

Equipping Junior High School Students with Lifelong Learning Skills in Technology and Livelihood Education

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Abstract: The study focused on the lifelong learning skills of students and their level of competencies in Technology and Livelihood Education, specifically on the three core areas of Beauty Care, Cookery and Information and Communication Technology. These skills include critical thinking, creativity, collaboration, communication, computer literacy, and career and learning self-reliance. It also described the extent of student development in terms of work attitudes and work skills and identified challenges in meeting TESDA standards. The descriptive research design was used with a researcher-made questionnaire as main data gathering tool. Quantitative data were supported by interview and focus group discussion. With 285 TLE teachers and 135 school heads from the four Divisions in Batangas Province serving as respondents and research participants. Findings revealed that students moderately manifest the six lifelong learning skills in Beauty Care, Cookery, and ICT. They are moderately knowledgeable and moderately competent in the three subject areas. The extent of manifestation of the lifelong learning skills among students are all significantly related to their level of knowledge, skills, and competencies. Further, students moderately manifest work, attitudes and have moderate competencies in work skills. Strengthening the TLE teachers technical and managerial skills is a primary issue that needs to be addressed. Based on key findings, a management plan was proposed to capacitate teacher in enhancing students lifelong learning skills in TLE areas.

Keywords: Beauty care, cookery, information and communication technology, lifelong learning skills, work skills, attitudes.

1. Introduction

In the Philippines, basic education reforms were put in place to respond to the increasing student population and to a rapidly increasing and developing economy where demand for quality education is high.

Developments have far-reaching consequences and are important to consider when looking for potential new workers for domestic and international industrial companies. Hence, the brand of teaching and learning has shifted to a more personalized instruction where independence and innovations are prioritized to adapt to any possible learning style (Ozen, 2015).

Since the Enhanced Basic Education Act (EBEA, known as

the K to 12 law) was signed, the Philippines has finally embarked on its most ground-breaking change to the schooling system in decades, the K-12 reform. K to 12 extends compulsory schooling to Grades 11 and 12, adding two years to secondary school, and making secondary education compulsory. Prior to its implementation, the Philippines was the only country in Asia, and one of only a few in the world, to have a basic education system of just 10 years.

The EBEA also mandates kindergarten as the start of compulsory formal education, while the Kindergarten Act of 2012 has made pre-school free. According to the Oxford Business Group, August 2016, 1.5 million Filipino children attended 11th grade, with senior school students choosing between four tracks through the system: academic, technical-vocational, sports or the arts and design.

With the new curriculum, future Filipino graduates will be ready and equipped with competencies and standards required in industries around the globe. In 2015, former President Aquino stated that K to 12 program will pave the way for an ever-brighter future for young Filipinos by equipping them with basic education that adheres to international standards. The goal of the K to 12 curriculum is to give Filipino students enough time to master relevant skills and concepts so that they are ready to be employed or to go to tertiary education. Hence, there is an apparent focus not only on academic areas but also on technical and vocational education.

Technology and Livelihood Education (TLE), as one of the areas being studied under the basic education curriculum, is geared toward the development of technological proficiency. It is anchored on knowledge and information, entrepreneurial concepts, process and delivery, work values, and life skills. This means that the TLE that works is one which is built on adequate mastery of knowledge and information, skills and processes, and the acquisition of right work values and life skills. It should be functional, in order to equip students with skills for lifelong learning.

Similarly, TLE that focused only on mastery of skills and processes without right work values is anemic and dangerous. An effective TLE is one that is founded on the cognitive, behavioral, or psychomotor and effective dimensions of human

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development. Teaching this subject means facts, concepts, skills and values are transferred entirely. TLE by its nature is dominantly a skill subject, hence, the teacher must engage students in an experiential, contextualized and authentic teaching learning process. It is a subject in which students learn best by doing. It is integrative in approach and integrates entrepreneurship with all its core areas. (Lee, 2016).

Corollary to this, Technical-Vocational Education (TVE) is an important part of the current educational structure and plays a major role in developing a flexible and well-educated workforce to address present and emerging industry and labor-market needs. It also allows students to acquire occupational skills which will open various career paths (Acordon, 2016) and help graduates to compete globally. Technology Education provides students with opportunities for solving problems and for addressing current trends and issues. Students study technology to create practical solutions to problems - individually or in groups, and to develop technical skills, knowledge and attitudes, including life skills on vocational efficiency and empathy (De Alca, 2008).

Furthermore, the Technical Education and Skills Development Authority (TESDA) is mandated to provide suitable, available, high-quality and effective technical education and skills development to support the development of quality, medium-sized Filipino workforce responsive to and compatible with the Philippine development objectives and priorities. It is the responsibility of the national government to promote the active involvement of the various sectors concerned, in particular private companies, to be direct participants in the immediate beneficiaries of a skilled and educated workforce, to provide opportunities for technical training and skills growth (RA 7796, Section 2). TESDA is not, however, the sole training ground for TVE graduates in the region, as the institutions of basic education also provide technology education in their curricula.

Technology education enables students to explore their ideas, gain practical experiences, and work through thinking processes in a safe and supportive environment. The ability to adapt to a changing technological society and to accept social responsibility is paramount to all young learners in the pursuit of new careers and lifestyles. It allows learners to evaluate their strengths and interests in career choices, and reflects rapid changes in the workplace, which allows them to make informed decisions about their future. Further, Ingal (2015) stated that it allows students to see the relevance of technology education and the importance of taking it as a subject.

Middle skills development among students are evident in the integration of vocational courses in the curriculum (DepEd, 2016) With such a strong focus on promoting technical and vocational programs, foreign employers who are looking for employees to work with them might consider the country's graduates. Thus is true most especially for well-equipped graduates in the most common vocational courses with high demands for employability.

Among the vocational courses, beauty care, cookery and Information and Communication Technology are commonly offered in schools. Beauty care includes both nail care and

wellness massage. Manicure, pedicure and nail enhancements are the different nail care services. Hence, it is emphasized that nails often reflect one's general state of health. Changes in the nail, such as discoloration or thickening, can signal health problems, including liver and kidney disease, heart and lung conditions, anemia and diabetes.

Another common vocational course is commercial cooking. Cooking or cookery is the art, technology and craft of preparing food for consumption with the use of heat. This course provides knowledge and skills in using kitchen tools, and in preparing and cooking hot and cold meals. The program also includes classes in native and international foods, preparation of plate meat/food to guests in restaurants, hotels, clubs, canteens, and cruises. Also, cooking methods and recipes vary widely around the globe, from grilling food over an open fire to using electric stoves to baking in different types of ovens, representing particular practices and developments in the climate, economy and culture.

Information and Communication Technology is another common field of specialization. In education, Information and Communications Technology (ICT) is the mode of education that uses information and communications technology to facilitate, improve and optimize information delivery. Policymakers understand that ICT in education can help students succeed in the global economy by becoming part of a professional workforce and fostering social mobility by improving learning opportunities and offering new skill sets, reaching more students with Maximize Open Online Courses (MOOCs), encouraging faculty training, reducing costs, and saving time associated with knowledge delivery and automating regular day-to-day tasks, thus improving the administration of institutions to enhance the quality and efficiency of service delivery.

Enabling ICT in education or making use of technology in education, creates an easy to manage learning environment where the delivery of information is so much smoother and the learning easier. Also, ICT is the path to take for institutions, especially in countries like the Philippines, whose growth is directly aligned with technology and the field of education is no exception. Assuring higher quality education for students will define whether the institution should move forward or perish. As Limon (2015) stated, ICT improve the quality of learning as it promotes learner motivation, mastery of concepts and development of lifelong learning skills.

Beauty Care, Cookery and Information and Communication Technology require extensive knowledge, skills and competencies from practitioners to ensure customer satisfaction. However, some industries have been complaining that the graduates of such courses are not prepared to do relevant work after graduation. Insufficient mastery of basic competencies may be attributable to the decongested curriculum. Even the graduates themselves are not very confident that they will get a job after senior high school, questioning their possible performance in the labor market (Orbeta, et al., 2018). Some in-house trainings are still necessary as different businesses have different needs as to skills and competencies, so the K-12 program should provide a

better articulation between schooling and workplace.

