strongly Agree	Highly Acceptable
Grand Mean	4.32		Strongly Agree	Highly Acceptable

Table 8 reveals that the design of the module is also one of the factors that contribute to the learning of the students. With the grand mean 4.32, it is shown that the module relative to its design is highly acceptable.

The developed module is constructed with such design that the respondents strongly agreed ($M=4.44$, $SD=0.62$) that is simple and not destructive. In addition, the font style and font size use are appropriate, properly labeled and the references are cited. With the $M=4.36$ & $SD=0.68$, it is strongly agreed that the module uses well-define language which is easy to understand. Overall, the illustration of the module is appealing to the learner ($M=4.29$, $SD=0.63$).

Consider the students and the settings in which they will be taught and learned. By detecting and accommodating the characteristics or characteristics of students that are likely to affect their learning, one can help them learn more efficiently and effectively. It will be working in a variety of scenarios when planning and teaching the module. (Moore et al., 2015)

The developed module in cookery is well illustrated in terms of its design, from the language to the appearance, as it has been well accepted by the respondents. The design is another factor to consider, as it influences and contributes the student's learning.

Level of Students' Performance

In every developed learning module, it is part of the learning to evaluate the performance of the students by the means of assessment, and in this study the student's performance is measured by the means of practical test since the focus of the study is more on cookery (stocks, soups and sauces) which is a skill subject.

Table 9. Student's Performance in Practical Test

The practical test...	Mean	SD	Remarks	Verbal Interpretation
...provides valuable information about student learning.	4.49	0.63	Strongly Agree	Highly Acceptable
...is appropriate and related to the subject matter.	4.31	0.73	Strongly Agree	Highly Acceptable
...contributes to the learning of the students.	4.24	0.68	Strongly Agree	Highly Acceptable
...demonstrates what students learned, how well they learned it, and where they struggled.	4.40	0.58	Strongly Agree	Highly Acceptable
...allows a student to evaluate whether the knowledge is learned and accessible.	4.27	0.65	Strongly Agree	Highly Acceptable
Grand Mean	4.24		Strongly Agree Highly Acceptable	

The most important thing in practical test is it provides valuable information about student learning and as well as it contributes to the learning of the students, and both of it was strongly agreed by the respondents that the developed module possess those criteria with the results $M=4.49$, $SD=0.63$ and $M=4.40$, $SD=0.58$, consecutively.

It is also strongly agreed that the practical test is appropriate and related to the subject matter ($M=4.31$, $SD=0.73$) as well as it allows a student to evaluate whether the knowledge is learned and accessible ($M=4.27$, $SD=0.65$). Lastly, the practical test is highly acceptable to the respondents as it demonstrates what students learned, how well they learned it and when they struggled ($M=4.40$, $SD=0.58$).

In this developed module in cookery, it is applicable to administer practical test since cookery is a skill that can only be assessed in terms of hands-on experience. Using the term practical test to refer to any teaching and learning activity which at some point involves the students in observing or manipulating the objects and materials they are studying. (Miller, 2014)

Table 10. Student's Performance in Preparing Stocks

PERFORMANCE STANDARDS	Mean Score	SD
Cut the bones into pieces, 3 to 4 inches long.	4.09	0.67
Rinse in cold water to remove impurities that cloud the stock.	3.62	0.72
Place the bones in the stockpot and cover with cold water to speed extraction	3.80	0.87
Bring water to boil and then reduce to simmer. Skim the scum.	3.33	1.13
Keep the water level above the bones	4.22	0.90
Add mirepoix	3.98	0.78
Simmer for recommended length of time	3.53	0.84
Strain through several layers of cheesecloth	2.93	0.86
Cool the stock as quickly as possible	3.16	1.11
When cool, refrigerate the stock properly in covered containers to keep for 2-3 days.	3.42	1.18
Follows the health and safety precautions	3.93	0.69
Average Score	3.64	
Performance Level	Can perform the skill satisfactorily without supervision and with initiative and adaptability to problem situations.	

Meanwhile, with the lowest mean 2.93 and $SD=0.86$, the performance of the students in regards with straining through the several layers of cheesecloth was unsatisfactory.

Overall, the performance level of the was very satisfactory since they can perform the skill satisfactorily without supervision and with initiative and adaptability to problem situations.

