

## Learning Competencies in Cookery through Hands-On Activities and Personal Experiences of Grade 9 Students amidst Covid-19 Pandemic

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### Abstract

*This study was purposely conducted to determine the relationship between hands-on activities as well as students' personal learning experiences and learning competencies in cookery. It is conducted with a belief of findings that hands-on activities and students' personal learning experiences can improve the students' learning competencies in cookery. The Correlational Descriptive-Survey was used in the study. The main instrument used in the study is a researcher-made survey questionnaire on Hands-on Activities, Personal Learning Experiences, and Learning Competencies in Cookery. The respondents of the study were composed of one hundred seventy-five (175) grade 9 students from Lusacan National High School who are enrolled for the school year 2021-2022. Based on the findings of the study, Individual and Group Hands-on Activities are both practices. The Level of students' personal experiences in learning Cookery in terms of Integration of Theory and Practice, Collaborative Work Experiences, Academic Settings, and Educational Interactions are also obviously all practice. Results revealed that Hands-on Activities to Individual activities as well as Group Activities were significantly correlated to Learning Competencies in the Cookery of Grade 9 students. On the other hand, there was a significant relationship between Personal learning experiences in terms of Integration of Theory and Practice, Collaborative Work Experiences, Academic Settings and Educational Interactions, and Learning Competencies in the Cookery of Grade 9 students.*

*Keywords: Hands-on activities, Personal learning experiences, Learning Competencies in Cookery, Constructivism.*

### Introduction

Learning for children begins as soon as they start to perceive anything around them and to construct their interpretation of events through their actions and experiences. It can be better developed through formal education in school wherein children could improve their knowledge by conducting activities assigned to them during class interactions.

As an accepted reality, education involves teaching and learning processes to improve the knowledge, skills, and values of a group of people, usually at school, in which the teachers impart their

knowledge through different strategies like storytelling, discussion, training or research, games, etc. Better education can be acquired with the guidance of an educator or teacher. Any experience that has a formative effect on students on the way they think, act, or feel may be considered as education through the teacher's intervention. However, students, for their betterment must also undergo self-education thru a process of autodidactic.

Teaching is traditionally done by giving students instructions from teachers who tend to use persuasive teaching procedures, techniques, and strategies for the development of the learner's knowledge and skills and to be equipped with values for a better quality of life. Teaching to be more effective, pre-planning is very essential. The teacher must undertake different activities that would give new views and meaningful ideas to bolster students' performance.

Nowadays, the pandemic COVID-19 situation poses a great challenge to the education system. The government proscribes traditional face-to-face learning in the classroom as a measure to contain the spread of the virus. Consequently, different learning delivery modalities are introduced as options for the different schools to implement. This pandemic brings discomfort and different challenges, especially to those teachers who are teaching skill-based subjects like Technology and Livelihood Education (T.L.E.). It is really hard for teachers to find the easiest way in delivering the skills in virtual (non-face-to-face) classes. It is hard to facilitate learning in this time of crisis. The sudden shift of the way of learning from face-to-face to virtual one has accompanying predicaments for learners most especially those without and/or having poor access to technology. Teachers need to think of alternative ways and solutions that will make them deliver quality education and overcome these trials brought about by the pandemic. In the new normal, teachers need to think of possible ways how to help students to accomplish their activities using available localized materials and equipment in their houses. The commonly used strategies to assist students' learning are through online communication, printed instructions, and electronic messages. With these strategies, students can still have effective learning with minimal teacher supervision but with more emphasis on self-study and parental assistance through the help of rubrics. These teaching strategies help the students to be more responsible in their studies and to develop a variety of skills. Hands-on activities make the learners' minds improve and learn more based on their experiences. Students should be encouraged to be creative and to think outside the box — let them realize that there are several ways to learn. Students learn best when there is active learning when they are engaged in hands-on activities and practical involvement.