In realizing established standards, the TESDA ensured that it has completed the development of a new set of curriculum for teaching the technical vocational education and training courses to students under the K to 12 program. In addition, the Technology and Livelihood Education teachers and supervisors should have completed the mandatory training and are prepared to teach the new curriculum.

The K to 12 program is designed using an outcomes-based curriculum. By expanding the basic education cycle, completers are expected to achieve essential knowledge and skills that would make them prepared and ready for the world of work, employment, and entrepreneurship. Students who go through the 12 years of basic education are geared up to advance to higher education, middle skill development, entrepreneurship, or employment (Cruz, 2013). These preparations and initiatives of the government address the needs of stakeholders of young but skilled and knowledgeable workers, and even the birth of young entrepreneurs who want to be engaged in business and work in the industry even without formally attaining higher education.

Further, the K to 12 curriculum envisions holistically developed learners with 21st century skills. At the core of this basic education program is the complete human development of every graduate, with acquired competency that encompasses personal characteristics to complete various tasks. (Main F. Hammond, 2008) This further means that every student would understand the world around him and a passion for lifelong learning while addressing every student's basic learning needs: learning to learn, and the acquisition of numeracy, literacy and scientific and technological knowledge as applied to daily life.

Students now live in a global society that is interconnected as never before. Just as the classroom had changed significantly, the textbooks and supplemented by videos and e-books, SMART board has replaced chalkboard, and the new technological devices are what students and teachers prefer to use. Since teaching has to be more interesting and relevant for students (Friedman, Friedman 2011) The teaching approaches have changed to student-centered approach which focuses on the learners who can solve problems, formulate questions on their own and have in-depth understanding of the course material.

As the students come face to face on this approach in teaching, the teachers are challenged on how to captivate learners to the new techniques and methods in teaching so that students become competent and effective learners. Different organizations in society play a very important role in developing persons. But most of all, schools have the biggest part on the life of individuals. Students spend more time in school than in their home which is the reason why the community expects much from schools to enhance students' abilities. Schools are expected to ensure that all learners get proper education and are ready for their future career to be globally competitive citizens.

In this light, teachers inevitably play a big role in ensuring greater productivity of students. The primary role of the teacher is to impart knowledge, skills, and values to young learners and

ensure that they will grow as an asset to the society. It is crucial on the part of the teachers to realize the noble purpose of their profession, as they should set as examples to the students. The skills that they impart to the learners must be exhibited first by the teachers, with competencies and higher level of recital. They must continuously improve their competencies for quality assurance in performing their tasks (Djatmiko, 2016) Hence it is important on the part of the researcher, as a TLE teacher, to initiate a study that deals with the assessment of the knowledge, skills and competencies in certain areas of Technical-Vocational Education (TVE) in light of a number of factors that may affect the teachers' skills and competencies.

It is for this reason that the researcher focused on management plan for Technology and Livelihood Education teachers. It is not as easy as some may think, since TLE teachers encounter factors that from time to time may affect their capabilities. The researcher herself has encountered these factors, which might lead to the reduction of skill in some areas that ultimately affect the performance of students. Some of these include teacher technical skills, integrating curricula with 21st century skills to encourage lifelong learning, and enthusiasm and capability to be National Certified II. These really affect the students' performance in complying with the needed competencies.

With this, the researcher, as a TLE teacher in Area I, Division of Batangas, realized these concerns and conducted this study in order to propose a management plan on selected Technology and Livelihood Education (TLE) areas for Junior High School teachers. The competencies and standards required in the K-12 curriculum, particularly in the field of Technical Vocational Education as possessed by the students, were assessed, and evaluated in terms of their significance in order to produce the most skilled, knowledgeable, and productive citizens.

2. Objectives

This study aimed to prepare a management plan for TLE teachers in Batangas that would capacitate them to equip junior high school students with lifelong learning skills in Technology and Livelihood Education.

Specifically, it aimed to achieve the following research.

Objectives:

1. Determine the extent of manifestation of lifelong learning skills of students in Beauty Care, Cookery and Information and Communication Technology as assessed by the school heads and teachers, with regards to:

- 1.1 critical thinking;
- 1.2 creativity;
- 1.3 collaboration;
- 1.4 communication;
- 1.5 computer literacy; and
- 1.6 career and learning self-reliance.

2. Ascertain the level of competencies in the following TLE areas:

- 2.1 Beauty care;
- 2.2 Cookery; and
- 2.3 Information and Communication Technology.

3. Find out if there is a relationship between the extent of

manifestation and level of competencies.

4. Describe the extent of student development in terms of:
 - 4.1 work attitudes; and
 - 4.2 work skills.
5. Identify some issues and challenges relative to meeting TESDA standards.
6. Prepare a management plan for TLE teachers.

3. Methods

The study employed the descriptive method of research in answering the queries under investigation. The principal aim in employing this method is to describe the nature of the situation that exists at the time of the study, and to explore the cause of a particular phenomenon (Tan, 2010). In this study, the descriptive method of research was employed to describe the extent by which Junior High School students manifest the different lifelong learning skills as assessed by Technology and Livelihood Education teachers and School Heads. Likewise, it was employed to characterize the level of performance of TLE Junior students on the three areas of TLE.

Subjects of the Study:

The study included two groups of respondents, the school heads and TLE teachers in Junior High School in the four schools' division offices in Batangas including Division of Lipa City, Division of Tanauan City, Division of Batangas City and Division of Batangas Province. Table 1 shows the distribution of respondents from the four division in the province of Batangas. The respondents of the study included 135 school heads and 285 Technology and Livelihood Education teachers in the Province of Batangas. Sampling method was applied for the group of teachers and the sample size was determined using Slovin's formula at five percent margin of error and was selected through cluster sampling using proportionate allocation. The TLE teacher-respondents were those who teach the three identified areas of TLE, namely Beauty Care, Cookery and Information and Communication Technology.

Data Gathering Instruments:

To gather the necessary data, the study utilized a researcher-made questionnaire. A self-directing instrument is structured with questions and indicators for the respondents to react from. It measures information levels, opinions, attitudes, beliefs, ideas, feelings, and perceptions as one gathers information from the respondents (Tan, 2010). Structured interview guides and focus group discussion agenda involving both school heads and teachers were likewise employed as additional research instruments to facilitate data gathering.

Questionnaire. The first part of the questionnaire determined the manifestation of lifelong learning skills of junior students relative to critical thinking, creativity, collaboration, communication, computer, literacy, career and learning self-reliance. The second part discussed the skills and competencies of the students in Technology and Livelihood Education areas in Beauty Care, Cookery Information and Communication Technology. The third part discussed the work skills and work attitude of students, while the fourth part identified the issues and challenges encountered relative to meeting Technical Education and Skills Development Authority standards.

Construction. The researcher delved into relevant topics and information from government documents, books, journals, and related research studies to come up with items for the questionnaire. Through the assistance of the research adviser, it was ensured that the instrument was responsive to the study's objectives. The first draft was shown to the adviser for checking, after which, suggestions, corrections, and modifications were considered for revisions. The second draft was presented again for further suggestions and improvement of the questionnaire's content. Prior to its final draft, the questionnaire was shown to experts in the field for validation.

Validation. When the questionnaire was formulated, it underwent checking, editing, and revising through the help of the author's dissertation adviser. The final draft was then validated by the members of the panel. This was done a week prior to the actual administration and sought the help of some TLE Teachers. A final copy was then produced for distribution to the target respondents.

Administration. Once permission was granted to proceed with the study, the researcher personally requested the Schools Division Superintendents of the four divisions for their approval on the distribution of questionnaire through a formal letter. Prior to this, another letter was sent requesting for a data specifically the exact number of TLE teachers in their respective division to determine the sample. Provisions in the data privacy act were observed in this process.

Because of the lockdown in the entire province due to the COVID-19 pandemic, the researcher decided to have an online questionnaire using Google docs. This is a word processor included as part of a free, web-based software office suite offered by Google within its Google Drive service. The link to the online questionnaire was then sent to the school heads and teachers using FB messenger.

