

DEVELOPMENT AND VALIDATION OF ENHANCED ACTIVITY-BASED LEARNING MATERIALS IN COOKERY

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ABSTRACT

This study aimed to develop and validate the enhanced activity-based learning materials for grade 9 cookery at Pilar National Comprehensive High School, Pilar I district SY 2021-2022. It used the developmental method of research. The respondents were the 30 grade 9 cookery at Pilar National Comprehensive High School, Pilar I district which were purposively chosen. The statistical tools utilized were the weighted mean, frequency, and t-test for dependent samples.

This study found out that the contents of the developed materials are very satisfactory as evaluated by the experts with an overall weighted mean of 3.58. Similarly, the format and presentation and organization of the materials are very satisfactory with an average of 3.77 and 3.74, respectively.

Also, the materials are accurate with free of errors as reflected by the overall weighted mean of 4.00. The students have low mastery level in the four developed learning materials with mean ML of 30. On the other hand, the students attained a mean ML of 100 in the posttest which is described as mastered with all the four developed enhanced activity-based having similar mastery level. Moreover, the computed values are greater than the critical value of 2.06 at 0.05 level of significance with degrees of freedom of 29. Therefore, the rejection of the null hypothesis which states that there is a significant difference between the pre-test and posttest scores of the students.

It was concluded that the developed enhanced activity-based learning materials were successful in teaching desserts as supplementary instructional materials. Experts firmly agreed that the instructional content for use in the home learning environment is appropriate and commendable. The developed activity-based learning materials are very satisfactory along content, format and presentation and organization. Also, there are no errors present in the materials as evaluated by the experts. The developed activity-based learning materials have improved the performance of the students in Cookery. Likewise, the pre-test and posttest results are significantly different which indicated that the materials are effective.

This study recommended that the developed activity-based learning materials may be submitted to the Division Office for further review and evaluation prior to its adoption and utilization. Encourage to utilize the developed activity-based learning materials in school and at home to heighten the learning abilities, style and habits of the students. Teachers may be encouraged to develop similar instructional materials focusing on the importance of the performance on cookery. The effectiveness of the developed activity-based learning materials may be sustained and cater the fast learners and other type of students identical to multiple intelligence. Future research on the development of another instrument or collection of learning materials is encourage to reinforced in teaching various fields of cookery and across different disciplines at different grade levels.

KEY WORDS: *DEVELOPMENT, VALIDATION, ENHANCED-ACTIVITY BASED LEARNING MATERIALS, COOKERY*

INTRODUCTION

Education is an essential as the existence of mankind .It is the best product ever made of one's quest for knowledge. Through Education, knowledge, and skills are developed. It is the most efficient system of equipping people with knowledge, skills and attitudes essential for effective membership in society. It consists of general and specialized educations which are acquired through formal, non-formal or informal schemes (Bates, 2016).

A major sub-system of education dealing with the technological aspects of the environment is technology education. In its general form, technology education seeks to help people become technology literate and equips with the basic skills, knowledge and understanding of the scope, materials, equipment. Processes, products, problems and developments in the world of works. Teaching Technology and Livelihood Education requires various knowledge and skill competencies to prepare the students for the better life. Teachers in this field are expected to have integrated information in teaching the subjects and its content. This requires competence both in subjects matter and skills (Limon,2014).

The school is a very important institution which can provide career pathways for students. Offering Technology and Livelihood Education is a response to the need of the community considering that the nature of the course would provide practical knowledge and skills of vocational and technological efficiency and problem solving in daily life.

TLE is also referred to as Career Pathways in Technology and Livelihood Education (CP-TLE). The 2010 Secondary Education Curriculum allocates 240 minutes per week for CP-TLE. However CP- TLE is required to include practical work experience in the community, which may extend beyond its specified school hours. Two types of curriculum are provided for regular high schools (private and public). These are: Technical Vocational Education-based TLE and Entrepreneurship Education- based TLE. The Technical – Vocational Education Based TLE is focused on technical skills development in any area. Five common competencies, based on the training regulations of the Technical Education and Skills Development Authority (TESDA), are covered in the exploratory phase for Grades 7 and 8. The specialization skills every quarter so that the student may be equipped to start a small household enterprise with family members.