Performance assessments can positively influence teachers' instructional practices and students' learning outcomes, thereby suggesting that performance assessments can play an important role in a balanced system of assessment. (Maier et al., 2020)

Table 11. Student's Performance in Preparing Soups

PERFORMANCE STANDARDS	Mean Score	SD
General Appearance	3.98	0.88
Palatability	4.44	0.78
Nutritive Value	4.42	0.49
Use of Resources	4.19	0.82
Cleanliness and Sanitation	3.87	1.00
Conservation of Nutrients	3.98	0.93
Average Score	4.14	
Performance Level	Can perform the skill satisfactorily without supervision and with initiative and adaptability to problem situations	

In regards with the student's performance in preparing soups, the palatability of the soup was outstanding since it got the highest mean and standard deviation 4.44 & 0.78. Subsequently, with the mean 3.98, its general appearance and conservation of nutrients was very satisfactory.

Generally, the students' performance in producing soups was excellent, as they were able to complete the task successfully without supervision, and with initiative and adaptation to challenging circumstances.

Practical work is essential only when it is used effectively. It is considered the effective practical as the one that is designed to link the objectives of what students are intended to learn and what they are intended to do: to what students actually learn and what they actually do in a process that involves both learning and assessment. (Said et. al, 2014)

Table 12. Student's Performance in Preparing Sauces

PERFORMANCE STANDARDS	Mean Score	SD
General Appearance	4.59	0.66
Palatability	3.87	0.40
Nutritive Value	3.98	0.95
Use of Resources	4.21	0.80
Cleanliness and Sanitation	3.91	0.95
Conservation of Nutrients	4.24	0.67
Average Score	4.18	
Performance Level	Can perform the skill satisfactorily without supervision and with initiative and adaptability to problem situations	

Table 12 explains the results of the student's performance in preparing sauces. With the highest mean 4.59, the general appearance of the sauces made by the students was outstanding. On the counterpart, with the lowest mean 3.87, its palatability was very satisfactory.

On the whole, their performance was very satisfactory as they can perform the skill satisfactorily without supervision and with initiative and adaptability to problem situations.

Significant Effect of Components and Characteristics of the Module on Students' Performance

The data gathered were statistically treated using Analysis of Variance. The computed p-values were compared to the level of significance at 0.05 to determine the significant effect of components and characteristics of the module on students' performance.

Table 13. Significant Effect of Components of the Module on Students' Performance

Variables		f-value	p-value	Analysis
Objectives		3.54	0.004	Significant
Content		3.19	0.006	Significant
Activities	Preparing Stocks	1.29	0.278	Not Significant
Assessment		1.28	0.281	Not Significant
Objectives		1.34	0.189	Not Significant
Content	Preparing Soups	0.17	0.867	Not Significant
Activities		0.98	0.335	Not Significant
Assessment		1.47	0.148	Not Significant
Objectives		2.17	0.053	Not Significant
Content	Preparing Sauces	1.92	0.082	Not Significant
Activities		0.98	0.470	Not Significant
Assessment		0.98	0.471	Not Significant

Table 13 revealed the effect of module components in terms of objectives, content, activities and assessment on students' performance in terms of practical test.

A partially *significant analysis* was obtained on the effect of module components on students' performance in the practical test in preparing stocks since the module objectives gained a p-value (0.004) and content obtained a p-value (0.006) which are lower than the (0.05) level significance while activities gained p-value (0.278), and assessment attained a p-value (0.281) which are higher than (0.05) level of significance which marked the result of the analysis.

However, it shows *not significant analysis* on the effect of module components on students' performance in the practical test in preparing soups. The module objectives gained a p-value (0.189), content obtained a p-value (0.867), activities gained p-value (0.335), and assessment attained a p-value (0.148) which were all higher than (0.05) level of significance which marked the result of the analysis.

Similarly, the effect of module components on students' performance on the practical test in preparing sauces shows *not significant analysis*. The module objectives gained a p-value (0.053), content obtained a p-value (0.082), activities gained p-value (0.470), and assessment attained a p-value (0.471) which were all higher than (0.05) level of significance which marked the result of the analysis.

This means further implies that the components of the module have a partially significant implication on the result of learner's three (3) practical tests.

Students' performance is crucial because it teaches pupils how to do each assignment in a systematic manner. It is critical to follow each step for each activity in order to complete it in the future. It enables teachers to assess how well their pupils are progressing. (Bacani, 2016)

Table 14. Significant Effect of Characteristics of the Module on Students' Performance

Variables		f-value	p-value	Analysis
Usefulness		1.54	0.172	Not Significant
Relevance		0.84	0.575	Not Significant
Adaptability	Preparing Stocks	0.65	0.734	Not Significant
Design		0.84	0.570	Not Significant
Usefulness		0.90	0.374	Not Significant
Relevance		0.30	0.769	Not Significant
Adaptability	Preparing Soups	0.25	0.805	Not Significant
Design		0.34	0.737	Not Significant
Usefulness		1.49	0.189	Not Significant
Relevance		0.82	0.587	Not Significant
Adaptability	Preparing Sauces	1.71	0.129	Not Significant
Design		1.71	0.129	Not Significant

Table 14 shows the impact of module characteristics on students' practical exam performance in terms of usefulness, relevance, adaptability and design. It was manifested that characteristics of module showed *not significant*

effect on the performance of learner in preparing stocks. The module's usefulness gained a p-value (0.172), relevance obtained a p-value (0.575), adaptability gained p-value (0.734), and design attained a p-value (0.570) which were all higher than (0.05) level of significance which marked the result of the analysis.