Scoring of Responses. Simple frequency count was used in tallying the responses. Percentage and simple frequency were applied in the analysis of the manifestation of students' lifelong learning skills. Pearson $-r$ was used to know if there were significant relationships between the assessments of school heads and TLE teachers on the manifestation of lifelong learning skills and the students' knowledge, skills and competencies.

Options	Scale	Verbal Interpretation
4	3.50-4.00	Great Extent Very knowledgeable Very Competent Highly Evident
3	2.50-3.49	Moderate Extent Moderately Knowledgeable Moderately Competent Moderately Evident
2	1.50 - 2.49	Slightly Extent Slightly Knowledgeable Slightly Competent Slightly Evident
1	1.00 -1.49	Least Extent Least Knowledgeable Least Competent Least Evident

The scales of statistical value adopted in this study are the following:

Scale of manifestations of lifelong learning skills; knowledge, skills and competencies; students' development in work skills and work attitude; and issues and concerns in meeting TESDA standards.

Interview. This constituted a major part of data collection in this research. To verify and supplement the information gathered from the questionnaire, there were actual interviews conducted with the school heads and TLE teachers. The interviews with the respondents were semi-structured, similar to a person-to-person conversation. In the semi-structured interview, the interviewer asked identified questions but also tried to save more freedom for the interviewees to talk. Hence, the lived experiences and insights were released through the interview, which substantiated the data of the study.

Focus Group Discussion (FGD). This was conducted to discuss the teachers' view and perspectives about the knowledge and skills needed in different areas in Technology in Livelihood Education. To strengthen the data gathered from the questionnaire, the focus group discussion (FGD) was conducted utilizing modern technology such as Google Meet. Ten TLE teachers were invited and served as discussants. These teachers shared their ideas based on the agenda prepared by the researcher about the lifelong learning skills, knowledge and competencies displayed by the students in the selected TLE areas. Work skills and attitudes were also discussed, as well as the trainings provided by TESDA. Participants freely expressed their points of view and perspectives about the agenda, which was distributed prior to actual discussion.

Data Gathering Procedure:

The researcher secured an endorsement letter from the Schools Division Superintendents of the four divisions, seeking for their permission to distribute the questionnaires to their TLE teachers. This was the first step in the data gathering procedure followed by the researcher immediately after the validity and reliability testing of the questionnaire.

Due to the COVID-19 pandemic, which is a threat to everyone's health, the researcher was not able to distribute the instrument personally to the different schools in the entire province. This triggered her to make an online questionnaire through Google forms, and distributed it utilizing electronic platforms like FB messenger and electronic mail to gather the needed data. The entire data gathering process lasted for three weeks. With the help of a statistician, the data collected were tallied, analyzed, and interpreted in accordance with corresponding tools.

Qualitative data were also gathered to enhance the findings. The answers of the teachers to the guide questions in the interview, together with their ideas shared in the FGD, enriched the quantitative data. The information shared by the respondents with their consent was assured to be utilized only for the purpose of accomplishing this study. Furthermore, the provisions in the Data Privacy Act were observed in the conduct of the research to ensure that the information obtained will only be used in the accomplishment of this academic undertaking, in fidelity to establish ethical considerations in research.

Statistical Treatment of Data:

The following statistical tools were used for accurate and reliable presentation, analysis and interpretation of the data to arrive at the findings and conclusions of the study.

Weighted Mean. This was used to determine the responses of the school heads and TLE teachers on items that were rated based on the questionnaire. It was also used to determine the weight in terms of mean responses.

Composite Mean. Composite scoring involved combining the items that represent the sum of the items or the mean of the items included in each domain.

Pearson-r. This statistical tool is mostly used in determining any significant relationship on the phenomenon under study. In this study, this was employed to determine the significant relationship on the assessments along the lifelong learning skills and the knowledge and competencies of Junior High School students as assessed by TLE teachers and School Heads.

4. Results and Discussion

The study focused on the lifelong learning skills of students and their level of competencies in Technology and Livelihood Education, specifically on the three core areas of Beauty Care, Cookery and Information and Communication Technology. These skills include critical thinking, creativity, collaboration, communication, computer literacy, and career and learning self-reliance. It also described the extent of student development in terms of work attitudes and work skills and identified challenges in meeting TESDA standards.

The descriptive research design was used with a researcher-made questionnaire as main data gathering tool. Quantitative data were supported by interview and focus group discussion. With 285 TLE teachers and 135 school heads from the four Divisions in Batangas Province serving as respondents and research participants.

Based on the data gathered from the respondents, the study yielded the following findings:

1. Extent of manifestation of lifelong learning skills of students in Beauty Care, Cookery and Information and Communication Technology.

1.1 **Critical Thinking.** Based on the assessments by majority of the TLE teachers, junior high school students moderately manifest their skills in beauty care, cookery and Information and Communication Technology in terms of critical thinking. This is somewhat similar with the assessment of the school heads. Based on the majority of their responses, the lifelong learning skills of students in beauty care, cookery and Information and Communication Technology in terms of critical thinking are moderately manifested. The results indicate that students moderately display critical thinking especially putting important consideration to health, safety, and security procedures in the workplace.

1.2 **Creativity.** Majority of the TLE teachers assessed that the creative skills of students relative to cooking methods are

highly manifested, but overall, the lifelong learning skill of students in the three core areas in terms of creativity are moderately manifested. For the school heads, the students also moderately manifest creativity in beauty care, cookery and ICT. Both groups of respondents assessed the students' skills in cooking methods as the highest. This means that students understand the importance of expressing their creative side in terms of cookery, therefore, considering it as both a needed skill and an art.

1.3 Collaboration. Both the TLE teachers and school heads indicated that students highly manifest working with other to create appealing food plating and presentation. In general, the composite means indicate that lifelong learning skills of students in beauty care, cookery and ICT in terms of collaboration are moderately manifested. The findings indicate that in creating an appealing food plating and presentation, working with others would result to better outcomes. This means that the students prefer working in some tasks assigned to them.

1.4 Communication. Based on the results, both groups of respondents indicate that adopting the value of occupational health and safety education by effective exchange and sharing of ideas based on standards is moderately manifested by the students. Overall, the teachers and school heads assessed that the students moderately manifest communication skills as a lifelong learning skill. The findings show that students value exchanging insights in terms of occupational health and safety education but can still improve in this area.

1.5 Computer Literacy. Majority of the teachers indicated that students moderately manifest skills in terms of computer literacy. In contrast, based on the assessment of the majority of school heads, the lifelong learning skills of students in beauty care, cookery and Information and Communication Technology in terms of computer literacy are moderately manifested. The findings further indicate that majority of the students depend on the internet for performing various tasks such as searching for a list of recipes and video demonstrations to obtain different cooking methods. This means that they consider the internet a good reference in improving their performance.

1.6 Career and Learning Self-Reliance. Majority of the teachers assessed that the students moderately manifest career and self-reliance in the three areas. Similarly, the school heads assessed that the students' skills in career and learning self-reliance are moderately manifested. The highest assessed skill sets are the student's performance in sanitizing kitchen equipment and utensils to comply with standards, and their performance in various nail-care services with confidence, thus leading to job opportunities.

2. Level of knowledge, skills, and competencies of the students

2.1 Beauty Care. The teachers and school heads both assessed that students are moderately knowledgeable in Beauty Care, especially in distinguishing the proper use and care of tools and equipment. On the other hand, the two groups of respondents are also parallel with their assessment that students are moderately competent in Beauty Care. Their highest assessment is on the students' skill in selecting, checking, and

preparing the necessary tools and equipment for specific treatment activities.

2.2 Cookery. For the teachers, students are very knowledgeable in cookery, especially in identifying hazards and risks in the workplace. However, the school heads assessed that students are moderately knowledgeable in this subject, especially in selecting, measuring devices, tools and equipment. Despite this, the two groups of respondents similarly assessed the students to be moderately competent on Cookery particularly in sanitizing kitchen equipment and utensils.

2.3 Information and Communication Technology. Both groups of respondents assessed that students are moderately knowledgeable in ICT, with identifying workplace hazards and risks receiving the highest assessment. On the other hand, the teachers and school heads' assessment indicated that students are moderately competent in ICT, with students being most competent in gathering and inspecting tools and equipment.

