

Proficiency of the BPP NCII holder in teaching tourism sector and its impact on learners' productivity in selected Tech-Voc Institutions in the Philippines

Maria Myrna Nuque¹, Aldrin Agasen^{2*}, and Rodolfo Cabardo³

Systems Plus Computer College¹, National University- Manila^{2,3}

**Corresponding Author: acagasen@national-u.edu*

Abstract: The study seeks to determine the level of proficiency of the Bread and Pastry Production NCII holder in teaching tourism-related sector and distinguish its impact on the learner's productivity in the selected technical-vocational institution in Caloocan City. The research also aimed to recognize the significant difference in the productivity level of the learners before and after the supervision of the NCII holder as the instructor. A survey questionnaire as the research tool was utilized to gather data from 58 respondents. An experimental research approach was used as the research design. The data collected were applied utilizing descriptive statistics such as percentage and frequency distribution, weighted mean, and T-test analysis for inferential statistics. The study found that most of the respondents are somehow exposed, related to the field or the industry. Moreover, only a few samples pursue the postgraduate level. BPP experts dominated the number of respondents. Considering the proficiency of the BPP NCII Holder instructor in terms of instructional delivery skills, instructional design skills, and Course/ Content expertise were substantial, while instructional assessment skills were exceptional. Moreover, the trainers' competitiveness reflects on the output and performance of the students as the result of the intervening action of the instructors. The study also resulted in a significant difference in the level of productivity of the learners between pre-and post-integration of the BPP NCII holder.

Keywords: *Tech-Voc tourism education; TESDA education; level of productivity; level of proficiency; bread and pastry Production*

1. Introduction

1.1. Background of the Study

There is no doubt that a reasonable ground of education has the power to transform lives for a better future and understanding of the different dimensions of life. This man's capability seems only limited to ones' ability and competency. As time progresses, learning and education also follow; it keeps on updating and advancing by the current circumstances, demands, and technology integration to modernize and uplift existing practices. These facts also influenced the qualifications in recruiting or hiring the workforce.

Internationally, education is considered a minor issue regarding employment, especially in a non-managerial position in which skill-based performance is the only basis of competencies. In the Philippines, most

Filipinos are looking for a greener pasture that tends to move abroad for a better opportunity and higher salary even though these people already earned work experience still need tons of requirements to consider that one person as capable and suitable for such position available. In support of this, according to the Philippine Statistics Authority, on average, there are 2.2 million Filipinos yearly who take the risk and find fortune in foreign countries and now respected to be "Bagong Bayani" (heroes) for the indirect benefit coming from their remittances that aids the national economy.

About the ideas above of competencies and employment, the government of the Philippines empowered the education level from primary education up to the technical-vocational courses, from the Department of Education, Commission on Higher Education and Technical Education Skills and Development Authority collaborated with the different private and public sectors and industry to have a better chance of employment thru enhancing the skills, knowledge, and attitude towards to work.

Trainers, teachers, coaches, or mentors have a vital role in molding aspirants, letting them be a catalyst of competitiveness and equipped with the knowledge, attitude, and skills to prepare for their potential career path.

As a result of these objectives, TESDA implemented the Training of Facilitators program. The main aim is to enhance the skills and knowledge of the trainer/facilitators in strategic planning, problem mitigation, and solving that makes the trainers equipped and ready for the different challenges they might encounter. This type of training uses contemporary training techniques which emphasize the importance of experiential learning or learning by doing.

The Technological Education Skills and Development Authority (TESDA) has conceptualized different pieces of training to address the essential elements necessary for the adequate preparation, implementation, and evaluation of training to get the message across. The most crucial component of a training situation is the trainer. The trainer who is enthusiastic, energetic, and genuinely interested in both the subject and getting the message across will evoke the most significant response from the trainees. The modules were prepared for the Bread and Pastry Production training to guide trainers in conveying the message successfully and developing knowledge and skills.

1.2. Review of Related Literature and Studies

Technical Vocational Education or Tec-Voc education is usually referred to here in the Philippines as TESDA, the government agency that handles all related skill-based education in preparation and enhances the level of competency of the learners from local employment to international standards. However, some results towards the education system in the Philippines reflect the opposite of what the government wanted to have.

Wu, B., Bai, B. & Zhu, X. (2019), conducted a study regarding Tech-Voc education revealed that Tech-Voc education in the Philippines currently

faces different challenges such as unsatisfactory quality and difficulty on the graduates' employment, and a single focus-skilled graduates. Moreover, issues have been raised from the study of Orbeta, A. & Esguerra, E. (2016), which resulted in outdated from the current industry trends, and unappealing image of the department and to the graduates and as well as insufficient financial assistance for the TVET trainers and training centers.

