

# Impact of Online Learning Among Hospitality Management Students: Laboratory Actual Performance

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**Abstract:** *This study was conducted to figure out the impact of digital learning on the performance results of third-year hospitality management students. It specifically aims to accomplish the following objectives: determine the student's level of self-efficacy through online learning; ascertain their accomplishments in laboratory performance through virtual learning; and establish an action plan that can be implemented based on the results listed below. This study employed descriptive-correlational research methods. The study's findings indicated that third-year students had high levels of confidence in their abilities, leading researchers to conclude that online laboratory activities benefit students' abilities and knowledge. In addition, the survey discovered that, apart from housekeeping, student laboratory activity successes in terms of culinary and kitchen essentials were moderate. The final finding was that while there is no significant correlation between students' self-efficacy in terms of housekeeping skills and attainments in laboratory activity and their actual performances, there is a significant correlation between students' self-efficacy in terms of knowledge and attainments in laboratory activity and actual performances.*

**Keywords:** Impact; Online Learning; Hospitality Management; Laboratory Performance

## I. INTRODUCTION

Hospitality Management education is an ever-changing field that emphasizes practical activities and online learning. To stay up to date with the industry's trends and technologies, academic institutions must provide students with practical skills that align with the field's requirements. It is crucial to equip students with the necessary tools and knowledge to succeed in this competitive field. Laboratory Activities in such courses help the student to attain the necessary skills needed in the course subject. In terms of learning ideas and comprehending the nature of science through concepts, it is essential to empower students with specific theoretical knowledge.

According to Chan, Y.K. (2012), laboratory activity is studying that occurs in a location where students may study, explore, and test with materials, resources, phenomena, and ideas individually or in groups. This learning is not limited to a physical laboratory location, but may also take place in other settings, such as an e-learning management program and computer-simulated virtual laboratories. Online learning has revolutionized the way students acquire knowledge, offering them greater flexibility and access to more resources. This is particularly significant in hospitality management, where innovative teaching techniques are essential. Therefore, it's important to evaluate the impact of online learning on the practical laboratory work of hospitality management students, especially in the digital age. In online learning to actual performances of students in a laboratory observation is that the behavior of the participant might not be the same as it would be in a natural setting. (Mover, 2014)

Learning can take place in the laboratory in a variety of methods, including observation of a case or phenomenon, hands-on practical instruction, and experimentation. The major goal of organizing laboratory activities for students would be to help them gain practical skills in their field of study. Laboratory learning allows students to apply and strengthen the theoretical principles given in class. It also aims to achieve a variety of learning goals, including experiential learning. (Ka Yuk Chan, 2012).

It is important to understand the impact of online learning in hospitality management for teachers, schools, and the industry itself. This study aims to investigate how well online learning tools work, how engaged students are, and how technology is used in labs. Specifically, the study evaluates the impact of online learning on third-year hospitality management students' practical skill development and their ability to apply theoretical knowledge in real-life situations through online laboratory activities. This will help us understand the actual learning capacities and performance of students in this field.

## **II. LITERATURE REVIEW**

### **A. Laboratory Activities**

According to Saraiva et.al (2019), Society believes that there is no equivalent substitute for hands-on activities where materials and equipment are used safely, and student experiences are guided. Society supports sustained investments to provide the facilities, equipment, curricula, and professional development needed for effective hands-on laboratories. The Tourism and Hospitality Laboratory is a learning space for teachers and students of tourism, hospitality, and leisure courses. Its purpose is to be an educational reference nucleus for meeting the demands of the institution and the external community. The proposal is to develop practical activities aimed at teaching, research, and extension, so that students can develop competencies, knowledge, skills, and attitudes; including theoretical-practical training that broadens the skills for professional performance.

In the study conducted by De Leon et al. (2021), titled 'Impact of Online Classes on Laboratory Subjects in Hospitality Management Students,' online laboratory classes were found to offer limited learning opportunities for students to engage with others. As a result, teachers and professors sought ways to enhance student engagement through social media platforms, helping learners improve their skills and boost their confidence in their respective fields. Laboratory experiments play a crucial role in students' learning and development as they allow them to ask questions, seek answers, conduct investigations, and collect data.

Furthermore, Ramesh (2019) revealed that students can acquire scientific concepts and new skills using virtual or online laboratories accessed through laptops and smartphones. According to the Program Pendidikan Vokasi (2022), this laboratory comprises a Front Office, Accounting Hotel, Housekeeping, Food and Beverage Service, Food Production, Pastry, Bartending, Stewarding, and Storeroom. Collaborations with various associations in the hospitality and restaurant industry, including IHRA (Association of Hotels & Restaurants Indonesia), and external laboratories, provide students with opportunities to apply both theoretical knowledge and practical skills within the restaurant and hospitality industries. Additional practical activities include the On-the-Job Training Program and Field Trip Program, which prepare students for the professional work environment and help them develop the required attitudes and behaviors. According to Father Leblond's blog (2019), laboratories are considered relevant and essential components in teaching both science and computer-related subjects.