Moreover, Technology and Livelihood Education is a program which equips learners with knowledge and information, skills and process, right work values and life skills in the field of Home Economics, Computer Aided Design, Carpentry, Clothing Construction, Cookery, Electricity and Electronics, Agriculture, Foods and Beverage, Handicrafts, Cosmetology, Home Nursing, Industrial Arts, Agri-Fishery Arts, and Information Communication Technology (ICT), (K to 12 Toolkit). The alignment of TLE curriculum in the escalating demand of skilled employees will enable the graduate to obtain certification and employment. Thus the need for the realistic and experiential learning aided by the right and adequate tools, equipment and machines for instruction is necessary.

Coupled with the implementation of the K to 12 Program, teachers handling TLE are now challenged to create an impact as to whether or not the students have acquired the concepts and essential skills to become productive citizens of the society. They should, therefore, provide learning activities which could be the training ground to enable the learners to face the battle of real-life situations. As such, TLE teachers should focus on the learners' acquisition of competencies through actual task performance of each learner. Performances for students in TLE whether electrical installation maintenance, cookery and computer hardware servicing are important preparation for the student's life in the future.

Philippine educational system in the new normal education has severely affected by the global outbreak. The pandemic has force to embrace the abrupt changes in education sector. To respond to in different challenges, Department of Education has institutionalized the Basic Education- Learning Continuity Plan (BE-LCP) to serve as a guideline in delivering education amidst pandemic. One of its mechanisms to respond to the challenges in education is the implementation of modular (print) distance learning (DepEd order n0.12, s.2020). This has been implemented based on the Partial report on the results of Learner Enrolment and Survey Form (LESFs) conducted during enrolment period 8.8 million preferred modular as a means of learning modality. For these reasons, DepEd concentrate on the Self-Learning Modules (SLMs) as the primary learning modalities of teaching to ensure that learning is continuous even learners are learning at home.

As such, Pilar National Comprehensive High School has institutionalized the implementation of Modular Distance Learning (print) through the utilization of Self Learning Modules (SLMs). The said modalities in new normal education in the school was based on the results of Learner Enrolment and Survey Form of almost 67% choose modular distance learning, 20% goes with blended learning and 13% choose online learning.

Needless to say, Pilar National Comprehensive High School encountered problems in modular distance learning. The majority of students have always been a shortage of classrooms, textbooks, and other educational resources, even prior to the pandemic, lack of adequate educational materials to supply all pupils with the gadgets

necessary for online learning during the pandemic, the telecommunications infrastructure of the country is ill-equipped to cater to the internet connectivity needs of everyone, especially those who reside in far-flung areas.

The scenarios above were seen in the level of performance of pupils in Cookery 9 as documented for years. In school year 2018-2019, the mean percentage score in Assessment Test was 72.34%. In school year 2019-2020, the mean score was 74.55% and 65.79% for the school year 2020-2021. Meanwhile, in the conducted assessment test for the first and second quarter in this school year, students gained a performance level of 66.4% and 63% respectively. From the results, it can be gleaned that pupils' achievement descriptive equivalent is below the standard of 75 passing score/cut-off score set by the Department of Education. These also show that regular lessons and peer monitoring are not enough to address the low performance in certain competencies (DepEd Order No. 29, s.2003).

Based on the above-mentioned problems, this study was conducted to find solutions to the critical issues and concern encountered by teachers, and students in Cookery especially in this time of crisis particularly in the low performance of pupils. Likewise, students have insufficient instructional resources that can be used at home. Teaching cookery skills are not possible without laboratory where students can practically apply their learning from theories. With the lack of instructional materials and insufficiency of laboratory and facilities as observed by teachers in Pilar National Comprehensive High School, teaching students the skills and competencies along with cookery topics was difficult. The researcher believed that the devised proposed innovations and interventions could back-up TLE students and teachers in the teaching-learning process, encourage open communications and inspires students in their self-learning journey.

The researcher led to underpin this study in order to for Department of Education Curriculum Implementation Division and TESDA as the governing bodies, to reflect and give emphasis in Cookery Specialization, thus, they can extend their support its special needs for teaching resources, and to strengthen the facilitation of more teachers training to build new technical capabilities, instructional technique and enhance teachers confidence and self-esteem for better students' learning achievement. Similarly, it may be a great help in raising awareness among all subject teachers, learners, school head and the general populace in providing more strategic actions along the challenges in the field of TLE and its Specialization courses.

Hence, the teachers being the front liners in the academe are task to fully give their best in fulfilling the aims and goals of the education sector. In the context of pressing problems in TLE- Cookery specialization, teachers are encouraged to devise the necessary adjustments in formulating teaching-learning activities and at the same time engage and support skills development of students especially in today's global outbreak. The researcher of this study embarked to develop and validate the enhanced activity-based learning materials for grade 9 cookery at Pilar National Comprehensive High School, Pilar I district S.Y 2021-2022.