Although the graduates of technical-vocational courses were not that much appreciated by the employers locally, oppositely, based on the study of Manalo, J.A., et al. (2018). Those who graduated with National Certificates or trained under the course outline of TESDA have more advantages in terms of employment since the graduates gain more knowledge, skills and perform well that exceeds the expectations of the employers.

About the competency level of the graduates of Tech-Voc programs, an investigation spearheaded by Moreno, R.B. (2014) stated that the NCII holders or passers were fully aware of the competencies required by the hospitality industry in their workplace. This just showed that the trainer's competency reflects on the learners' performance and output not only within the training venue but also outside the border of the school. This claim was supported by the study of Sunico, R.A., & Talili, I.N. (2015). The research found that, overall, TVET providers are very efficient in training provision across seven facets measured. A collaboration study from China and New Zealand, Liu, & Clayton (2016), also found out vocational education and industry training are progressively sustainable, cost-efficient, attractive to the employers, and valued with this, this will continue to grow the TVET industry and should continuously develop to match what the industry trends and enable for the graduate to compete for employment.

TESDA (2019) identified that the tourism sector recorded the highest number of registered participants and TVET graduates among all sectors offered by this agency. Furthermore, a bachelor's degree who graduated with TVET certificates posted the highest employment rate with such a high employment rate. The service-related job was the highest share among the different opportunities for the TVET clients, including the tourism and hospitality sector.

Thus, there was a limited study regarding the competency level of the trainers since TVET trainers usually undergo a calibration every year and assuming that the caliber of the trainers reflects on the performance and output of the learners, which resulted in 9 out of 10 employers were satisfied with the Tech-Voc graduates, TESDA (2019). Subsequently, most of the learners or 7 out of 10 graduates employed within a span of 1 to 3 months after graduation, TESDA (2019), and most of the study focus on the learners, not on the trainers. Therefore, this study was launched by the researchers.

1.3. Statement of the Problem

This study aimed to determine the level of proficiency of the Bread and Pastry Production NCII holder in the teaching tourism sector and its impact on the learners' productivity in selected TVI's in Caloocan City

Specifically, the investigation seeks to answer the following queries;

1. What is the profile of the respondents that may affect the instruction to Tourism students in terms of :
 - 1.1. Age
 - 1.2. Educational Attainment
 - 1.3. Bachelor's Degree/Major
 - 1.4. Field of Expertise
 - 1.5. Number of years of experience in the industry
 - 1.6. Number of the year teaching the sector
 - 1.7. Employment status
2. What is the level of proficiency of Bread and Pastry Production NCII holder in teaching Tourism Sector in Selected TVI's in Caloocan City in terms of;
 - 2.1. Instructional Design Skills
 - 2.2. Course/Content Expertise
 - 2.3. Instructional Delivery Skills
 - 2.4. Instructional Assessment Skills
3. What is the productivity level of the students under the supervision of the BPP NCII Holders as assessed by the respondents in terms of;
 - 3.1. Learners Engagement
 - 3.2. Learners Output and Performance
 - 3.3. Learners Intellectual Competency
4. Is there any significant difference in the level of productivity of the learners between the before and after integration or supervision of the BPP NCII Holder as assessed by the respondents

1.4. Hypothesis

The study hypothesized that there is no significant difference in the level of productivity of the learners between the before and after integration or supervision of the BPP NCII Holder as assessed by the respondents.

2. Methodology

This study used experimental research to determine the difference in the level of productivity of pre-and post-integration of the BPP NCII trainer. This experimental research seeks the effect of the independent variables on the dependent variables as undergone on the different intervening processes.

A survey method was also used to gather data from the respondents. The survey method is defined as studying the sampling of individual units from a population and the associated survey data collection techniques, such as survey questionnaire construction and methods for improving the number and accuracy of responses to the survey. It also includes instruments or procedures that ask one or more questions that may or may not be answered.

2.1 Instrumentation and Sampling Techniques

The primary instrument of this study is a self-made survey questionnaire and developed by the researcher.

Part I is the demographic profile of the respondents.