The idea of this research topic is in line with the research thrust and priorities of the government. The National Research Agenda for Teacher Education (NRATE) highlights research potential topics to enhance the teaching and learning processes. Problems have arisen as to how students will have access to education amidst this pandemic (Jim, 2020). DepEd makes sure to find possible ways to carry on with providing quality education by implementing a distance learning modality—a non-face to face learning delivery mode where interaction takes place between the teacher and the students. This means that lessons will be taught in a non-traditional setup. Since traditional academic interaction is still not allowed, different learning modalities are being implemented to be effective options on how to deliver quality education to students.

During this time of crisis, when there are limited means of communication with the students, one of the subjects that is hard to facilitate is Technology and Livelihood Education (TLE) where learners' tasks are mostly skill-based or performance activities. One of the problems encountered by TLE teachers is improving students' performance (learner-centered teaching) wherein students are gaining experiences and knowledge through classroom interaction. Gregorio, M. (2015). This problem in terms of teaching

strategy use for instruction, how to enhance students' learning competencies using hands-on activities and personal learning experiences and if these strategies are having an impact on learners' holistic domain during this time of pandemic is also encountered by the present researcher. Certain strategies of teachers always have a great effect on the holistic performance of a learner.

The researcher believes that education must continue. In this study, "Learning competencies of students through hands-on activities and personal experiences in learning using digital teaching platforms and materials," the students still have the opportunity to experience and engage in the demonstration of knowledge and skills and then improve their learning competencies and other aspects of a learner to be a well-driven person.

### **Objectives of the Study**

Currently, the teacher is not anymore the spoon-feeder of knowledge, instead, he or she acts as a facilitator who guides students on how to discover new things. Students have greater interplay in gaining and acquiring knowledge as they are the ones who think critically and act actively to learn. Their schema or existing knowledge serves as their foundation to think outside their comfort zone. Past and current experiences also affect their learning since they can connect those experiences to newly discovered ideas. Learning by doing which is pioneered by John Dewey proves that there is long-term knowledge when students are the ones who will do their activities on their own by the use of scaffolding or guidance from someone with expertise. In different learning areas, teachers use different activities to obtain the output of students. Nonetheless, TLE is one of the subject areas which use most of the time hands-on activities, taking into account the proposition that it abides by practical learning that makes students do their activities actively and discover possible solutions to actual problems or situations. Personal experiences in learning whether in traditional or non-traditional settings and interactions may also help students to develop and improve their knowledge, skills, and values.

Unfortunately, the current pandemic situation limits the communication and collaboration of students. Nonetheless, even if students are currently engaged in distance learning modality, learning still takes place through hands-on activities. Teachers give students their assigned tasks through the use of printed instructions as well as digital video presentation and that will enable students to be properly guided in accomplishing these performance activities. Students are also guided by the use of rubrics to come up with the desired output.

Technology and Livelihood Education (TLE) is a skill-based subject. Therefore, teaching different TLE subject areas, specifically Cookery, must make use of experiential learning. Since Cookery is a skilled course, traditional face-to-face instruction is most appropriate but because of the situation brought by COVID-19, physical interactions are limited. Performance activities must still take place using distance learning using digital platforms. The demonstrations of understanding are expected for the learners at the end of every quarter and improve learning competencies as prescribed by Technical Education and Skills Development Authority (TESDA). Although face-to-face is still not yet applicable at this time, the teacher will continue to deliver quality education using the new learning modality. Distance Learning Modality will not be a problem to increase the student's interest in learning skills. They stay at home while learning together with their family members and it will encourage them to accomplish tasks, think creatively, and connect the prior knowledge or schema to the new concept. It is said that schema is the information and educational context a learner already has before they learn new information. A learner's knowledge can be enhanced by connecting of their prior knowledge with the new concept.

The above-mentioned propositions give the researchers ideas to conduct a research study in response to the chosen topic. The purpose of this research study is to encourage learners to fully understand that “Hands-on activities” and “Personal Experiences” truly help improve the learning competencies of a learner, especially in terms of knowledge, skills, and values, alongside the application of certain strategies which are effectively adopted in teaching, most especially during this time of the pandemic, and will help bolster students’ performance in all subjects, including TLE subject specifically Cookery.