OBJECTIVES

Statement of the Problem

This study aimed to develop and validate the enhanced activity-based learning materials for grade 9 cookery at Pilar National Comprehensive High School, Pilar I district S.Y 2021-2022.

Specifically, this study sought to answer the following questions:

1. What enhanced activity- based learning materials may be developed in cookery along the following topics:

- a. Performing mise en place;
- b. Preparing dessert;
- c. Plating/presenting dessert;
- d. Storing desserts;

2. What is the validity of the developed enhanced activity- based learning materials based on DepEd LRDMS along:

- a. Content;
- b. Format;
- c. Presentation and Organization; and
- d. Accuracy

3. How effective is the developed enhanced activity- based learning materials in improving the performance in Cookery?

METHODOLOGY

This study aimed to develop and validate the enhanced activity-based learning materials for grade 9 cookery at Pilar National Comprehensive High School, Pilar I district S.Y 2021-2022. The respondents of this study

were the thirty (30) Grade nine students and five experts came from different schools in the Schools Division of Sorsogon, Sorsogon City who are Master Teachers or teachers teaching Cookery nine for five years and above. Generally, descriptive-developmental research method was the design in which this study was anchored. Furthermore, statistical tools such as weighted mean for the mean score and t-test(two-tailed) for correlated samples for the pretest and posttest result was used in the study.

This study was descriptive since this determined experts' validity of the enhanced activity-based learning materials, and the level of performance of the students in the pretest and post test result. Moreover, the development and evaluation of the remediation tool focused on ADDIE Model. It involved five stages: Analysis, Design, Development, Implement and Evaluation.

The study also made use of pre-experimental, single group, pretest-posttest design. This design was used by the researcher since a single group of respondents was used in the study; they were the least performing students in grade nine Cookery.

RESULT AND DISCUSSION

Findings

Based on the analysis and interpretation of data, the following findings were drawn:

1. The developed learning resources consist of four topics along the topics for the fourth quarter which covers performing mise en place, preparing dessert, plating/presenting dessert, and storing desserts. The enhanced-activity-based materials consist of seven parts: The first part of the SIM is the title card which gives a preview of what students will learn. The second part is the learning competency with code which states expected competency to be developed among with learners after using the materials. The third part of the enhanced competency-based materials is the activity which consists of let us review, let us study, let us practice, let us remember, let us practice more, and enhancement activity. The fourth part is the evaluation that is made up of exercises and drills to assess their understanding of what they have learned from the previous activities of the materials. The sixth part is the answer key which serves as reference and provides learners the answer of all the activities. The seventh part is the reflection which allow learners to reflect on their own learning. And lastly is the reference which includes a carefully and well-researched list of resources that helps pupils reinforce concepts and skills that they learned.
2. Generally, the contents of the developed materials are very satisfactory as evaluated by the experts with an overall weighted mean of 3.58. Similarly, the format and presentation and organization of the materials are very satisfactory with an average of 3.77 and 3.74, respectively. Also, the materials are accurate with free of errors as reflected by the overall weighted mean of 4.00.
3. The students have low mastery level in the four developed learning materials with mean ML of 30. On the other hand, the students attained a mean ML of 100 in the post-test which is described as mastered with all the four developed enhanced activity-based having similar mastery level.

Moreover, the computed values are greater than the critical value of 2.06 at 0.05 level of significance with degrees of freedom of 29. Therefore, the rejection of the null hypothesis which states that there is a significant difference between the pre-test and post-test scores of the students.

Conclusions

Based on the findings of the study, the researcher arrived at the following conclusions:

1. The developed enhanced activity-based learning materials focus on contextualization, localization and innovative assessment.
2. The developed activity-based learning materials are valid along the content, format, presentation and organization and accuracy.
3. The developed activity-based learning materials are effective in improving the performance of students in Cookery.

Recommendations

Based on the results and in the light of the findings and conclusions drawn, the following recommendations are proposed:

1. The developed activity-based learning materials may be submitted to the Division Office for further review and evaluation prior to its adoption and utilization.
2. Teachers may utilize the developed activity-based learning materials in school.

3. Teachers may be encouraged to develop similar instructional materials focusing on the importance of the performance on cookery.
4. The effectiveness of the developed activity-based learning materials may be sustained and cater the fast learners and other type of students identical to multiple intelligence.
5. Future research on the development of another instrument or collection of learning materials is encourage to reinforced in teaching various fields of cookery and across different disciplines at different grade levels.

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