Part II states the assessment level of proficiency of Bread and Pastry Production NCII holder in teaching Tourism Sector in Selected TVI's in Caloocan City

Part III indicates the evaluation of the productivity level of the students under the supervision of the BPP NCII Holder/trainers

Table I. Cronbach's Alpha of the Research Instrument

Indicator	Alpha	Verbal Interpretation	N of Items
Level of Proficiency of the Trainers			
Instructional Skill	.873	Good	5
Course/Content Expertise	.908	Excellent	13
Instructional Delivery Skill	.927	Excellent	5
Instructional Assessment Skill	.823	Good	5
Productivity Level of the Learners			
Learner's Engagement	.862	Good	5
Learner's Output and Performance	.903	Excellent	13
Learner's Intellectual Competencies	.817	Good	5

Legend

Cronbach's Alpha

$a \geq 0.9$

$0.9 > a \geq 0.8$

$0.8 > a \geq 0.7$

$0.7 > a \geq 0.6$

$0.6 > a \geq 0.5$

$0.5 > a$

Internal Consistency

Excellent

Good

Acceptable

Questionable

Poor

Unacceptable

As depicted in table I as to the result of the Cronbach's Alpha, the research instrument on each indicator exceeds the acceptable level, two (2) variables rated excellent, namely: instructional materials and course/content expertise. In contrast, two (2) more indicators were interpreted as Good such as Instructional Skills and Instructional Assessment Skills. On the other hand, based on the productivity level of the learners, the research tool rated above good point, learner's output and performance evaluated excellent, and two (2) indicators rated Good namely: learner's engagement and learner's

intellectual competencies. The said evaluation of the research tool was computed manually.

2.2 Research Respondents and Sampling

The participants of the study were composed of fifty-eight (58) BPP NCII holders teaching tourism in selected Tech-Voc Institution in Caloocan City. There were fifteen (15) Bread and Pastry Production NCII Assessors from Quezon City Assessors Association who assessed the proficiency level of the BPP NCII Holder/trainer.

The researchers utilized the Purposive sampling technique wherein a type of sampling technique under the probability sampling starts in determining the number of population and defining the sampling fraction that enables to get the respondents. The main objective of a purposive sample is to produce a sample that can be logically assumed to be representative of the population. This is often accomplished by applying expert knowledge of the population to select a sample of elements that represent a cross-section of the population in a nonrandom manner.

2.3 Statistical Treatment Data

The following were utilized in the statistical treatment of the data:

1. Percentage and Frequency Distribution: To determine the relation of a part to a whole into a percentage form.

Formula:

$$P = \frac{F}{N} \times 100\% \quad (\text{Eq. 1})$$

where:

P = Percentage

F = Frequency

N = Total Number of Respondents

2. Cronbach's Alpha: it is used to determine the level of reliability of the survey questionnaire as to how consistent the respondents understand each question on the survey questionnaire.

Formula

$$\alpha = \frac{n}{n-1} \left(1 - \frac{\sum V_i}{V_t} \right) \quad (\text{Eq. 2})$$

where:

α = *alpha*

n = *number of items/questions*

V_i = *Variance of scores on each question*

V_t = *total variance of overall scores on the entire test*

3. Weighted Mean. It is the average calculated by taking into account frequencies of values of a variable and some other

factors such as additional variance. The weighted mean average of observed data is the result of dividing the sum of the products of each observed value, the number of times it occurs, and this other factor by the total number of observations.

Formula

$$x = \frac{\varepsilon fx}{n} \quad (\text{Eq. 3})$$

where:

X = Weighted Mean

εfx = Total Weighted Score

N = Number of respondents

4. T-Test: this is used to determine the significant difference between the respondents.

Formula:

$$t = \frac{\sum d}{\sqrt{\frac{n(\sum d^2) - (\sum d)^2}{n - 1}}} \quad (\text{Eq. 4})$$

where:

d = Difference per paired value

n = number of samples

3. Result and Discussion

The first part presents the profile of the respondents that may affect the instruction to Tourism students in terms of the following:

- a. Age
- b. Educational Attainment
- c. Bachelor's Degree/Major
- d. Field of Expertise
- e. Number of years of experience in the industry
- f. Number of the year teaching the sector
- g. Employment status

Table 2. Respondents as to Age

Age	Employees		Rank
	f	%	
20 - 25	8	13.79	5
26 - 30	16	27.59	1
30 - 35	14	24.14	2
36 - 40	11	18.97	3
Above 40	9	15.52	4
Total	58	100	

Table 2 revealed that most of the bread and pastry production NCII trainers fall under the late twenties age bracket, and trainers coming from the early twenties, or the young adults got the least number of samples.