### **B. Housekeeping**

Based on the Study of Roberts (2016). The Housekeeping department takes pride in keeping the hotel clean and comfortable, to create a 'Home away from home'. All accommodation establishments aim to provide their customers with clean, attractive, comfortable, and welcoming surroundings that offer value for money. Nothing sends a stronger message than cleanliness in a hospitality operation. No level of service, friendliness, or glamor can equal the sensation a guest has upon entering a spotless, tidy, and conveniently arranged room.

The housekeeping department in a hotel plays a crucial role in ensuring the cleanliness, upkeep, and visual appeal of both guest rooms and public areas. This department not only efficiently prepares and cleans guest rooms but also maintains the entire hotel property to keep it as fresh and inviting as it was on its opening day for business. A hotel survives on the sale of rooms, food, beverages, and other minor services such as the laundry, health club spa, and so on. The sale of rooms constitutes a minimum of 50 percent of these sales. Thus, the major part of the hotel's margin of profit comes from the room sales, because a room, once prepared, can be sold repeatedly. The effort that a housekeeping department makes in giving a guest a desirable room has a direct bearing on the guest's experience in a hotel. Guestrooms are the heart of the hotel. The housekeeping department not only prepares a clean guestroom on a timely basis for arriving guests but also cleans and maintains everything so that the property is as fresh and attractive as

the day it opened for business. Housekeeping is typically categorized as a "backstage" department, even though it involves certain interactions with guests, such as room cleaning, laundry collection, and evening or turndown services. The team succeeds in building and maintaining the right image and reputation of the hotel by providing excellent and quality services through standard practices.

### **C. Culinary**

A food enthusiast is someone with a profound interest in food and beverages, primarily driven by the desire for new culinary experiences rather than mere hunger. They take pleasure in savoring the flavors and aromas of expertly crafted dishes and beverages (Sherri Scott, 2017). Implementing fundamental steps, such as effectively promoting a destination's authenticity in its food tourism offerings through marketing and meeting visitors' expectations by using sustainable, high-quality products, can significantly enhance culinary tourism as an independent product and amplify its benefits for travel destinations (Wawira, 2017). In a study conducted by Jeffrey N. Brown EdD et al. in 2013 titled "A Comparison of Learning Outcomes in Culinary Education: Recorded Video vs. Live Demonstration," students in both groups received identical teaching instructions, except for the delivery methods of the demonstrations. A 2-way mixed design was employed to examine substantial differences in student performance between the two instructional delivery methods, namely online taped video and live class demonstrations, for both individual and team tasks.

The findings revealed that, when considering both individual and team tasks, both teaching methods produced similar student performance. However, students instructed through the online delivery approach demonstrated enhanced group performance compared to those taught through the conventional method. These results suggest that online instruction is suitable for culinary arts education, but there is room for improving group dynamics to further boost group performance in educational settings using this approach.

### **D. Kitchen Essentials**

A recent review of Wang & Huang's work in 2018 highlights the necessity of analyzing kitchen essentials to determine the size of the kitchen application space and equipment demand. This analysis aims to meet people's requirements for time-saving, comfort, and ease of operation by understanding the necessary equipment, furniture, activity patterns, frequency of use, hours of operation, and other related elements. As emphasized by Tipton in 2019, the saying "the right tool for the right job" and "you are only as good as your tools" underscores the paramount importance of having suitable cooking equipment, both in your kitchen and in a restaurant. For those aspiring to excel in cooking, having the right cooking equipment is vital for success and minimizing frustration.

### **E. Hospitality Management**

Buston University (2022). Recently Highlighted that If You love building human connections and working in a global team, and you are ready to take on the challenge of thinking creatively, then studying hospitality management might be a great option for you. An industry as diverse as the culinary delights that grace its establishments' tables. A customer-oriented mindset is the guiding principle of the industry. Then there is management which stands for leadership and responsibility. In the Study conducted by EHL Insights (2022). Put the two together, and you get "hospitality management". (EHL Insights, 2022). Hospitality management is a broad field that involves overseeing the day-to-day administrative, operational, and commercial activities of businesses in the hospitality industry. Hospitality management: the go-to choice for those with a service mindset, aptitude for critical thinking, and hunger for leadership looking to work in a diverse field.

A degree in hotel administration can allow you to pursue a variety of careers, ranging from hospitality management to entrepreneurial endeavors. Hospitality is an industry that involves administrative, operational, and commercial facets that can be applied to any sphere of interest that prioritizes service. That means you can apply your hospitality knowledge from your degree and your passion to a wide range of enterprises, from property and event management and marketing to tourism, entertainment, food and beverage management, and entrepreneurship (Cornel and Nolan, 2022). If you are interested in a career in hospitality management, you will learn all about this industry and how to get started in this article (Revfine, 2021).