Specifically, the objectives of this study are the following (1) To determine the students’ perception of the following hands-on activities as to; Individual Activities and Group Activities. (2) To find out the level of students’ personal experiences in learning Cookery in terms of; Integration of Theory and Practice, Collaborative Work Experiences, Academic Settings, and Educational Interactions. (3) To determine the mean level of students learning competencies in Cookery in terms of; Knowledge, Skills, and Values. (4) To find out if there is a significant relationship between hands-on activities and learning competencies in Cookery. (5) To find out if there is a significant relationship between personal experiences and learning competencies in Cookery.

### **Methodology**

This study used Correlational Descriptive design to assess the relationship between the following variables: Hands-on activities in Cookery which are Individual Learning Activities and Group Activities; Personal experiences such as Integration of Theory and Practice, Collaborative Work Experiences, Academic Settings, and Educational Interactions; and Learning Competencies in Cookery in terms of Knowledge, Skills, and Values of Grade nine students of LNHS academic year 2021-2022.

The respondents of this study were taken from Lusacan National High School. The respondents of this study are the Grade 9 enrolled students for SY 2021- 2022 handled by the researcher. The researcher looked into her records of the total number of her handled sections of Grade 9 students enrolled for the school year 2021-2022. Records revealed that each section has 35 students, so the total number of respondents is 175 since there are five sections handled by the researcher.

The first thing considered by the researcher is a request letter. Upon approval, the researcher retrieved the request letter. The assistance of the school head, as well as class advisers and other faculty members, were selected in the administration. After determining the number of respondents, the researcher began collecting essential data using a self-made questionnaire. The researcher gave the students enough time to answer the questions. The responses made by the students described their personal experiences, performing activities and anticipated problems were presented. This was also applied to Learning Competencies in cookery in terms of Knowledge, Skills, and Values. In providing an overall picture of the personal experiences, as well as anticipated problems in pursuing their studies through hands-on activities and its effect on students, summary presentations will also be presented.

Responses to the questionnaire by Grade nine students were statistically analyzed with the data requirements of the study. Descriptive statistics such as frequency count, mean, and percent were considered. After collecting the data, to provide answers to the problem, the researcher used the following treatment in the analysis and interpretation of data: Percentage were used for the variables which can be reduced into categories; Mean and Standard of Deviation were used in determining the respondents learning in terms of knowledge, skills and values impact of hands-on activities and personal learning experiences and to identify if the students are acquiring the competencies in cookery this time of COVID-19 pandemic; and Pearson r was used in determining the relationship between the variables shown in the paradigm, Learning Competencies in cookery in terms of knowledge, skills, and values, the impact of

hands-on activities and personal experiences on it, the relationship between the variables in this time of pandemic using distance learning modalities. For analysis and interpretation of data, alpha .05 and .01 were used by the researcher.

## Results and Discussion

The data shown were obtained from the results of the given questionnaire to the researcher. The main concern of this study was to determine the relationship between Learning Competencies in Cookery and the two independent variables which are the Hands-on Activities and Personal Learning Experiences of the students in Grade 9.

### 1. Profile of the Respondents

**Table 1**

*Profile of the Respondents in terms of Age, Section, Gender, Source of Internet Connection, and Educational Gadget*

Profile	Frequency	Percent
<b>Age</b>		
13	1	0.6
14	107	61.1
15	60	34.3
16	4	2.3
17	3	1.7
<b>Total</b>	<b>175</b>	<b>100</b>
<b>Section</b>		
CGG	35	20
HLL	35	20
CCV	35	20
CAM	35	20
CMA	35	20
Total	175	100
<b>Gender</b>		
Male	83	47.4
Female	92	52.6
<b>Total</b>	<b>175</b>	<b>100</b>
<b>Internet Connection</b>		
Data	104	59.4
Fiber	55	31.4
DSL	8	4.6
Cable	8	4.6
Total	175	100
<b>Gadget</b>		
Smartphone	166	94.9
Laptop	9	5.1
<b>Total</b>	<b>175</b>	<b>100</b>