Table 3. Respondents as to Educational Attainment

Educational Attainment	Employees		Rank
	f	%	
Bachelor's Degree	47	81.03	1
Master's Degree	8	13.79	2
Doctorate Degree	3	5.17	3
Total	58	100	

Table 3 showed that all the trainers are graduates of bachelor's degrees, and some pursue the postgraduate level such as the master's degree and doctorate.

Table 4. Respondents as to Bachelor's Degree

Bachelor's Degree	Employees		Rank
	f	%	
HRM/Tourism	44	75.86	1
Business Administration	6	10.34	2
Food Technology	5	8.62	3
Nutrition	2	3.45	4
Culinary Management	1	1.72	5
Total	58	100	

As shown in Table 4, trainers who graduated under HRM/Tourism program dominated the number of respondents, and several of the trainers took business administration, food technology, nutrition, and culinary management, which are still related to the business and tourism industry.

Table 5. Respondents as to Field of Expertise

Field of Expertise	Employees		Rank
	f	%	
Bartending	5	8.62	4.5
Front Office	3	5.17	6.5
Housekeeping	5	8.62	4.5
Cookery	8	13.79	3
Food and Beverage	15	25.86	2
Tour Guiding	1	1.72	8
Travel Service	3	5.17	6.5
Bread and Pastry Production	18	31.03	1
Total	58	100.00	

Table 5 showed that the respondents have a wide range of expertise not only teaching the bread and pastry production but also exposed and trained with the different qualifications, namely; bartending, front office, housekeeping, cookery, food and beverage, tour guiding, and travel service, hence, most of the trainers of BPP NCII are experts on the field of bread and pastry production.

Table 6. Number of Years of Experience in the Industry

Number of years of experience in the industry	Employees		Rank
	f	%	
1 - 3 years	18	31.03	2
4 - 6 year	31	53.45	1
7 - 9 year	7	12.07	3
10 - 12 years	2	3.45	4
Total	58	100	

As shown in Table 6, trainers have adequate exposure in the industry to teach and impart their specializations to the trainees.

Table 7. Number of Years in Teaching the Sector

Years of teaching the sector	Employees		Rank
	f	%	
1 - 3 years	7	12.07	3
4 - 6 years	21	36.21	1
7 - 9 years	20	34.48	2
10 - 12 years	6	10.34	4
Total	58	100	

Table 7 showed that trainers under this qualification are well-versed in the academe having enough experience in training and teaching procedures and modality since most of the trainers are in the academe for at least four years and above while few are from the new entrants to the teaching profession.

Table 8. Employment Status

Employment Status	Employees		Rank
	f	%	
Part-Time	27	46.55	2
Full Time	31	53.45	1
Total	58	100	

As presented in Table 8, most of the employees are under full-time status. Hence, almost half of the samples are part-time employees.

Table 9. Assessment on the Proficiency Level of Bread and Pastry Production NCII holder in Teaching Tourism Sector in Selected TVI's in Caloocan City as to Instructional Design Skills.

Indicators	Employees		Rank
	WM	VI	
1. Prepares a curriculum that is relevant to the level of the students	3.88	MP	5.5
2. Organize based on the level of difficulty in designing the curriculum	3.88	MP	5.5
3. Facilitates the alignment, of course, module objectives with self-check and activities in the course	4.17	MP	2
4. Prepares logical, consistent, and uncluttered layout is developed.	4.21	HP	1
5. Free from Grammatical and spelling errors.	4.07	MP	3
6. Prepares a curriculum that is relevant to the level of the students	4.04	MP	4
Composite Weighted Mean	3.88	MP	

Table 9 showed that the instructional design skills of the trainers rated as moderately proficient in which preparing a logical, consistent, and uncluttered instructional layout seem to be their strengths while both leveraging the curriculum or content that will match the level or current capability of the students and organizing content based on the level of difficulty showed to be the downtrend of the trainers.

Table 10. Assessment on the Proficiency Level of Bread and Pastry Production NCII holder in teaching Tourism Sector in Selected TVI's in Caloocan City as to Course/Content Expertise.