It also reveals that characteristics of module showed *not significant* effect on the performance of learner in preparing soup. The module's usefulness gained a p-value (.374), relevance obtained a p-value (0.769), adaptability gained p-value (0.805), and design attained a p-value (0.737) which were all greater than (0.05) level of significance which marked the result of the analysis.

Furthermore, characteristics of module showed *not significant* effect on the performance of learner in preparing sauces. The module's usefulness gained a p-value (0.189), relevance obtained a p-value (0.587), adaptability gained p-value (0.129), and design attained a p-value (0.129) which were all higher than (0.05) level of significance which marked the result of the analysis.

These results means that the characteristics of the module have a no significant implication on the result of learner's three (3) practical tests.

The revised curriculum and syllabus for expanded education were created with the goal of practicing vertical integration, including the overview of instructional materials and performance goals. The learning areas' essential competences might be combined with others learning field abruptly and articulate curriculum in horizontally, elementary and senior high school. The school-based development of national core skills under the cooperation of institutions, the curriculum will be effective the federal, state, municipal, and school levels. (Fang et. al., 2013)

Furthermore, it was found that students' involvement in the key decisions of their educational process produces motivation, a sense of ownership and therefore a higher inclination to abide by the set rules, personal drive to meet the individual and collective goals, and an overall higher academic performance (Mati et. al., 2016)

Summary of Findings

This study aimed to determine the validity and acceptability of the Developed Module in Cookery that focuses in Stocks, Soups and Sauces to the selected Grade 10 students of Masico National High School under the Modular Distance Learning.

It sought to answer the following questions: What is the component level of the module in cookery with regards to: objectives, content, activities and assessment?; What is the level of characteristics of the module in Cookery relative to: usefulness, relevance, adaptability and design?; What is the level of performance of learners in Cookery as to practical test?; Do the component of the module in cookery has significant effect to the performance of learners in cookery?; Do the characteristics of the module in cookery has significant effect to the performance of learners in cookery?

This study utilized the experimental type of research. Questionnaire was the main major tool used and was divided into three parts. The first part focuses on the Components of Development of Module in Cookery. The second part is about the Characteristics of the Module in Cookery and the last part focuses on the Performance of Learners in Cookery by the means of Practical Test.

This study's prior findings were presented. The Level of Components of Module in Cookery, in terms of objectives, contents, activities, and assessment, are highly accepted by the respondents based on the data gathered, analyzed, tabulated, and comprehended. The statements given in the questionnaire have been strongly agreed by them, resulting in results that have a positive impact of the component on the respondents.

In terms of usefulness, relevance, adaptability, and design, the Module's Level of Characteristics has been presented as highly accepted, and the respondents strongly agreed that these characteristics of the module help learners increase their knowledge and comprehension of cookery.

Subsequently, the Level of Student Performance in Terms of Practical Test received a remark of, indicating that the students' performance in their practical test in cookery was impressive with the use of the developed learning module as the learners were able to perform the practical tests satisfactorily without the supervision and with initiative and adaptability to problem situations.

A partially significant analysis was obtained on the effect of module components on students' performance in the practical test in view of the result of objectives and content in one of the three practical tests was lesser than the level of significance while its result in activities and assessment was greater than the level of significance. On the other hand, the effect of module characteristics on students' performance in the practical test obtained a not significant analysis since the results were all greater than the level of significance.

Conclusion

In light of the findings the following conclusions were drawn:

1. The null hypothesis which the components of the module have no significant effect to the performance of learners was partially accepted, it implies that there is a partially significant effect between them.
2. The null hypothesis which the characteristics of the module have a no significant effect on the performance of learners was accepted, it implies there is no significant effect between them.

Recommendations

In view of the findings and conclusions of the study, the following recommendations may be done:

1. Since it obtained the lowest results of the acquired data, the module's objectives must be practical, reasonable, logical, and easy to understand.
2. Based on the outcomes of the produced module's practical test, it must be simple to follow and comprehend. Use basic words as much as possible.
3. Topics and sub-topics of the module must be reviewed again since it got the lowest mean from the results of the gathered data. It must be arranged chronologically and logically.
4. The videos provided for each practical test must be available offline for easy access of the learners so that they can easily comprehend to the steps given in the module.

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