Table 1 shows the actual age, section, gender, source of internet connection, and educational gadget of the respondents. Most of them are at the age of 14 with a frequency of 107 out of the total number of respondents which is 175. The least range of age that only got a frequency of 1 is the age of 13. There are five sections of Grade 9 in Lusacan National High School where the respondents were taken. Those five sections with an equal number of 35 respondents per section are CGG, HLL, CCV, CAM and CMA which are all handled in TLE (Cookery) subject by the researcher. The number of female respondents which is 92 out of the total number of 175 is larger than the frequency of the male respondents which is 83. The

source of the Internet Connection used by the respondents during classes is also presented in the table. It is revealed that most of the students used Mobile Data as their source of internet connection. The number of students who are using data is 104 while DSL and Cable both got the least frequency of 8. The table also shows the Educational Gadget used by the respondents. It is revealed that smartphones are the usual gadget used by the students and only 9 of the total respondents (175) used laptop.

**Table 2**  
 Profile of the Respondents in terms of Father and Mothers' Educational Attainment, Father and Mothers' Occupation, and Family Monthly Income

Profile	Frequency	Percent
<b>Father's Educational Attainment</b>		
Elementary Undergraduate	10	5.7
Elementary Graduate	21	12.0
High School Undergraduate	19	10.9
High School Graduate	68	38.9
Vocational Graduate	12	6.9
College Undergraduate	16	9.1
College Graduate	29	16.6
<b>Total</b>	<b>175</b>	<b>100</b>
<b>Mother's Educational Attainment</b>		
Elementary Undergraduate	7	4.0
Elementary Graduate	11	6.3
High School Undergraduate	22	12.6
High School Graduate	79	45.1
Vocational Graduate	4	2.3
College Undergraduate	26	14.9
College Graduate	26	14.9
Total	175	100
<b>Father's Occupation</b>		
Employed	102	58.3
Self-Employed	52	29.7
Unemployed	21	12.0
<b>Total</b>	<b>175</b>	<b>100</b>
<b>Mother's Occupation</b>		
Employed	57	32.6
Self-Employed	34	19.4
Unemployed	84	48.0
<b>Total</b>	<b>175</b>	<b>100</b>
<b>Family Monthly Income</b>		
5000 and below	45	25.7
5001-10000	45	25.7
10001-15000	40	22.9
15001-20000	20	11.4
20001 and above	25	14.3
<b>Total</b>	<b>175</b>	<b>100</b>

Table 2 presented the data of the respondents' Father's Educational Attainment. Most of them are High School graduates with a frequency of 68, 38.9% out of a total percentage of 100%, and the least frequency

is 10 which is Elementary Undergraduate. It is also presented the data of the respondents' Mother's Educational Attainment. Most of them are High School graduates with a frequency of 79, 45.1% out of a total percentage of 100%, and the least frequency is 4 which is Vocational graduates. The data on the table revealed the respondents' Father's Occupation. Most of them are Employed with the frequency of 102, 58.3% out of total percentage of 100%, and the least frequency is 21 which are Unemployed. The table also presented the data of the respondents' Mother's Occupation. Most of them are Unemployed fulfilling the duty as a housewife with the frequency of 84, 32.6% out of total percentage of 100%, and the least frequency is 34 which are Self-Employed. It is obviously revealed that most of the respondents' family earned an income ranging 5000 and below and 5001-10000 which has a frequency of both 45 and a percentage of 25.7%. The income range of 15001-20000 got the least frequency of 20.

## 2. Students' Perception in Hands-On Activities

**Table 3**  
*Perception in Hands-On Activities*

Hands-On Activities	Mean	Verbal Interpretation
Individual	4.22	Practice
Group	4.26	Practice
<b>Overall</b>	<b>4.24</b>	<b>Practice</b>

Table 3 shows the data on Students' perception of Hands-on Activities. Individual and Group Hands-on Activities are obviously both practice with a mean of 4.22 and 4.26 consecutively and with an overall mean of 4.24, verbally interpreted as "Practice". Students play an active role in carrying out experiments and reaching their own conclusions through different hands-on activities.