Indicators	Employees		Rank
	WM	VI	
1. Performs the fundamentals of scaling and measurement practices	4.64	HP	1
2. Well-verse on the different baking terms, jargon, and techniques	4.55	HP	2
3. Executes the proper operation and maintenance of the different baking tools and equipment	4.22	HP	7
4. Executes proper preparation of quick bread	4.28	HP	6
5. Performs the foundation of cookies and cookie-related preparation	4.41	HP	5
6. Demonstrates the fundamentals of pie and tarts preparation	4.45	HP	4
7. Executes the proper preparation of pastry and pastry-type products (éclair, choux pastries, cream puff, etc.)	3.97	MP	9

Continuation- Table 10

8. Prepares different baking syrups and sauces	3.98	MP	8
9. Prepares various bread (fermented, with yeast, sourdough, etc.)	4.50	HP	3
10. Prepares different types of cakes (pound, chiffon, buttered, sponge, etc.)	3.34	SP	10
11. Knowledgeable in frosting and icing preparation (royal, buttercream, boiled, Fondant, Meringue, Ganache, Cream cheese, Glass Gloss)	2.57	LP	11.5
12. Performs cake decoration and cake tier tactics. (anti-gravity tactics, ratio of genuine and fake tier of cakes)	2.33	LP	13
13. Utilizes different techniques and presentations in bread, pastries, and cakes packaging.	2.57	LP	11.5
Composite Weighted Mean	3.83	MP	

Regarding the course or content expertise, Table 9 revealed that the trainers are moderately proficient, considering that the trainers are highly skilled in the fundamentals such as measurement, familiar with the terms and jargon, have technical knowhow on various baking tools and equipment, as well as baking and producing multiple baked products, however, techniques in frosting, packaging and decorating baked products showed to be least of focused or overlooked by the trainers during the bread and pastry production NCII training.

Table 11. Assessment on the Proficiency Level of Bread and Pastry Production NCII holder in teaching Tourism Sector in Selected TVI's in Caloocan City as to Instructional Delivery Skills.

Indicators	Employees		Rank
	WM	VI	
1. Appropriate communication methods based on the capability level of the learners	4.38	HP	3
2. Provides briefing (instruction dissemination) before the baking operation.	4.48	HP	2
3. Pose a thought-provoking question that inspires students to think for themselves and become more independent learners	3.41	MP	5
4. Supervises students in delivering safe, ethically sound and preparation and baking proper.	4.66	HP	1
5. Prepares different forms utilized on the laboratory (Requisition, Manpower Schedule, Production Schedule & Standardized Recipe)	3.95	MP	4
Composite Weighted Mean	4.18	MP	

As presented in Table 11, the assessment reflects on how the trainers are excellent in their field of specializations coming from the trainers' prolonged exposure to both industry and academe, yet considering the instructional delivery skills, the study discovered that the trainers are somewhat lacking in initiating the trainees to think critically. Rationally that will be the venue for the learners to work independently.

Table 12. Assessment on the Proficiency Level of Bread and Pastry Production NCII holder in teaching Tourism Sector in Selected TVI's in Caloocan City as to Instructional Assessment Skills.

Indicators	Employees		Rank
	WM	VI	
1. Facilitates learning experiences before and after the activities	4.29	HP	4
2. Ask questions for further verifications and gain more information from the learners	3.98	MP	5
3. Recognize and state the learners' strengths and room for improvement	4.36	HP	2.5
4. Evaluate students' performance utilizing appropriate rubrics	4.59	HP	1
5. Reflecting on the training gaps of the baking operation	4.36	HP	2.5
Composite Weighted Mean	4.32	HP	

In terms of instructional assessment skills, Table 12 showed that trainers are highly proficient with a flagship of evaluating the students' performance utilizing appropriate rubrics, followed by a reflection in the gaps of baking operation as well as recognizing the learner's strengths and weaknesses, though follow up questions should still be improved by the trainers for further verifications or extracting more information from the students.

Table 13: Summary Table of the Assessment on the level of proficiency of Bread and Pastry Production NCII holder in teaching Tourism Sector in Selected TVI's in Caloocan City

Indicators	Employees		Rank
	CWM	VI	
1. Instructional Design Skills	3.88	MP	3
2. Course/Content Expertise	3.82	MP	4
3. Instructional Delivery Skills	4.18	MP	2
4. Instructional Assessment Skills	4.32	HP	1
Overall Composite Weighted Mean	4.05	MP	

Table 13 showed that the BPP NCII trainers earned a moderate proficiency level in which the instructional assessment skills are the trainers'

best practices; hence, under instructional delivery, design skills and course/content expertise are still needed for further improvement.