### **F. Effects of Online Learning**

The technology integration in learning activities at various educational levels by presenting online learning activities has been conducted in many countries (Rizal et al., 2019) and has become increasingly popular in learning and teaching activities to replace traditional classes (Lin & Chen, 2017). Online learning with various tools has influenced learners well in developing their knowledge and skills (Jung & Lee, 2020; Patiar et al., 2020). As a versatile platform for learning and teaching processes, the E-learning framework has been increasingly used (Salloum&Shaan, 2018). Song (2010) added that online learning technology can simplify a concerted student-centered learning environment. Radovic-Makovic (2010) proposed that there are many advantages and disadvantages to the use of online teaching platforms when compared to traditional pedagogical approaches. One advantage is the easy availability of research material online which has enhanced virtual teaching platforms and has benefitted the learning of students and enhanced the interaction between instructors and students.

Online hospitality courses are becoming more popular than normal institutions delivering face-to-face instruction. Compared to the traditional ways of learning, online learning has increased study efficiency, which results in studies being completed in a shorter time frame. This favors the learner, especially when he is eager to start his career in the workforce as soon as he completes his studies. Online learning is becoming popular when delivering information at the fastest time. Jacqueline Wong et al (2019) reviewed that in online learning environments where the instructor presence is low, learners must make the decisions regarding when to study or how to approach the study materials. Therefore, learners' ability to self-regulate their learning becomes a crucial factor in their learning success. Supporting self-regulated learning strategies can help learners become better at regulating their learning, which in turn could enhance their learning performance. As some students find that online meetings and teaching are less valuable because of less demand for online participation, it is important to highlight interpersonal dialogues, interactions, and scaffolding of online activities. Thus, Chigeza and Halbert (2014) find that there is a need for several pathways of support to enable some of these pre-service teachers to be online learners, and a need for ways in which students can interact reflectively with content (Donnelly and Hume, 2014).

Hospitality and tourism educators are continuously adjusting response actions to the pandemic situation and exerting their best to maintain the operation of the education system. Hospitality and tourism education has shifted from offline to online educational delivery during this period. Most teaching classes, seminars, and workshops are carried out online to reduce unnecessary face-to-face activities. Ramesh (2019) revealed that students can learn scientific concepts and gain new skills using virtual/online laboratories through laptops and smartphones. Mtebe and Raisamo (2014) stated that effective course design will help improve performance through learner's knowledge and skills. According to Loike and Stilts (2029), online in the wake of the COVID-19 pandemic has given faculty members even Universities and Colleges little to no time for planning and preparation. Almaiah&and Almulhem (2018) evaluated that if the course is not designed effectively then it might lead to low usage of e-learning platforms by teachers and students. In a survey conducted by Sciarini, Beck, and Seaman (2012) on the popularity of online learning coursework, it was found that almost 35% of hospitality students indicated that the delivery of face-to-face material is the same as in the online mode. However, almost 50% stated that face-to-face delivery was more effective. Only 20% said that online delivery was superior when it concerns the demonstration of content. The survey also recorded that more than half of the hospitality administrators believed that face-to-face content is greater than online when it concerns communication between students and tutors. In general, 80% of hospitality administrators show that they favor face-to-face instruction over online learning styles. Instead of aggressively contributing, like the traditional method, students tend to be more relaxed and watch demonstrations on video rather than participating (Mejia & Phelan, 2014).

### **G. Performance, Skills, and Knowledge Acquired in Laboratory Activities**

According to Sisson and Adams (2013), a combination of hands-on activities and a cluster of related knowledge, attitudes, and skills must be correlated with performance, measured against standards, and improved through educational initiatives. Rahman (2014), states that most studies involving needs assessment in the Hospitality Industry are conducted mainly to analyze the industry expectations and students' perceived level of preparedness with very little work that considers the expectations of hospitality educators. Hospitality Industry experience has been an important job requirement for Hospitality educators across the world. To meet the needs of the rapidly changing hospitality industry,

educators must continually investigate and identify the essential competencies demanded by the industry and revise the curriculum to meet these needs to achieve much-needed integrated educational outcomes (Sisson and Adams, 2013). Jefferis et al. (2020) evaluated that there is a disparity between the soft skills that are seen as necessary in the hospitality service industry and the perception that hospitality students have of the skill set, they possess, as well as their readiness for the hospitality industry. While students can acquire some soft skills via internships or by learning on the job, hotel managers seek employees with a level of readiness that is often lacking. The responses of hospitality service students show a lack of awareness as to the specific soft skills that are necessary for them to acquire. According to top researchers in the field of hospitality, the following qualities were determined to be invaluable for future service professionals. Alonso and O'Neil, in their article, "What Defines the "Ideal" Hospitality Employee," stated a need for employees with attitudinal characteristics of good work ethic, punctuality, responsibility, and accountability. Soft skills include interpersonal traits, which, according to Wolfe, Phillips, and Asperin (2014), are the models for soft skills for those who serve in the hospitality industry. According to Michael McKay of Typsy.com (2017), the Department of Tourism, Leisure, Hotel and Sport Management in 2015 claimed the hospitality workplace demands skills such as problem-solving, critical thinking, and emotional intelligence, which are important to the performance of businesses, and subsequently success for employees. However, managers in the industry find that students' perceptions of the skills that they need have been at odds with the actual soft skill set that they need to succeed. It was discovered in the previous research study that soft skills such as communication were crucial in career advancement for some. For the hotel mid-management movement, directing and delegating skills were very important. What is also important is the skill of listening, which plays a major role in advanced positions, such as those of the general managers. While these are not the only skills for the industry, others, such as interpersonal, leadership, and conceptual-creative competencies are seen as very important for hotel manager trainees. However, technical skills, which could be thought of as very important by some, came in as the least important (Sisson & Adams, 2013).