## 3. Level of Students' Personal Experiences in Learning Cookery

**Table 4**  
*Level of Students' Personal Experiences in Learning Cookery*

Personal Experiences	Mean	Verbal Interpretation
Integration of Theory and Practice	4.25	Practice
Collaborative Work Experiences	4.15	Practice
Academic Settings	4.27	Practice
Educational Interactions	4.22	Practice
<b>Overall</b>	<b>4.23</b>	<b>Practice</b>

Table 4 shows the data on Students' Personal Experiences in Learning Cookery. Integration of Theory and Practice, Collaborative Work Experiences, Academic Settings, and Educational Interactions are obviously all practices with a mean of 4.25, 4.15, 4.27, and 4.22 consecutively and with an overall mean of 4.23, verbally interpreted as "Practice". Having a personal learning experience on something makes us ahead of those who don't have any, and a hands-on approach really provides a good quality of experience that a learner must have. Personal experience or on-hand things is very much powerful to develop characteristics. When we experience things back then and it happened again, we can easily cope with it since there can be a reference on how can we act in the same situation.

## 4. Level of Students' Learning Competencies in Cookery

**Table 5**  
*Level of Students' Learning Competencies in Cookery*

Learning Competencies	Mean	Verbal Interpretation
Knowledge	4.28	Very Good
Skills	4.28	Very Good
Values	4.40	Very Good
<b>Overall</b>	<b>4.32</b>	<b>Very Good</b>

Table 5 shows the data of Students' Learning Competencies in Cookery. Knowledge, Skills and Values are obviously all verbally interpreted as "Very Good" with a mean of 4.28, 4.28, and 4.40 consecutively and with an overall mean of 4.32, verbally interpreted also as "Very Good". A high level of knowledge, skills, and values was attained along with learning. For students to be successful in life, they need to have knowledge and skills in accordance with the 21<sup>st</sup> century's competencies. It prepares students to learn and practice new knowledge and strategies, to express and explain their ideas, and to test their reasoning and recognize the need to modify their thinking.

### 5. Correlation Between Hands-on Activities and Learning Competencies in Cookery

**Table 6**  
*Correlation Between Hands-on Activities and Learning Competencies in Cookery*

Hands-on activities	Student Competencies in Cookery		
	Knowledge	Skills	Values
Individual	.715**	.707**	.646**
Group Activities	.608**	.624**	.593**

The data presented on Table 6 is the correlation between the hands-on activities and learning competencies in cookery. Hands-on Activities as to Individual activities as well as on Group Activities were significantly correlated to Learning Competencies in Cookery of Grade 9 students. As seen on the table, on Individual Activities, Students' competencies in cookery in terms of Knowledge, skills and values obtained r value of .715\*\*, .707\*\*, and .646\*\* respectively. This implies that Individual activities can really help to improve learning competencies in cookery. Individual exploration plays a great role on improving one's skills and knowledge about things. Participation in purposeful activities offers a high level of development in every individual that engages in individual activities. On the other hand, on Group Activities, the r value in students' competencies in cookery obtained was .608\*\* in terms of knowledge, .624\*\* in terms of skills, and .593\*\* in terms of values. On the article written by Boys and Girls Club of Central Texas (2014), it says that group activities promote other important and desirable qualities and character traits in students. There several benefits which help them to cooperate with their peer group and take part in group activities which help them a lot in their real life. The most important thing of taking part in group activities is that it teaches learners teamwork and a sense of responsibility. It is a move from the intrapersonal to the interpersonal in terms of personality development, social skills, emotional development, and communication skills. The study of Ryoo, M. S., & JK2783696 Aggarwal (2007) indicated that students who had better participation during the pair and small group activities manifested enhanced production of the target competencies, even though they did not perceive the activities in the actual classroom settings or laboratory.