Table 14. Assessment of the productivity level of the students under the supervision of the BPP NCII Holders in terms of Learners engagement

Indicators	Pre-Test		Rank	Post-Test		Rank
	WM	VI		WM	VI	
1.Participates in lectures, discussion, and laboratory activities	4.38	HPr	2	4.45	HPr	2
2.Ask questions during discussion whenever the learners need to clarify information.	4.52	HPr	1	4.60	HPr	1
3. Give suggestions and recommendations regarding the topic or laboratory	4.28	HPr	3	4.29	HPr	3
4.Enable to lead his/her members during the laboratory.	3.57	MPr	5	3.71	MPr	5
5.Prepared for class and laboratory requirements	4.14	MPr	4	4.19	MPr	4
General Composite Weighted Mean	4.18	MPr		4.25	HPr	

Table 14 revealed that there is a slight improvement in the productivity level considering the learners' engagement of students after the intervention of the BPP NCII trainer handles the subject. In which, both pre-test and post-test have the same pattern wherein throwing questions during the discussion for clarification, the students are participating the meetings and activities and open to give suggestions and recommendations regarding the discussion and laboratory revealed as its strengths while the students preparation during the class or laboratory and the leading the members of the group during the laboratory still something that needs to improve.

Table 15. Assessment of the productivity level of the students under the supervision of the BPP NCII Holders in terms of Learners Output & Performance

Indicators	Pre-Test		Rank	Post-Test		Rank
	WM	VI		WM	VI	
1. Performs the fundamentals of scaling and measurement practices	3.55	MPr	8	3.95	MPr	6
2. Well-verse on the different baking terms, jargon, and techniques	3.52	MPr	9	3.55	MPr	9

Continuation- Table 15

3.	Executes the proper operation and maintenance of the different baking tools and equipment	3.84	MPr	3	4.10	MPr	1
4.	Executes proper preparation of quick breads	4.00	MPr	1	4.07	MPr	2
5.	Performs the foundation of cookies and cookie-related preparation	3.91	MPr	2	4.05	MPr	3
6.	Demonstrates the fundamentals of pie and tarts preparation	3.84	MPr	4	4.02	MPr	4.5
7.	Executes the proper preparation of pastry and pastry-type products (éclair, choux pastries, cream puff, etc.)	3.81	MPr	5	3.90	MPr	7
8.	Prepares different baking syrups and sauces	3.79	MPr	6	4.02	MPr	4.5
9.	Prepares various breads (fermented, with yeast, sourdough, etc)	3.74	MPr	7	3.88	MPr	8
10.	Prepares different types of cakes (pound, chiffon, buttered, sponge, etc.)	2.78	SPr	10	3.16	SPr	10
11.	Knowledgeable in frosting and icing preparation (royal, buttercream, boiled, Fondant, Meringue, Ganache, Cream cheese, Glass Gloss)	2.33	LPr	12	2.55	LPr	12
12.	Performs cake decoration and cake tier tactics. (anti-gravity tactics, ratio of true and fake tier of cakes)	2.16	LPr	13	2.47	LPr	13
13.	Utilizes different techniques and presentation in bread, pastries and cakes packaging.	2.43	LPr	11	2.98	SPr	11
General Composite Weighted Mean		3.36	SPr		3.59	MPr	

Considering the performance and output of the learners, Table 15 revealed that the trainer boosts the outcome of the students compared to the previous performance. The students were now better at executing the proper operation and maintenance of the different baking tools and equipment, preparing and measuring ingredients, baking quick bread, cookies, pies, tarts, and sauces; however, the result for preparing to frost, and icing, cake decorating and techniques in presentation and packing are

still parallel from the previous assessment, which still is considered as the weaknesses of the training output.

Table 16. Assessment of the Productivity Level of the Students under the Supervision of the BPP NCII Holders in terms of Learners Intellectual Competencies

Indicators	Pre-Test		Rank	Post-Test		Rank
	WM	VI		WM	VI	
1. Memorize each recipe per laboratory	3.43	MPr	3	3.81	MPr	3
2. Enable to convert measurement depending on the available resources.	2.47	LPr	5	3.12	SPr	5
3. Enable to think and request tools and equipment as the learners read the recipes and procedures.	3.72	MPr	2	3.98	MPr	2
4. Enable to give and formulate their feedback as the learners' evaluate the products of their peers.	3.88	MPr	1	4.10	MPr	1
5. Enable to modify and standardize the given recipe.	3.12	SPr	4	3.21	SPr	4
General Composite Weighted Mean	3.32	SPr		3.64	MPr	

In Table 16, it showed that the integration of the trainers with BPP NCII resulted in a higher level of intellectual competencies on the learners in which the students can formulate feedback to evaluate the products of the other students, increases the ability to envision the tools or equipment by the given procedures and can memorize recipes for laboratory are the strengths and improvements while modification and standardization of the recipe and adapting the available resources for measurement. However, it has improved yet, still need further enhancement.