3. Relationship between extent of manifestation and assessment on three TLE areas

Knowledge in beauty care was found to have a significant relationship when correlated with critical thinking, creativity, collaboration, communication, computer literacy, and career and learning self-reliance. The learning skills and competencies in beauty care were also found to have a significant relationship when correlated with the lifelong learning skills. Knowledge in cookery was found to have a significant relationship when correlated with critical thinking, creativity, collaboration, communication, computer literacy, and career and learning self-reliance.

Similarly, learning skills and competencies in cookery were found to have a significant relationship when correlated with the six lifelong learning skills.

Lastly the students' knowledge in Information and Communication Technology was found to have a significant relationship when correlated with lifelong learning skills. The students' competencies in Information and Communication Technology were also found to have a significant relationship when correlated with critical thinking, creativity, collaboration, communication, computer literacy, and career and learning self-reliance.

4. Extent of student Development

4.1 Work Attitudes. The teachers' and school heads' assessment indicate that students moderately manifest work attitudes. Most manifested are the students' commitment and effort to achieve work-related objectives and their demonstration of camaraderie for positive cooperation with others.

4.2 Work Skills. Both groups of respondents assessed that the students are moderately competent in terms of work skills. For teachers, the students acquire interpersonal skills to communicate efficiently, and apply healthy procedures to prevent accidents during laboratory work. For school heads, the students work within the framework of operational guidelines to comply with standard operating procedures.

5. Issues and Challenges relative to meeting TESDA standards

The teachers and school heads agreed that the primary issue

relative to meeting TESDA standards is on strengthening the technical and management skills of TLE teachers. For teachers, integrating the curricula with 21st century skills to promote lifelong learning is also a huge challenge. On the other hand, the school heads' assessment indicated that the teachers' and students' interest and capability to be Nationally Certified in different TLE areas also pose serious challenges.

6. Management Plan for Junior High School TLE Teachers

The proposed management plan intends to help junior high school TLE teachers to enhance and strengthen the students' capabilities to sustain the culture of excellence through the acquired competencies. Anchored on the findings of this study and based on the umbrella of quantitative and qualitative data gathered, the management plan aims to capacitate teachers so they can better achieve student outcomes. The plan focuses on three major areas of faculty development, facilities development, and student development.

Table 1
Distribution of Respondents

Division	School Heads	TLE Teachers	
	Population	Population	Sample Size
Batangas Province	82	702	201
Batangas City	20	127	37
Lipa City	15	105	30
Tanauan City	18	61	17
TOTAL	135	995	285

Table 2
Extent of Manifestations of Lifelong Learning Skills in terms of Critical Thinking

	Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
1. Analyze the proper usage of tools and materials for nail care services	3.49	MM	3.45	MM
2. Scrutinize the basic precautionary maintenance of work	3.53	HM	3.45	MM
3. Examine information on the right nail care procedure	3.31	MM	3.24	MM
4. Apply proper wellness massage techniques	3.32	MM	3.27	MM
5. Evaluate the result according to the clients' desired outcome	3.43	MM	3.34	MM
6. Recognize the health, safety and security procedures in the workplace	3.62	HM	3.58	HM
7. Classify the proper methods of sanitizing tools, appliances and utensils for cooking	3.56	HM	3.48	MM
8. Follow logically the cooking method for a menu	3.43	MM	3.36	MM
9. Distinguish standards for food presentation/plating	3.45	MM	3.37	MM
10. Resolve issues related to food preparation/handling	3.45	MM	3.43	MM
11. Project a structural layout and information in the description of job requirements	3.21	MM	3.21	MM
12. Illustrate the electrical plans and layouts	3.24	MM	3.14	MM
13. Elucidate safety procedures at the workplace	3.24	MM	3.16	MM
14. Discuss the installation of operating system and application drivers	3.10	MM	3.07	MM
15. Analyze computer system and network malfunction	3.03	MM	2.92	MM
Composite Mean	3.36	MM	3.30	MM

Table 3
Extent of Manifestations of Lifelong Learning Skills in terms of Creativity

	TLE Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
1. Show realia of nail care and wellness massage tools and equipment for easy identification	3.46	MM	3.40	MM
2. Manifest passion for nail care practices	3.37	MM	3.34	MM
3. Apply various nail art design	3.35	MM	3.24	MM
4. Follow the proper wellness massage techniques to ensure customer satisfaction	3.21	MM	3.12	MM
5. Provide a comfortable workstation according to the policies and procedures of the Salon / SPA	3.36	MM	3.28	MM
6. Adopt innovation of preparing ingredients for certain menu	3.46	MM	3.38	MM
7. Demonstrate creative skills in cooking method	3.51	HM	3.45	MM
8. Find solutions to food preservation issues	3.35	MM	3.29	MM
9. Exhibit different food preparation demonstrating the artistic skills of students	3.40	MM	3.36	MM
10. Apply a new style of food presentation/plating	3.43	MM	3.33	MM
11. Utilize power point presentation with animated images to display tools and equipment for technical drawing	3.30	MM	3.24	MM
12. Design electrical plans and layouts	3.10	MM	2.98	MM
13. Adopt new techniques to set the router/wi-fi/wireless access point	3.04	MM	2.93	MM
14. Follow the procedures for installing network devices precisely	3.22	MM	3.15	MM
15. Install operating system and drivers for devices creatively	3.28	MM	3.19	MM
Composite Mean	3.32	MM	3.25	MM

Table 4
Extent of Manifestations of Lifelong Learning Skills in terms of Collaboration

	TLE Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
1. Engage in group activities to familiarize with the different tools and equipment required for nail care services	3.49	MM	3.45	MM
2. Foster cooperative learning in cleaning and sanitizing workstation	3.57	HM	3.48	MM
3. Work in pairs and apply accurately the strokes in a wellness massage	3.50	HM	3.44	MM
4. Form a small group to apply the proper draping prior to massage	3.36	MM	3.25	MM
5. Perform a role play about the proper procedures in accommodating a client in a salon	3.39	MM	3.31	MM
6. Sanitize materials, equipment and utensils for food preparation to ensure food safety with peers	3.58	HM	3.50	HM
7. Conduct a panel discussion on maintaining occupational health and safety awareness	3.38	MM	3.36	MM
8. Cook foods based on the recipe given in a small group	3.55	HM	3.49	MM
9. Work with others to create appealing food plating and presentation	3.58	HM	3.51	HM
10. Make a group project to store of food properly	3.43	MM	3.39	MM
11. Form a panel discussion on OHS guidelines and procedures in ICT	3.40	MM	3.36	MM
12. Create a group power point presentation on tools and equipment use in technical drafting	3.25	MM	3.17	MM
13. Work in group to assemble computer hardware accurately	3.25	MM	3.15	MM
14. Connect network cables between peers	3.23	MM	3.12	MM
15. Set the router/wi-fi/wireless access point in pairs	3.17	MM	3.07	MM
Composite Mean	3.41	MM	3.34	MM

Table 5
Extent of Manifestations of Lifelong Learning Skills
in terms of Communication

	TLE Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
1.Explain on how to use tools and equipment in nail care and wellness massage	3.35	MM	3.29	MM
2.Consult the client on the desired nail service activity	3.29	MM	3.20	MM
3.Communicate with the client the relevant criteria for nail treatment and consultation record are agreed upon and signed	3.38	MM	3.33	MM
4.Interview the client with the relevant information prior to the wellness massage	3.29	MM	3.21	MM
5.Manifest telephone etiquette for health massage scheduling	3.14	MM	3.02	MM
6.Exhibit art or technique by using words effectively to convey information or ideas on sanitizing kitchen appliances and utensils.	3.23	MM	3.15	MM
7.Facilitate exchange of thoughts, messages or information about the Occupational Health and Safety awareness	3.35	MM	3.27	MM
8.Exhibit the art of presenting techniques used in cooking by means of oral presentation	3.39	MM	3.30	MM
9.Develop interpersonal rapport through effective communication in dealing with others to sell the product	3.35	MM	3.30	MM
10.Show ability to transmit information effectively in plating and presenting foods	3.36	MM	3.28	MM
11.Adopt the value of occupational health and safety education by effective exchange and sharing of ideas on the basis of standards	3.43	MM	3.39	MM
12.Employ communication in drafting architectural layout and details based on job requirements.	3.17	MM	3.11	MM
13.Communicate visually through video and imagery in operating Computer-Aided 14.Drawing software and computer hardware	3.11	MM	3.04	MM
15.Convey messages and information to set router/Wi-fi wireless access point	3.08	MM	2.95	MM
16.Accept feedback throughout the communication process in maintaining computer system and network	3.13	MM	3.04	MM
Composite Mean	3.27	MM	3.19	MM