#### **H. Theoretical Framework**

This theory was guided by theory and concepts. These are: The theory of Culinary, a theory on how to be a culinary professional; Kitchen Essential and Basic Food Preparation; and Role of Housekeeping.

##### **Theory on how to be a Culinary Professional**

A culinary professional is responsible for more than just good food since it is a culinary art of food preparation, cooking, and presentation, typically in the form of meals. It requires knowledge for meal preparation that is as pleasing to the eye as it is to the plate.

##### **Kitchen Essential and Basic Food Preparation**

To improve each student's knowledge and skills in the cooking perspective and technique in food preparation, Kitchen Essential and Basic Food Preparation is a series of discussions on kitchen essentials that includes tools and equipment used in food preparation, basic cooking principles, and ingredients used in the kitchen. Also, it includes mastering the most common culinary arts knife cuts to bring you one step closer to creating impressive-looking, evenly cooked, delicious meals, familiarization with spices used to flavor various dishes, and the five mother sauces used in various cuisines.

##### **Role of Housekeeping**

Housekeeping is a hotel operations department responsible for the cleanliness, maintenance, and aesthetic upkeep of rooms, public areas, back areas, and the surroundings. The effort that the housekeeping makes in giving a guest a desirable room has a direct bearing on the guest's experience in a hotel. Good management of the housekeeping department depends on achieving a balance between the workload and the staff strength.

With these theories and concepts, it could be relevant for the researchers to consider the above-guided theory and concepts on what the researcher is conducting. These will help to define the relevant variables of the study and map out how they might relate to each other.

**Research Paradigm**

Independent Variables

Dependent Variables

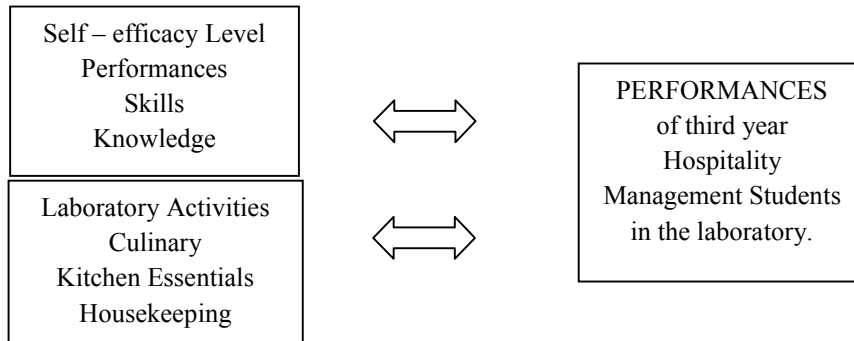


Fig. 10. Schematic diagram of the study showing the independent and dependent variables of the study

**III. METHODOLOGY**

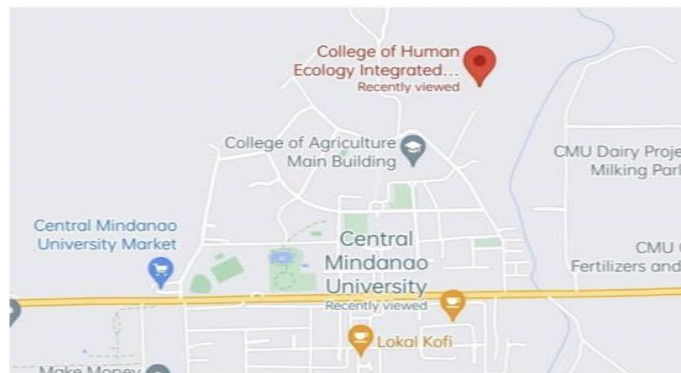
In this chapter, the research methodologies to be employed in the study are presented. These methodologies encompass various aspects, including the research design, the geographical scope of the study, the study's participants, the research instruments used, the data collection procedure, and the statistical tools to be applied in the study.

**A. Research Design**

This research will employ a descriptive-correlational research design. The primary objective of this study is to provide a comprehensive description of the Self-Efficacy Level, Laboratory Activities, and Performance of Third-Year Hospitality Management Students enrolled at Central Mindanao University. Rigorous measurement techniques will be utilized to collect data and determine the potential existence of a relationship between the independent and dependent variables under investigation.

**B. Research Locale**

This study will be conducted at Central Mindanao University in the Department of Hospitality Management under the College of Human Ecology. In the center of Mindanao Island, Province of Bukidnon, the Philippines, lies Central Mindanao University, sometimes known as "The Academic Paradise of the South." It is one of the oldest premier universities in Southern Philippines. The university's ten (10) colleges provide 11 doctoral degree programs, 28 master's degree courses, and 33 undergraduate degree programs. Central Mindanao University is among the 2022 top 10 Universities in the Philippines and was awarded for being one of Asia's Outstanding Academic Institutions by the CMO Asia last August 17, 2022, at Pan Pacific, Singapore.