Table 17. Summary Table of the Assessment of the Productivity Level of the Students under the Supervision of the BPP NCII Holders in terms of Learners

Indicators	Pre-Test		Rank	Post-Test		Rank
	WM	VI		WM	VI	
1. Learners' Engagement	4.18	MPr	1	4.25	HPr	1
2. Learners' Output and Performance	3.36	SPr	2	3.59	MPr	3
3. Learners' Intellectual Competencies	3.32	SPr	3	3.64	MPr	2
Overall Composite Weighted Mean	3.62	MPr		3.83	MPr	

Overall, the study revealed that the intervention of the trainers enhances the output or productivity of the learners, wherein learners' engagement is considered highly productive. In contrast, both learners' intellectual competencies and output and performance resulted in moderately productive, which still needs room for improvement (Table 17).

Table 18. Significant Difference on the Level of Productivity of the Learners between Before and After the Integration or Supervision of the BPP NII Holder.

	Variable	Df	T-Value	Critical Value	Interpretation	Decision
1.	Learners' Engagement	57	3.72	2.0	Reject Ho	Significant
2.	Learners' Output and Performance	57	10.12	2.0	Reject Ho	Significant
3.	Learners' Intellectual Competencies	57	6.80	2.0	Reject Ho	Significant
	OVERALL	57	6.88	2.0	Reject Ho	Significant

@ .05 level of Significance

Based on Table 18 as to the significant difference in the level of productivity of the learners between the before and after the integration or supervision of the BPP NCII holder with a degree of freedom of 57, overall computed t-value of 6.88, and a critical value of 2.0 resulted in rejecting the null hypothesis. Therefore, there is a significant difference in the productivity level between the pre-and post-integration of the BPP NCII holder

4. Conclusion and Recommendation

Most of the respondents are somehow exposed, related to the field or the industry. Moreover, only a few samples pursue the postgraduate level. BPP experts dominated the number of respondents.

The researchers concluded that there are very proficient ways and systems of assessing the learners' performance and output because of a well-constructed matrix of assessment and reflection of the laboratory outcome, which might come either from the well-experienced industry worker, fresh from the industry, or an actively participated faculty members on any related seminars or development programs intended on the tourism industry that the NCII holder inherits during the faculty/instructor's training under TESDA. However, there are such competencies that do not cover or focus on the existing core competencies of bread and pastry production, such as the new trends in icing making, presentation, and decoration such as the glass gloss icing, fondant, and the like, same as the packaging and cake production.

The trainers' competitiveness reflects on the output of the learners'. The results presented development in the production and performance of the students as the trainers/instructors/professors integrate the competency learned that transpired during the TESDA/NCII training.

The results that training from TESDA uplift the level of competency of the learners as shown that the post-test result signifies the enhancement of the caliber of the learners specifically on the engagement and encouragement of the students towards to course/subject; however, some factors affects the rate of the skill-based lectures/practices due to some unfocused competency such as trends on techniques, preparation, presentation and packaging of the bread, cake and other baked products.

Recommendations

The management must continue to provide a complete package of training programs to Trainers, specifically, in Bread and Pastry Production as the best way of enhancing and augmenting their capabilities to teach and supervise. The major role being played by the trainers and managers in teaching is improving, refining, re-engineering, and molding the students. Thus, this will all depend on the outcome-based training and creating a better output building a picturesque image of the School or the Training Center relevant to the trainer's productivity.

The management should provide a continuous training program to their trainers, specifically Decorating Cakes and Bakery Products. An in-depth training must be provided to improve their innate knowledge and training on cake decorating and augment their capabilities to train, teach and transfer.

The management should continuously provide faculty development in the field of enriching and improving their capabilities to teach and supervise. A continuous application and integration on the Knowledge and practice in frosting and icing preparation using royal, buttercream, boiled, Fondant, Meringue, Ganache, Cream cheese, Glass Gloss in the HRM department, whereby all are planned with desirable learning outcomes regarding the course content, learning activities and assessment that are designed to be consistent with the achievement of evidence gathered with feedback that ensures that learning environment is acting in concert to facilitate the nurturing of the desired outcomes.

Attendance to all seminars offered and conducted by TESDA, CHED, and all other related Professional organizations is advised. Ongoing professional development keeps teachers up to date on new research, programming, and developing on how students learn, emerging technology tools for the classroom, new curriculum resources. The best professional development is ongoing, experiential, collaborative, and collective. Results of the study can be a source of information and a guide about the new behavioral and interactive approach of instruction, curriculum development,

and transfer of knowledge and skills. Creative, Resourceful, and Inventiveness of faculty development is an advantage.