Table 6
Extent of Manifestations of Lifelong Learning Skills
in terms of Computer Literacy

	TLE Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
1.Use technology as a tool to provide details on the correct use of nail-care tools and equipment	3.36	MM	3.29	MM
2.Show video presentation of the proper procedure for nailcare	3.21	MM	3.15	MM
3.Store the client's records of past and current medical data on the computer	3.05	MM	2.95	MM
4.Collect information in digital environment on performing appropriate wellness massage techniques	3.11	MM	2.99	MM
5.Develop a brochure to advertise the various health massage offerings	2.97	MM	2.87	MM
6.Use online information and resources on the importance of cleaning and sanitation in cooking	3.20	MM	3.09	MM
7.Make a research of the different tools and equipment used in nailcare services	3.25	MM	3.18	MM
8.Search recipe of menu through internet	3.45	MM	3.33	MM
9.Use video demonstration to learn more about the various cooking methods	3.44	MM	3.38	MM
10.Download procedures to make food presentations creative	3.42	MM	3.33	MM
11.Design electrical plan and layout with the use of software application	2.89	MM	2.73	MM
12.Use appropriate program/application in entering the data	3.11	MM	3.01	MM
13.Assemble computer hardware base on standards	2.90	MM	2.70	MM
14.Set network configuration using computers	2.88	MM	2.70	MM
15.Diagnose faults of computer systems and networks using internet	2.84	MM	2.69	MM
Composite Mean	3.14	MM	3.02	MM

Table 7
Extent of Manifestations of Lifelong Learning
in terms of Career and Learning Self-Reliance

	TLE Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
1. Aware to the proper use of nail care tools and equipment to meet labor force requirements	3.37	MM	3.31	MM
2. Perform the numerous nail-care services confidently that will lead to job opportunities	3.46	MM	3.42	MM
3. Acquire information on basic preventive and corrective maintenance to provide safe workplace	3.42	MM	3.41	MM
4. Ensure the implementation of various health massage techniques to be used in salon/spa	3.19	MM	3.10	MM
5. Provide client satisfaction with the health massage services to promote customer satisfaction	3.17	MM	3.05	MM
6. Perform well on the cleaning and sanitizing of kitchen utensils and equipment to comply with the standards of food establishments	3.48	MM	3.42	MM
7. Produce high-quality, nutritious food items to encourage quality products in restaurants	3.39	MM	3.30	MM
8. Acquire experience in food preparation to meet career requirements	3.38	MM	3.33	MM
9. Provide a workplace to prepare a cooking base for work needs	3.37	MM	3.33	MM
10. Prepare a food presentation base on menu service criteria	3.41	MM	3.35	MM
11. Design of electrical plans and layouts require independently in establishments	3.07	MM	2.93	MM
12. Using computer-aided drawing in software and hardware to provide high-quality service	3.01	MM	2.89	MM
13. Set router/ wi-fi and wire access point skillfully to meet the requirements of the labor market	2.94	MM	2.83	MM
14. Provide quality output in installing network cables to meet company requirements	2.95	MM	2.88	MM
15. Identify faults of computer systems and networks using internet base on company standards	2.96	MM	2.88	MM
Composite Mean	3.24	MM	3.16	MM

Table 8
Summary of Responses on the Extent of Manifestations of Lifelong Learning Skills in Selected TLE areas

	TLE Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
Critical Thinking	3.36	MM	3.30	MM
Creativity	3.32	MM	3.25	MM
Collaborating	3.41	MM	3.34	MM
Communication	3.27	MM	3.19	MM
Computer Literacy	3.14	MM	3.02	MM
Career and Learning Self-Reliance	3.24	MM	3.16	MM

Table 9
Level of Knowledge of TLE Students in Beauty care

	TLE Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
1. Distinguish the proper use and care of tools and equipment	3.42	MK	3.42	MK
2. Understand occupational health and safety awareness	3.42	MK	3.40	MK
3. Possess good interpersonal relationship	3.37	MK	3.36	MK
4. Distinguish the necessary tools and equipment for the specific nail care and wellness massage activity	3.36	MK	3.33	MK
5. Trim and file nails following client's desired shape and style	3.36	MK	3.30	MK
6. Cognizant of performing basic preventive and corrective maintenance	3.32	MK	3.27	MK
7. Remove cuticle and dry skin using appropriate tools	3.32	MK	3.26	MK
8. Apply top or seal coat with long strokes in the same manner as the base coat	3.30	MK	3.20	MK
9. Ascertain functions of nail care and wellness massage	3.29	MK	3.20	MK
10. Consult the client on desired nail service activity	3.29	MK	3.26	MK
11. Position client safely/appropriately/comfortably prior to massage	3.29	MK	3.20	MK
12. Advise client with appropriate maintenance progress	3.29	MK	3.23	MK
13. Check and analyze outcome according to the clients nail service requirements	3.28	MK	3.17	MK
14. Perform appropriate wellness massage techniques.	3.25	MK	3.15	MK
15. Record clients' past and present medical history	3.16	MK	3.11	MK
Composite Mean	3.31	MK	3.26	MK

Table 10
Learning Skills and Competencies Relative to Beauty Care

	TLE Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
1. Select, check, and prepare necessary tools and equipment for the specific treatment activity	3.47	MC	3.40	MC
2. Check and sanitize work station / cuticle	3.44	MC	3.36	MC
3. Attend personal needs of the clients.	3.42	MC	3.33	MC
4. Consult the client on desired nail service activity	3.42	MC	3.36	MC
5. Check, clean and sanitize workstation and prepare for succeeding treatment	3.40	MC	3.31	MC
6. Ensure clients' safety and comfort during the entire process	3.40	MC	3.31	MC
7. Select and agree color of the nail polish according to client's desires or requirements	3.40	MC	3.30	MC
8. Trim and file nails following client's desired shape and style	3.38	MC	3.28	MC
9. Check and analyze outcome according to the clients' nail service requirements	3.38	MC	3.30	MC
10. Apply base coat with long strokes starting with the little finger	3.36	MC	3.24	MC
11. Apply polish from the base to the edge of the nail using light sweeping stroke around the cuticle	3.36	MC	3.26	MC
12. Ensure clients' safety and comfort during the entire process	3.36	MC	3.25	MC
13. Remove cuticle and dry skin using appropriate tools	3.35	MC	3.24	MC
14. Advise client with appropriate maintenance progress	3.35	MC	3.23	MC
15. Interview vital information of the client	3.34	MC	3.27	MC
16. Position client safely/appropriately/comfortably prior to massage	3.34	MC	3.21	MC
17. Apply proper draping.	3.31	MC	3.18	MC
18. Perform massage following schedule and procedure prescribed by salon/SPA industry	3.31	MC	3.19	MC
19. Record clients' past and present medical history	3.29	MC	3.16	MC
20. Perform appropriate wellness massage techniques.	3.29	MC	3.15	MC
Composite Mean	3.37	MC	3.27	MC

Table 11
Level of knowledge in Cookery

	TLE Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
1. Select measuring devices, tools and equipment needed for each task	3.57	VK	3.48	MK
2. Identify hazards and risks in the workplace	3.56	VK	3.47	MK
3. Maintain occupational health and safety awareness	3.55	VK	3.46	MK
4. Aware of health, safety and security procedures in the workplace	3.54	VK	3.46	MK
5. Identify standard measuring devices and kitchen tools	3.53	VK	3.41	MK
6. Determine the condition of tools and equipment	3.53	VK	3.40	MK
7. Identify and select ingredients as per required menu items.	3.53	VK	3.42	MK
8. Recognize procedures in using measuring devices and instruments	3.52	VK	3.39	MK
9. Label and storing tools and equipment properly	3.51	VK	3.41	MK
10. Review the procedures in using standard measuring devices and tools	3.50	VK	3.40	MK
11. Aware of the basic preventive maintenance.	3.50	VK	3.40	MK
12. Know the procedures in preparing foods according to recipe	3.49	MK	3.39	MK
13. Categorize measurements and calculations in a required task	3.46	MK	3.34	MK
14. Analyze types of kitchen and lay outs	3.46	MK	3.36	MK
15. Identify tables and conversion systems required of the task	3.39	MK	3.24	MK
Composite Mean	3.51	VK	3.40	MK