Highlights the map of the College of Human Ecology at Central Mindanao University as the locale of the study.

**C. Participants of the Study**

The participants of this study will be Third-Year students at the College of Human Ecology in Central Mindanao University who are currently enrolled in Bachelor of Science in Hospitality Management during the academic year of 2022-2023. A total of 111 students were identified. The chosen fifty (50) participants of the students will be used to determine the target population.

**D. Research Instrument**

In this study, the primary instrument for data collection will be a questionnaire. To ensure the validity and reliability of this research tool, it will undergo a pilot testing phase conducted by third-year college students enrolled in the Hospitality Management program at Central Mindanao University. The questionnaire consists of three distinct sections.

Part I dealt with the personal information of the respondents and included the directions that served as a guide to answer the questions.

Part II is the level of self-efficacy such as a. skills b. knowledge. The research rating scale uses a 5-point scale. It is coded with the number 5, 4,3,2,1.

Part III dealt with the Attainments in Laboratory Activities such as a. Culinary b. Kitchen Essential c. Housekeeping. And the Performances of the Third Year Hospitality Management students among the variables. The questionnaire rating scale uses a 5-point scale. It is encoded with the number 5, 4,3,2,1. The descriptions of each scale are as follows:

**E. Data Gathering Procedure**

The research team intends to seek permission from the College of Human Ecology (CHE) at Central Mindanao University, including the Dean, faculty members, and third-year students enrolled in the Hospitality Management program. This permission will encompass both conducting the survey or research at the designated location and securing their consent to participate in the study. Subsequently, once approval is granted, the researcher will provide a formal letter to the instructors before proceeding to distribute the questionnaire to the students. Upon obtaining the necessary permissions, the researcher will commence the data collection process and distribute the questionnaires to the study's participants. The researcher will promptly verify, compile, tabulate, present, and assess the data collected through the research questionnaire, constituting a critical component of the primary research text.

**F. Statistical Treatment**

In interpreting the data, the following statistical procedures were employed to answer the specific problems of the study: Mean Values and overall computed means will be utilized to determine the extent of modular distance learning, and the difference between online learning and actual attainments of Third Year students applying Laboratory activities. To ascertain the level of performance of Third Year Hospitality Management students.

To evaluate if the dependent and independent variables have a substantial connection. The Pearson-R or Pearson-product moment relationship will be used. To determine which variable singly, or in combination, best predicts the student's actual learning or performance.

<i>Scale</i>	<i>Range</i>	<i>Descriptive</i>	<i>Qualitative Interpretation</i>
5	4.50-5.00	Strongly Agree	Highly Observed
4	3.50-4.49	Agree	Sometimes Observed
3	2.50-3.49	Undecided	Observed
2	1.50-2.49	Disagree	Less Observed
1	1.00-11.49	Strongly Disagree	Not Observed at all

**IV. FINDINGS AND DISCUSSION**

This chapter presents the data and the interpretation of the results of the study. It showed the level of self-efficacy in terms of, a. Skills b. Knowledge and the attainments in their laboratory activity in terms of a. culinary b. Kitchen Essential c. Housekeeping. Lastly, the “Relationship between the Level of Self-efficacy and their Attainments in Laboratory Activity of the third-year students of Hospitality Management and their Performances”. The order of presentation follows the order in which the research problems are presented.

**A. Level of Self-efficacy**

The Prevalent Level of Self-efficacy of Third-Year Students of Hospitality Management at Central Mindanao University is a. Skills and b. Knowledge. Data on the Level of Self-efficacy in terms of the Skills of the respondents are presented in Table 1.

TABLE 1.

Indicator	Mean	Descriptive rating	Qualitative interpretation
I gained necessary skills through online laboratory activity.	3.94	Usually	High
I am confident with the skills I gained from online activity.	3.70	Usually	High
I demonstrate it with interest.	4.06	Usually	High
Enhance my needed skill for the laboratory activity.	4.04	Usually	High
I can show my skills attainment in actuality.	3.90	Usually	High
OVERALL MEAN	3.93	Usually	High

Skills

Legend:

Range	Description Rating	Qualitative Interpretation
4.51 - 5.0	Always	Very High
3.51 - 4.50	Usually	High
2.51 - 3.50	Sometimes	Moderate
1.51 - 2.50	Rarely	Low
0.51 - 1.50	Never	Very Low

Table 1 shows that the Third Year Students have manifested their Level of Self-efficacy in terms of Skills as “high” having a mean of 3.93. This means that Skills are usually gained through virtual. The highest mean of the Level of Self-efficacy in terms of Skills is 4.06 which states that the third-year students of Hospitality Management “usually” demonstrate it with interest. The lowest mean of the Level of Self-efficacy in terms of Skills is 3.70 which states that third-year students of Hospitality Management are “usually” confident with the skills they gained from online activity. However, Elhashash (2018) proposes that the virtual teaching and learning environment designed to improve students' laboratory skills is preferred as a virtual lab. In contrast to the limitations of real labs, the learner can conduct a variety of experiments there without any restrictions on time or location.