### 6. Correlation Between Personal Learning Experiences and Learning Competencies in Cookery

**Table 7**  
*Correlation Between Personal Learning Experiences and Learning Competencies in Cookery*

Learning experiences	Student Competencies in Cookery		
	Knowledge	Skills	Values
Integration of theory and practice	.743**	.702**	.684**
Collaborative work experiences	.658**	.625**	.618**
Academic settings	.753**	.737**	.674**
Educational interactions	.776**	.797**	.702**

The data presented in the Table 7 is the correlation between personal learning experiences and learning competencies in cookery. Students’ personal learning experiences as to integration of theory and practice, collaborative work experiences, academic settings and educational interactions were significantly correlated to Learning Competencies in Cookery of Grade 9 students. As seen on the table, on the Integration of theory and practice, Students’ competencies in cookery in terms of Knowledge, skills and values obtained r value of .743\*\*, .702\*\*, and .684\*\* respectively. This implies that Integration of theory and practice can really help to improve learning competencies in cookery. Dorfman (1996) stated that the needed additional skill is the ability to acquire and make use of knowledge from practice in order for students to develop these skills and experiences. Learning the theories and applying those in practice make the students have a life-long learning that will help them to adapt in any real-life problems. On the Collaborative work experiences, the r value in students’ competencies in cookery obtained was .658\*\* in terms of knowledge, .625\*\* in terms of skills and .618\*\* in terms of values. Collaborative work experiences can also help to enhance Cookery learning competencies. In the study of Dzemicic Kristiansen et al. (2019), their findings indicate that in order to be successful in acquiring of knowledge, skills and even values in small groups, students' interpersonal behavior, their experiences and active participation in the classroom learning process, communication and support to each other, and teachers' influence on promoting students' interaction is very crucial. Working with others develop learners holistically, they will develop knowledge through sharing of ideas and perspectives. Students can also enhance their skills through collaboration and cooperation to do any assigned tasks, and obviously, they can develop values like the sense of belongingness for example in working with others. On the Academic settings, students’ competencies in cookery in terms of Knowledge, skills and values obtained r value of .753\*\*, .737\*\*, and .674\*\* respectively, it means that academic settings have a great help in betterment of learning competencies in cookery. Chandrasekaran et al. (2016) stated that the preferred way to combine study with life, family and work commitments for learners is distance education mode. That can extend their interest and engagement using different online learning platforms or technology as it drives to inform various skills. Students can provide a connection that will greatly benefit to students learning. Skills need to develop in grade 9 cookery are not new and not hard to acquire because students already have prior knowledge regarding the course. The students need to follow steps in order to accomplish tasks and of course they should know how to perform activities by the help of rubrics. And last, on the Educational interactions, students’ competencies in terms of knowledge is .776\*\*, .797\*\* in skills and .702 in values. This result also implies a positive correlation between Educational interactions and students’ competencies in cookery. According to the journal research of Wirt, Lesley G.; Jaeger, Audrey J. (2014), one fundamental aspect of engagement in education is teacher-student interaction. It has been associated with student success and persistence in gaining the three main domains in learning which are the knowledge, skills and values. Personal learning experiences of learners really help them in coping with different real-life situations and survive in any roles and tasks, it is obviously evident and observable that having previous experiences really improves the student’s knowledge, skills, and even values.

## Conclusions

In the light of findings of the study, the conclusions are drawn:

1. There is significant relationship between hands-on activities and learning competencies in cookery. Therefore, the null hypothesis posited in the study is not sustained.
2. There is significant relationship between personal learning experiences and learning competencies in cookery. Therefore, the null hypothesis posited in the study is not sustained.

## Recommendations

Since, it is revealed that hands-on activities and personal learning experiences of students are important in improving students' learning competencies in cookery in terms of knowledge, skills and values, it is appropriate to continue pursuing the practices implemented by the school.

Based on the findings and conclusion drawn from the study, the following recommendations are presented:

School Administration with the implementation of best practices in improving students' learning competencies in cookery, must continue providing instructional leadership and developing, implementing, and supporting the school systems and policies. They must also continue assisting and motivating teachers and staff in providing simulative learning experiences to students.

Parents may take time to continue supporting their son/daughter in improving their competencies in cookery through their proper guidance and motivation in accomplishing tasks and activities.

Teachers may take into account to provide information and clear instructions through different platforms of communication and given rubrics. Teachers must also continue to provide proper guidance to students in improving their competencies in cookery of knowledge, skills and values.

For future researchers, it is recommended that they intensively study on how to improve the competencies of students in cookery through hands-on activities and personal learning experiences.

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