Table 12
Learning Skills and Competencies Relative to Cookery

	TLE Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
1. Clean and/or sanitize kitchen equipment and utensils	3.58	VC	3.49	MC
2. Gather, inspect tools and equipment needed	3.54	VC	3.44	MC
3. Follow cleaning schedules	3.54	VC	3.44	MC
4. Store and stack cleaned equipment and utensils	3.53	VC	3.40	MC
5. Gather, identify and select ingredients as per required menu items.	3.51	VC	3.42	MC
6. Prepare ingredients and flavoring agents as per required menu items.	3.51	VC	3.40	MC
7. Use appropriate cooking methods	3.49	MC	3.37	MC
8. Organize and prepare food items according to menu requirements.	3.49	MC	3.39	MC
9. Plate and present food	3.49	MC	3.38	MC
10. Store food in appropriate condition	3.49	MC	3.38	MC
11. Use appropriate chemicals and equipment in cleaning and maintaining kitchen premises, tools and equipment	3.47	MC	3.38	MC
12. Select and assemble ingredients to produce varieties of soup, stock and sauce.	3.44	MC	3.33	MC
13. Arrange sauces and garnishes.	3.44	MC	3.31	MC
14. Select primary, secondary and portioned cuts of protein; pork, lamb, beef, veal and seafood	3.39	MC	3.28	MC
15. Adapt appropriate packaging procedures	3.39	MC	3.24	MC
Composite Mean	3.49	MC	3.38	MC

Table 13
Level of knowledge in Information and Communication Technology

	TLE Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
1. Identify hazards and risks in the workplace.	3.28	MK	3.20	MK
2. Aware of health, safety and security procedures in the workplace.	3.26	MK	3.21	MK
3. Maintain occupational health and safety awareness.	3.26	MK	3.18	MK
4. Store tools safely in appropriate locations in accordance to standard operating procedures.	3.26	MK	3.19	MK
5. Obtain work instruction in accordance with standard operating procedures	3.23	MK	3.15	MK
6. Know the procedures in using hand tools and equipment	3.23	MK	3.15	MK
7. Determine requirements of task in accordance with the required output	3.21	MK	3.11	MK
8. Plan a task to ensure that OHS guidelines and procedures are followed	3.19	MK	3.08	MK
9. Determine the condition of tools and equipment.	3.19	MK	3.08	MK
10. Identify and use documentation relative to quality within the prescribe standard	3.18	MK	3.09	MK
11. Aware of the basic preventive maintenance.	3.18	MK	3.11	MK
12. Identify object/s or component to be measured	3.17	MK	3.05	MK
13. Identify necessary network materials in accordance with established procedures and check against system requirements	3.15	MK	3.05	MK
14. Enter the data into the computer using appropriate program/application in accordance with company procedures	3.12	MK	3.01	MK
15. Process entered data using appropriate software commands	3.11	MK	3.01	MK
Composite Mean	3.20	MK	3.11	MK

Table 14
Learning Skills and Competencies Relative to Information and Communication Technology

	TLE Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
1. Gather, inspect tools and equipment needed.	3.25	MC	3.15	MC
2. Prepare and set up tools and materials for drawing	3.22	MC	3.11	MC
3. Prepare architectural layout and details based on established industry and/or job requirements	3.08	MC	2.96	MC
4. Draft structural layout and details following the job requirements	3.06	MC	2.93	MC
5. Design electrical plans and layouts	3.04	MC	2.94	MC
6. Assemble computer hardware	2.98	MC	2.81	MC
7. Install operating system and drivers for peripherals/ devices	2.98	MC	2.85	MC
8. Draft heating, ventilating, and air conditioning systems layout	2.97	MC	2.84	MC
9. Install network cables	2.95	MC	2.80	MC
10. Maintain computer systems and networks	2.95	MC	2.79	MC
11. Set network configuration	2.93	MC	2.77	MC
12. Set router/Wi-fi/wireless access point/repeater configuration	2.93	MC	2.75	MC
13. Diagnose faults of computer systems and networks	2.93	MC	2.77	MC
14. Operate CAD software and computer hardware	2.92	MC	2.77	MC
15. Configure network services	2.92	MC	2.74	MC
Composite Mean	3.01	MC	2.86	MC

Table 15
Relationship between extent of manifestation and knowledge in Beauty care

	r-value	r ² - val ue	p-value	Decisio n on H0	Interpretatio n
Critical Thinking	0.6014	0.3617	0.0000 **	Reject	Significant
Creativity	0.6507	0.4233	0.0000 **	Reject	Significant
Collaboration	0.6564	0.4309	0.0000 **	Reject	Significant
Communication	0.6555	0.4296	0.0000 **	Reject	Significant
Computer Literacy	0.5779	0.3340	0.0000 **	Reject	Significant
Career and Learning Self-Reliance	0.6466	0.4182	0.0000 **	Reject	Significant

**Significant at $\alpha = 0.05$ with $p < 0.001$

Table 16
Relationship between extent of manifestation and learning skills and competencies relative to Beauty care

	r-value	r ² - val ue	p-value	Decisio n on H0	Interpretatio n
Critical Thinking	0.6164	0.3799	0.0000	Reject	Significant
Creativity	0.6416	0.4117	0.0000	Reject	Significant
Collaboration	0.6339	0.4018	0.0000	Reject	Significant
Communication	0.6552	0.4293	0.0000	Reject	Significant
Computer Literacy	0.5719	0.3271	0.0000	Reject	Significant
Career and Learning Self-Reliance	0.6652	0.4425	0.0000	Reject	Significant

** $\alpha = 0.05$ with $p < 0.001$

Table 17
Relationship between extent of manifestation and knowledge in Cookery

		r-value	r ² - value	p-value *	Decision on H0	Interpretation
Knowledge in Cookery	Critical Thinking	0.5400	0.2916	0.0000	Reject	Significant
	Creativity	0.5413	0.2930	0.0000	Reject	Significant
	Collaboration	0.4778	0.2283	0.0000	Reject	Significant
	Communication	0.4959	0.2459	0.0000	Reject	Significant
	Computer Literacy	0.4280	0.1815	0.0000	Reject	Significant
	Career and Learning Self-Reliance	0.5424	0.2942	0.0000	Reject	Significant

*α = 0.05 with p < 0.001

Table 18
Relationship between extent of manifestation and learning skills and competencies relative to Cookery

		r-value	r ² - value	p-value *	Decision on H0	Interpretation
Learning Skills and Competencies in Cookery	Critical Thinking	0.5401	0.2917	0.0000	Reject	Significant
	Creativity	0.5240	0.2745	0.0000	Reject	Significant
	Collaboration	0.5121	0.2623	0.0000	Reject	Significant
	Communication	0.4787	0.2291	0.0000	Reject	Significant
	Computer Literacy	0.4213	0.1775	0.0000	Reject	Significant
	Career and Learning Self-Reliance	0.5625	0.3164	0.0000	Reject	Significant

*α = 0.05 with p < 0.001

Table 19
Relationship between extent of manifestation and knowledge in Information and Communication Technology (ICT)

		r-value	r ² - value	p-value *	Decision on H0	Interpretation
Knowledge in ICT	Critical Thinking	0.5245	0.2751	0.0000	Reject	Significant
	Creativity	0.5674	0.3220	0.0000	Reject	Significant
	Collaboration	0.5546	0.3076	0.0000	Reject	Significant
	Communication	0.5873	0.3449	0.0000	Reject	Significant
	Computer Literacy	0.5885	0.3464	0.0000	Reject	Significant
	Career and Learning Self-Reliance	0.6084	0.3677	0.0000	Reject	Significant