TABLE 2.

Indicator	Mean	Descriptive rating	Qualitative interpretation
I learned the procedures easily.	3.60	Usually	High
I easily understand the given task.	3.78	Usually	High
I remember all the procedures.	3.48	Sometimes	Moderate
I easily catch up on what to do.	3.82	Usually	High
It is hard for me to actually perform it.	2.98	Sometimes	Moderate
OVERALL MEAN	3.53	Usually	High

Knowledge

Legend:

Range	Description Rating	Qualitative Interpretation
4.51 - 5.0	Always	Very High
3.51 - 4.50	Usually	High
2.51 - 3.50	Sometimes	Moderate
1.51 - 2.50	Rarely	Low
0.51 - 1.50	Never	Very Low

It can also help with practical skill development and scientific thinking. As conducted by Cople and Upmacis (2021) they were also concerned about the potential effects on the students of the switch to remote learning. For instance, we anticipated that some students could complain that they weren't getting "the full feel of the lab," meaning that they weren't getting the visceral sensations of contacting and experiencing the actual experiment, nor were they learning how to use real lab equipment or instruments.



Data on the Level of Self-efficacy in terms of their knowledge of the respondents are presented in Table 2. As shown in Table 2, in the level of self-efficacy: Knowledge was rated by students as “usually” with a mean of 3.53 which indicates a qualitative interpretation of “high”. Most of the indicators in knowledge were rated "usually" except for indicator 3 with a mean of 3.48 which means that the students sometimes remember all the procedures given by the instructors. The highest mean of the Level of Self-efficacy in terms of Knowledge is 3.78 which states that the third-year students of Hospitality Management “usually” easily understand the given task. The lowest mean of the level of self-efficacy in terms of knowledge is indicator 5 with a mean of 2.98 which states that third-year students of Hospitality Management sometimes have a hard time performing it.

The results indicate that the teaching and learning quality as well as the students' mental health were most impacted by COVID-19 on students' online learning experiences. Students' anxiety was caused by a variety of factors, including COVID-19 itself, social and physical limitations, a lack of familiarity with new learning environments, technical difficulties, the ability to catch up on lessons, and worries about their ability to pay for education. These results are in line with those of Copeland et al. (2021) and Fawaz et al. (2021), who reported that the pandemic hurt students' mental and emotional health. This information emphasizes the need to pay close attention to the mediating impacts of mental health, mobility limits, and readiness for providing online learning.

TABLE 3.

Areas	Mean	Qualitative interpretation
Skills	3.93	High
Knowledge	3.53	High
OVERALL MEAN	3.73	High

Summary Table on Level of Self-efficacy of Third Year Students' in Hospitality Management

Legend:

Range	Description Rating	Qualitative Interpretation
4.51- 5.0	Always	Very High
3.51 - 4.50	Usually	High
2.51 - 3.50	Sometimes	Moderate
1.51 - 2.50	Rarely	Low
0.51 - 1.50	Never	Very Low

As shown in Table 3, the level of self-efficacy in terms of performance, skills, and knowledge was rated by third-year students as "high" with a mean of 3.73, which indicates their capacity to enhance certain results and acquire or participate in actions at required levels (Bandura, 2006, 2012). All of the areas in the Level of Self-Efficacy of the third-year students were interpreted as high," which means that the students usually attain the actual attainments through online laboratory learning.

### B. Attainments in Laboratory Activity

The prevalent attainments in laboratory activities of the third-year students in hospitality management at Central Mindanao University are a. Culinary; b. Kitchen Essentials and c. Housekeeping. Data on the attainments in laboratory activity in terms of culinary skills of the respondents are presented in Table 4.

Table 4 shows that the third-year students have manifested their attainment in culinary laboratory activities as high, with a mean of 3.62. This means that they attain the activity through online learning. The highest mean of the culinary indicator of the students is 4.16, which states that the students are having fun performing each of the activities. The lowest mean is indicator 5, with a mean of 3.06, which means that sometimes they have a hard time doing it.

According to Mao et al. (2013), the findings showed that when individual and team tasks were considered, the student performance levels produced by both delivery methods were comparable. However, when compared to students who used the traditional method, students using the online delivery method might have performed better in groups. The results indicate that the online learning technique should be used in culinary student learning; however, in contexts where this delivery method is used, efforts to improve group synergy might improve group performance.

TABLE 4.

Indicator	Mean	Descriptive rating	Qualitative interpretation
I can cook well.	3.86	Usually	High
Performing excellent plating.	3.42	Sometimes	Moderate
Confident to perform it in an actual laboratory.	3.62	Usually	High
Having fun in performing each of the activities.	4.16	Usually	High
Having a hard time doing it	3.06	Sometimes	Moderate
OVERALL MEAN	3.06	Usually	High

Culinary

Legend:

Range	Description Rating	Qualitative Interpretation
4.51 - 5.0	Always	Very High
3.51 - 4.50	Usually	High
2.51 - 3.50	Sometimes	Moderate
1.51 - 2.50	Rarely	Low
0.51 - 1.50	Never	Very Low

Data on the Attainments in Laboratory Activity in terms of kitchen essentials of the respondents are presented in Table 5.