*α = 0.05 with p < 0.001

Table 20
Relationship between extent of manifestation and learning skills and competencies relative to Information and Communication Technology (ICT)

		r-value	r ² - value	p-value *	Decision on H0	Interpretation
Learning Skills and Competencies in ICT	Critical Thinking	0.5864	0.3439	0.0000	Reject	Significant
	Creativity	0.6296	0.3964	0.0000	Reject	Significant
	Collaboration	0.6251	0.3908	0.0000	Reject	Significant
	Communication	0.6504	0.4231	0.0000	Reject	Significant
	Computer Literacy	0.5986	0.3583	0.0000	Reject	Significant
	Career and Learning Self-Reliance	0.6731	0.4531	0.0000	Reject	Significant

*α = 0.05 with p < 0.001

Table 21
Extent of Student Development in terms of Work Attitudes

	TLE Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
1. Cultivate commitment, in particular, an effort to achieve work-related objectives	3.47	MM	3.42	MM
2. Demonstrates camaraderie for positive cooperation with others	3.47	MM	3.42	MM
3. Create a positive environment to attract more clients	3.47	MM	3.40	MM
4. Demonstrate conscientiousness that develop coordination, trust and discipline	3.46	MM	3.41	MM
5. Exhibit work ethics, standards and quality concepts	3.46	MM	3.36	MM
6. Enhance intra and interpersonal social development dimensions	3.46	MM	3.38	MM
7. Establish a healthy relationship with the client to create mutual trust and understanding	3.46	MM	3.37	MM
8. Aware on the interests of others when making decisions	3.46	MM	3.37	MM
9. Manifest optimism in performing the task to achieve productivity	3.44	MM	3.35	MM
10. Adopt change and consider it an opportunity not a threat	3.44	MM	3.34	MM
11. Provide consistency and satisfaction to the customer service	3.43	MM	3.36	MM
12. Accentuate positive outlook on the workplace to maintain good ties with others	3.43	MM	3.36	MM
13. Manifest ingenuity and innovation in the implementation of different practices at the workplace	3.42	MM	3.36	MM
14. Integrate customer service technologies in a secure and cost-effective manner	3.42	MM	3.36	MM
15. Deal with conflicting situation and mindful of the rights of others	3.42	MM	3.34	MM
16. Utilize ICT to promote cooperative learning contexts	3.38	MM	3.33	MM
Composite Mean	3.44	MM	3.37	MM

Table 22
Extent of Student Development in terms of Work Skills

	TLE Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
1. Acquire interpersonal skills to communicate efficiently with others	3.47	MC	3.34	MC
2. Apply healthy procedures to prevent accidents during laboratory work or operation	3.47	MC	3.37	MC
3. Work within the framework of the regulations and guidelines to comply with the standard operating procedure	3.47	MC	3.38	MC
4. Comply with Occupational Health and Safety procedures in order to create a desirable workplace	3.45	MC	3.35	MC
5. Employ effective ways of accomplishing a certain task	3.43	MC	3.32	MC
6. Execute systematically the procedures for different services to fulfill the organizational goal	3.43	MC	3.33	MC
7. Provide a problem-solving ability to satisfy the needs of the customer and build a positive experience	3.42	MC	3.33	MC
8. Acquire the technical skills necessary in the modern world of work	3.42	MC	3.30	MC
9. Adopt new concepts and techniques to offer more service to clients	3.41	MC	3.25	MC
10. Perform procedures precisely to ensure customer satisfaction	3.40	MC	3.31	MC
11. Operate devices, machines, tools and equipment to achieve the objective of the organization	3.40	MC	3.28	MC
12. Utilize devices and equipment accurately to ensure reliability and precision to meet customer needs	3.40	MC	3.29	MC
13. Attain the entrepreneurial skills to turn ideas into practice	3.39	MC	3.29	MC
14. Capable to use computer applications and equipment to follow technical advances	3.36	MC	3.27	MC
15. Use social media to get exposure and gain market insights	3.35	MC	3.24	MC
Composite Mean	3.42	MC	3.31	MC

Table 23

Issues and Challenges Relative to Meeting TESDA Standards

	TLE Teachers		School Heads	
	W.M.	V.I.	W.M.	V.I.
1. Strengthening the technical skills and managerial skills of TLE teachers	3.47	A	3.39	A
2. Integrating the curricula with 21 st century skills to promote lifelong learning	3.39	A	3.29	A
3. Interest and capability to be National Certified in TLE areas	3.38	A	3.31	A
4. Budget in school to undertake various activities related to TLE	3.37	A	3.26	A
5. Availability and accessibility of tools, materials and equipment to sustain the need of TLE students	3.36	A	3.26	A
6. Intensify the utilization of multimedia instructional materials	3.35	A	3.27	A
7. Insufficient laboratory room designed for a specific area of specialization	3.32	A	3.27	A
8. Upgrade qualifications of teachers through graduate studies and conduct research	3.31	A	3.17	A
9. Financial support granted by school to attend trainings, workshop and seminars for teachers' development	3.31	A	3.21	A
10. Collaboration and support system in the workplace	3.31	A	3.23	A
11. Students misbehavior hinders learning and a nuisance to the progress of lesson delivery	3.29	A	3.20	A
12. Consistency of technical support from the superiors	3.25	A	3.15	A
13. Inadequacy of teaching guide, learning modules and reference books to be used in TLE	3.22	A	3.07	A
14. Mismatch of specialization offers to students of interest due to unavailability of NC II teachers	3.21	A	3.12	A
15. Insufficient number of programs offered by the school, hence minimizing the opportunity to enhance TLE teachers' skills and competencies	3.07	A	2.98	A
16. Learning of TLE teachers is stagnated due to lack of interest to pursue more trainings	2.77	A	2.67	A
Composite Mean	3.27	A	3.18	A

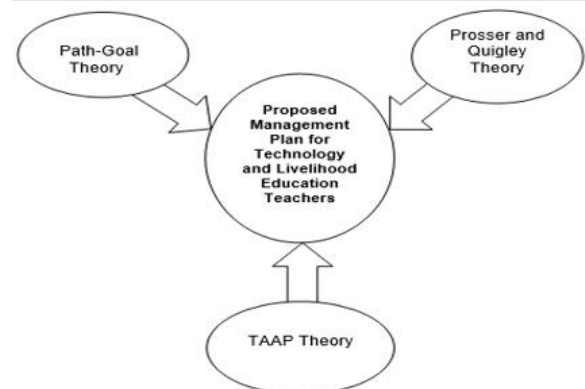


Fig. 1. Theoretical framework

This study is anchored on the Path-goal Theory, Prosser and Quigley Theory, and Technology for All Americans Project Theory.

In relation to TLE, path-goal theory and the TAAP theory deal more on the content aspect of TLE instruction, while the Prosser and Quigley theory pertains to the learning environment including such factors as student behavior, interest, material resources and facilities. As shown in Figure 1, the interrelationships between the three theories serve as the foundation for producing quality students.

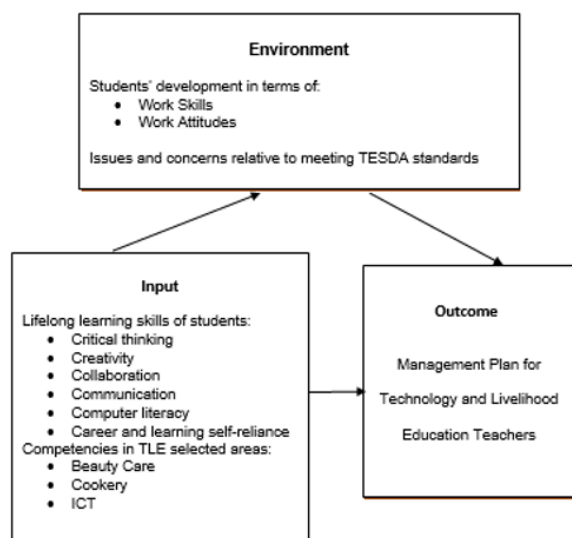


Fig. 2. Conceptual paradigm on the management plan for junior high school technology and livelihood education teachers

The Input- Environment- Outcome (IEO) model was used to visualize the flow of the research work. The input box showed items including manifestations of lifelong learning skills of students, knowledge, learning skills and competencies of students, extent of student development and Issues and Concerns relative to meeting TESDA standards. The second box presented the enhanced skills of students among the TLE areas which signified the environment created by the scenario. The third box contains the output of the study which is a proposed management plan for Technology and Livelihood Education Teachers. The arrow pointing from the input box to the other two boxes showed the relationship that would directly affect the outcome of the research work.

5. Summary

The study focused on the lifelong learning skills of students and their level of competencies in Technology and Livelihood Education, specifically on the three core areas of Beauty Care, Cookery and Information and Communication Technology. These skills include critical thinking, creativity, collaboration, communication, computer literacy, and career and learning self-reliance. It also described the extent of student development in terms of work attitudes and work skills and identified challenges in meeting TESDA standards.

The descriptive research design was used with a researcher-made questionnaire as main data gathering tool. Quantitative

data were supported by interview and focus group discussion. With 285 TLE teachers and 135 school heads from the four Divisions in Batangas Province serving as respondents and research participants.

Based on the data gathered from the respondents, the study yielded the following findings:

1. Extent of manifestation of lifelong learning skills of students in Beauty Care, Cookery and Information and Communication Technology.

1.1 Critical Thinking. Based on the assessments by majority of the TLE teachers, junior high school students moderately manifest their skills in beauty care, cookery and Information and Communication Technology in terms of critical thinking. This is somewhat similar with the assessment of the school heads. Based on the majority of their responses, the lifelong learning skills of students in beauty care, cookery and Information and Communication Technology in terms of critical thinking are moderately manifested. The results indicate that students moderately display critical thinking especially putting important consideration to health, safety and security procedures in the workplace.

1.2 Creativity. Majority of the TLE teachers assessed that the creative skills of students relative to cooking methods are highly manifested, but overall, the lifelong learning skill of students in the three core areas in terms of creativity are moderately manifested. For the school heads, the students also moderately manifest creativity in beauty care, cookery and ICT. Both groups of respondents assessed the students' skills in cooking methods as the highest. This means that students understand the importance of expressing their creative side in terms of cookery, therefore, considering it as both a needed skill and an art.

1.3 Collaboration. Both the TLE teachers and school heads indicated that students highly manifest working with others to create appealing food plating and presentation. In general, the composite means indicate that lifelong learning skills of students in beauty care, cookery and ICT in terms of collaboration are moderately manifested. The findings indicate that in creating an appealing food plating and presentation, working with others would result to better outcomes. This means that the students prefer working in some tasks assigned to them.

1.4 Communication. Based on the results, both groups of respondents indicate that adopting the value of occupational health and safety education by effective exchange and sharing of ideas based on standards is moderately manifested by the students. Overall, the teachers and school heads assessed that the students moderately manifest communication skills as a lifelong learning skill. The findings show that students value exchanging insights in terms of occupational health and safety education but can still improve in this area.

1.5 Computer Literacy. Majority of the teachers indicated that students moderately manifest skills in terms of computer literacy. In contrast, based on the assessment of the majority of school heads, the lifelong learning skills of students in beauty care, cookery and Information and Communication Technology in terms of computer literacy are moderately manifested. The

findings further indicate that majority of the students depend on the internet for performing various tasks such as searching for a list of recipes and video demonstrations to obtain different cooking methods. This means that they consider the internet a good reference in improving their performance.

1.6 Career and Learning Self-Reliance. Majority of the teachers assessed that the students moderately manifest career and self-reliance in the three areas. Similarly, the school heads assessed that the students' skills in career and learning self-reliance are moderately manifested. The highest assessed skill sets are the student's performance in sanitizing kitchen equipment and utensils to comply with standards, and their performance in various nail-care services with confidence, thus leading to job opportunities.

2. Level of knowledge, skills, and competencies of the students

2.1 Beauty Care. The teachers and school heads both assessed that students are moderately knowledgeable in Beauty Care, especially in distinguishing the proper use and care of tools and equipment. On the other hand, the two groups of respondents are also parallel with their assessment that students are moderately competent in Beauty Care. Their highest assessment is on the students' skill in selecting, checking, and preparing the necessary tools and equipment for specific treatment activities.

2.2 Cookery. For the teachers, students are very knowledgeable in cookery, especially in identifying hazards and risks in the workplace. However, the school heads assessed that students are moderately knowledgeable in this subject, especially in selecting, measuring devices, tools and equipment. Despite this, the two groups of respondents similarly assessed the students to be moderately competent on Cookery particularly in sanitizing kitchen equipment and utensils.

2.3 Information and Communication Technology. Both groups of respondents assessed that students are moderately knowledgeable in ICT, with identifying workplace hazards and risks receiving the highest assessment. On the other hand, the teachers and school heads' assessment indicated that students are moderately competent in ICT, with students being most competent in gathering and inspecting tools and equipment.

3. Relationship between extent of manifestation and assessment on three TLE areas.

Knowledge in beauty care was found to have a significant relationship when correlated with critical thinking, creativity, collaboration, communication, computer literacy, and career and learning self-reliance. The learning skills and competencies in beauty care were also found to have a significant relationship when correlated with the lifelong learning skills. Knowledge in cookery was found to have a significant relationship when correlated with critical thinking, creativity, collaboration, communication, computer literacy, and career and learning self-reliance.

Similarly, learning skills and competencies in cookery were found to have a significant relationship when correlated with the six lifelong learning skills.

Lastly the students' knowledge in Information and Communication Technology was found to have a significant

relationship when correlated with lifelong learning skills. The students' competencies in Information and Communication Technology were also found to have a significant relationship when correlated with critical thinking, creativity, collaboration, communication, computer literacy, and career and learning self-reliance.

4. Extent of student Development

4.1 Work Attitudes. The teachers' and school heads' assessment indicate that students moderately manifest work attitudes. Most manifested are the students' commitment and effort to achieve work-related objectives and their demonstration of camaraderie for positive cooperation with others.

4.2 Work Skills. Both groups of respondents assessed that the students are moderately competent in terms of work skills. For teachers, the students acquire interpersonal skills to communicate efficiently, and apply healthy procedures to prevent accidents during laboratory work. For school heads, the students work within the framework of operational guidelines to comply with standard operating procedures.

5. Issues and Challenges relative to meeting TESDA standards

The teachers and school heads agreed that the primary issue relative to meeting TESDA standards is on strengthening the technical and management skills of TLE teachers. For teachers, integrating the curricula with 21st century skills to promote lifelong learning is also a huge challenge. On the other hand, the school heads' assessment indicated that the teachers' and students' interest and capability to be Nationally Certified in different TLE areas also pose serious challenges.

6. Management Plan for Junior High School TLE Teachers

The proposed management plan intends to help junior high school TLE teachers to enhance and strengthen the students' capabilities to sustain the culture of excellence through the acquired competencies. Anchored on the findings of this study and based on the umbrella of quantitative and qualitative data gathered, the management plan aims to capacitate teachers so they can better achieve student outcomes. The plan focuses on three major areas of faculty development, facilities development, and student development.

6. Conclusions

Based on the findings revealed in the study, the following conclusions are drawn:

1. Students moderately manifest critical thinking, creativity, collaboration, communication, computer literacy, and career and learning self-reliance in Beauty Care, Cookery and ICT.
2. Students are moderately knowledgeable and moderately competent in beauty care, cookery and information and in Information and Communication Technology.
3. The extent of manifestation of lifelong learning skills among students are all significantly related to their level of knowledge, skills, and competencies on the three areas of TLE.
4. In terms of student development, students moderately manifest work attitudes, and have moderate competence

in work skills.

5. The primary issue that poses challenge is on strengthening the technical skills and managerial skills of TLE teachers.
6. A management plan was proposed to capacitate TLE teachers in enhancing students' knowledge, and lifelong learning skills in selected TLE areas.

7. Recommendations

In light of the findings and conclusions of the study the following recommendations are suggested:

1. The project management plan proposed in this study may be evaluated for possible future implementation by DepEd Batangas Province.
2. The identified issues and challenges in meeting TESDA standards may be studied further to help all stakeholders improve their training offerings and existing standards in collaboration with schools offering TLE programs.
3. Future research studies that are parallel with the present study may be conducted, covering other areas or fields of specialization, and involving a different research environment.

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