TABLE 5.

Indicator	Mean	Descriptive rating	Qualitative interpretation
I put all the ingredients given by the instructor/laboratory manual.	3.84	Usually	High
I clean it after I'm finished cooking.	4.60	Always	Very High
I have the same skill in my previous video in performing it in an actual laboratory.	3.84	Usually	High
I put the proper measurements.	4.32	Usually	High
I feel compelled to cook dishes especially when I do it for the first time.	3.88	Usually	High
OVERALL MEAN	4.10	Usually	High

Kitchen Essential

Legend:

Range	Description Rating	Qualitative Interpretation
4.51 - 5.0	Always	Very High
3.51 - 4.50	Usually	High
2.51 - 3.50	Sometimes	Moderate
1.51 - 2.50	Rarely	Low
0.51 - 1.50	Never	Very Low

As shown in Table 5, the attainments in laboratory activities in terms of kitchen essentials were rated by students as "usually" with a mean of 4.10, which indicates a qualitative interpretation of high. The highest mean of the attainments in laboratory activity in terms of kitchen essentials is 4.60, which states that they always clean it after finishing the cooking. The lowest mean of the attainments in laboratory activity in terms of kitchen essentials is indicators 1 and 3, with a mean of 3.84, which states that the third-year students of hospitality management usually put all the ingredients given by the instructor or laboratory manual and have the same skill as in their previous video in performing it in the actual laboratory.

As mentioned by Benja (2019), a meal cannot fulfill its potential without a complete ingredient that is also distinctive in and of itself. The ingredients themselves express the nation's culinary character in a similar way to how local recipes do. It would be accurate to state that if the chef's job is to bring out the best in the ingredients, then the ingredient's job is to showcase and bring out the finest that the dish and its place of origin have to offer.

Data on the Attainments in Laboratory Activity in terms of housekeeping of the respondents are presented in Table 6.

TABLE 6.

Indicator	Mean	Descriptive rating	Qualitative interpretation
I can perform it well in actuality.	3.88	Usually	High
I have the attitude in doing the activity.	3.68	Usually	High
I hate role playing as giving services.	2.50	Rarely	Low
I find it hard doing the actual laboratory.	2.96	Sometimes	Moderate
I can assure that I'm good at cleaning and serving guests properly.	4.08	Usually	High
OVERALL MEAN	3.42	Sometimes	Moderate

*Housekeeping*

Legend:

Range	Description Rating	Qualitative Interpretation
4.51 - 5.0	Always	Very High
3.51 - 4.50	Usually	High
2.51 - 3.50	Sometimes	Moderate
1.51 - 2.50	Rarely	Low
0.51 - 1.50	Never	Very Low

Table 6 shows that the third-year students have manifested their attainment in housekeeping laboratory activity as moderate, with a mean of 3.42. This means that they moderately attain the activity through online learning. The highest mean of the housekeeping activity is indicator 5, with a mean of 4.08, which states that the students usually ensure that they're good at cleaning and serving guests properly. The lowest mean is indicator 3, with a mean of 2.50, which means that people rarely hate role-playing as much as giving services.

According to Roberts (2016), the crew is successful in creating and preserving the proper brand and image of the hotels by offering top-notch services using accepted procedures. Nothing in a hospitality setting conveys a message more strongly than cleanliness. No degree of friendliness, service, or glitz can compare to the feeling a visitor gets when they walk into an immaculate, orderly room that is thoughtfully set up.

TABLE 7.

Areas	Mean	Qualitative interpretation
Culinary	3.62	High
Kitchen Essential	4.10	High
Housekeeping	3.42	Moderate
OVERALL MEAN	3.71	High

*Summary Table on the Attainments in Laboratory Activity of Third Year Students' in Hospitality Management*

Legend:

Range	Description Rating	Qualitative Interpretation
4.51 - 5.0	Always	Very High
3.51 - 4.50	Usually	High
2.51 - 3.50	Sometimes	Moderate
1.51 - 2.50	Rarely	Low
0.51 - 1.50	Never	Very Low

As shown in Table 7, the attainments in laboratory activities in terms of culinary, kitchen essentials, and housekeeping were rated by the third year. Students' as "high" with a mean of 3.71, which indicates that limited resources and equipment, make it possible for students to comprehend subjects better. Through a visual, immersive experience, professors may readily communicate difficult theoretical topics to students through virtual laboratories, which can help students comprehend them more easily (Hurix, 2020). Most of the areas in Attainments in Laboratory Activity of the third-year students were interpreted as high," which means that the students usually attain the actual attainments through online laboratory learning. The lowest mean is housekeeping with a mean of 3.42, which means that the students have moderately attained this activity.

**C. Relationship between the Level of Self-efficacy and their Attainments in Laboratory Activity of the third-year students of Hospitality Management and their Performances**

TABLE 8.

Indicator	Mean	Descriptive rating	Qualitative interpretation
I repeat when I make a mistake in the given activity.	3.64	Usually	High
Unable to properly execute the laboratory activity due to lack of equipment to use.	3.44	Sometimes	Moderate
I am able to perform it in actuality.	3.88	Usually	High
I was satisfied with my video presentation of my previous activity.	3.82	Usually	High
Little interest in given laboratory activity.	2.96	Sometimes	Moderate
OVERALL MEAN	3.55	Usually	Moderate

*Performances on Third Year Hospitality Management Students*

Legend:

Range	Description Rating	Qualitative Interpretation
4.51 - 5.0	Always	Very High
3.51 - 4.50	Usually	High
2.51 - 3.50	Sometimes	Moderate
1.51 - 2.50	Rarely	Low
0.51 - 1.50	Never	Very Low

As shown in Table 8, in the level of self-efficacy, performance was rated by students as “usually” with a mean of 3.55, which indicates a qualitative interpretation of “high”. The highest mean of the level of self-efficacy in terms of performance is indicator 3, with a mean of 3.88, which states that the students can perform it in practice. The lowest mean of the level of self-efficacy in terms of performance is the indicator Little interest in given laboratory activity, with a mean of 2.96, which states that third-year students of hospitality management sometimes have little interest in given laboratory activities.

As mentioned by Tuysuz (2010), activities in the laboratory help students learn and develop their interest in the topics being discussed in class. Hands-on experiments are rarely conducted in schools due to a lack of laboratories or inadequate equipment in laboratories. However, because of recent advancements in information technology, such studies may now be performed online. In this study, the impacts of creating a virtual classroom for students on their academic performance and attitudes were examined. The findings of this study demonstrated that, when compared to conventional teaching techniques, virtual laboratories had favorable effects on students' performance and attitudes.

TABLE 9.

Pearson Correlation		Significance
Level of Self-efficacy	0.211	0.141
Skills		
Knowledge	0.322	0.023*
Attainments in Laboratory Activities	0.349	0.013*
Culinary		
Kitchen Essentials	0.424	0.002**
Housekeeping	0.040	0.782

*Relationship of Level of Self-efficacy in terms of skills and knowledge and attainments in Laboratory Activities on their performances.*

Legend:

Range	Description Rating	Qualitative Interpretation
4.51 - 5.0	Always	Very High
3.51 - 4.50	Usually	High
2.51 - 3.50	Sometimes	Moderate
1.51 - 2.50	Rarely	Low
0.51 - 1.50	Never	Very Low

Table 9 shows that the level of self-efficacy in terms of skills has a Pearson R-value of 0.211, which means that it has a weak correlation to the performances, while knowledge has a Pearson R-value of 0.322, which means that it is weak, but this variable has a significant correlation to the performances of the students.

This support was provided by Alyami et al. (2017), who conducted a study on 214 university students and revealed that academic self-efficacy has a positive and significant effect on their academic performance. Other studies have shown that academic self-efficacy has a considerable effect on students' learning, motivation, and academic performance.

The attainments of laboratory activities in terms of culinary have a Pearson R-value of 0.349, which has a weak correlation but is significant to the performances of the third-year student. In terms of kitchen essentials, which have a Pearson R-value of 0.424, there is a moderate correlation, but it is highly significant to the performances of the third-year students. Lastly, in terms of housekeeping, it has a Pearson R of 0.040, which means that it has a very weak correlation to the performances of third-year students in hospitality management.

TABLE 10.

Indicator	Action Plan	Indicator of Attainment
Culinary	Synchronous learning to improve more the skills and knowledge they gain in asynchronous or online modality.	Very high possibility of gaining necessary skills
Kitchen Essential	Synchronous and asynchronous modality of learning to maintain and improve the same skills in their previous videos and performing it in actual laboratory	Very high possibility of gaining necessary skills
Housekeeping	Synchronous modality of learning and finding ways to provide some materials and equipment to use for every laboratory activity.	Very high possibility of gaining necessary skills

*Action plan that can be done based on the outcomes of the BSHM students' self-efficacy level and their attainments in laboratory activities during online learning.*

## V. CONCLUSION

The following conclusions are drawn from the findings:

The level of self-efficacy in hospitality management third-year students in terms of skills shows a high result, which means students' interest in skills usually gained through virtual. The level of self-efficacy in terms of knowledge indicated a high result, which means students sometimes remember all the procedures given by the instructor virtually.

The attainments of third-year Hospitality Management students in terms of the Culinary Laboratory show a high result, which means they attain and perform well in their culinary activity virtually. The attainments of students in terms of Kitchen Essentials laboratory are high, which indicates that they can still perform well in their Kitchen Essentials accurately online. The attainments of the students in terms of the Housekeeping Laboratory show a moderate result, which means that they moderately attain the activity in Housekeeping in online learning.

Lastly, the performance of Third Year Hospitality Management students in their level of self-efficacy and attainments in laboratory activities was rated by students, which indicates a qualitative interpretation of "high" with an overall mean of 3.55.

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