The results of this study would be beneficial not only to TESDA, University, Colleges, Administration, and Trainers but also to future readers. A repetition of this study with different respondents is also advised, thus applying all the given suggestions and recommendations will come up and aimed at an additional finding and result more specifically in developing awareness amongst the Trainers regarding the new trends and development in the Philippine Education, more specifically the one being offered by Technological Education Skills and Development Authority (TESDA), the Bread and Pastry Production. This could be a primary source of their background in developing the enhanced intended curriculum for the said qualification.

References

- ADB – Asian Development Bank (2014). Technical and vocational education and training in the Socialist Republic of Viet Nam. Mandaluyong City: ADB.
- ADB & ILO – Asian Development Bank / International Labour Organization (2014). ASEAN Community 2015: Managing Integration for better jobs and shared prosperity. Bangkok: ILO and ADB.
- ASEAN (2012). ASEAN Economic Community Blueprint. Jakarta: ASEAN Secretariat.
- Bateman, A. & Coles, M. (2013). ASEAN Qualification Reference Framework. Education and Training Governance: Capacity Building for National Qualifications Frameworks.
- Bateman, A., Keating, J., Gillis S., Dyson, C., Burke, G. & Coles, M. (2012). East Asia Summit Vocation
- Calmorin, L. P. and Calmorin, M. A. (2012). Research Methods and Thesis Writing. (2nd ed.). Rex Bookstore Inc.
- CEDEFOP – European Centre for the Development of Vocational Training (2012). Modernizing vocational education and training: Fourth report on vocational training research in Europe: Background report, Vol. 2, CEDEFOP Reference Series 70.
- Deci, E. L., & Ryan, R. M. (2012). Intrinsic motivation and self-determination in human behavior. New York: Plenum.
- Deci, E. L., Connell, J. P., & Ryan, R. M. (2012). Self-determination in a work organization. *Journal of Applied Psychology*, 74, 580–590.
- Gill, E. (2018), Teaching Strategies
- Grasha, A.F. (2011). Teaching with Style: The Integration of Teaching and Learning Styles in the Classroom. University of Cincinnati

- Hall, C. & Gardner L. (2011). *The Theories of Personality*. (3rd. ed). John Wiley and Sons Incorporation
- Hawkins, Ph.D., and Richard F. (2015). *Trainer's Guide Educational Technology and Mobile Learning*.
- ILO – International Labour Organization (2010). *A skilled workforce for strong, sustainable, and balanced growth: Proposals to G20 leaders for a training strategy*. www.ilo.org/public/libdoc/jobcrisis/download/g20_skilledworkforce.pdf
- ILO – International Labour Organization (2010). *Teachers and trainers for the future – Technical and vocational education and training in a changing world*. Geneva: International Labour Office.
- Liu, G., & Clayton, J. (2016). *Measuring Technical Vocational Education and Training (TVET) Efficiency: Developing a Framework*.
- Maclean, R. & Wilson, D.N. (Eds.) (2015). *International Handbook of Education for the Changing World of Work: Bridging Academic and Vocational Learning*. Springer.
http://www.unevoc.unesco.org/fileadmin/user_upload/pubs/Handbook_Introduction_RM_DW.pdf
- Manalo, J.A., Caguicla, A.L., Dimalaluan, J.A., Macatangay, J.G., Robles, S.G. and Felicen, S.S. (2018). *Effectiveness of TESDA National Certification to Cruise Line Operation in Culinary Arts Graduates of 2015 and 2016*.
- Marope, P.T.M., Chakroun, B. & Holmes, K.P. (2015). *Unleashing the Potential Transforming Technical and Vocational Education and Training*. UNESCO/UNEVOC.
<http://unesdoc.unesco.org/images/0023/002330/233030e.pdf>.
- Ministry of Education. Nielsen, S. (2011). *TVET teachers and trainers*. Background paper commissioned by UNESCO Education Sector.
- Moreno, R. B. (2014). *Level of Competence of Food and Beverage Services NCII Passes: Basis for Strengthening the Training Program in Western Visayas*.
- Orbeta, A. & Esguerra E. (2016). *The National System of Technical Vocational Education and Training in the Philippines. Review and Reform Ideas*.
- Parsons, D.; Hughes, J.; Allinson, C.; Walsh, K. (2009). *The training and development of VET teachers and trainers in Europe*, in Cedefop - European Centre for the Development of Vocational Training, *Modernising vocational education and training: Vocational training research in Europe*: 4(2), 79–156
- Paryono (2013). *Mapping national and regional TVET initiatives in Southeast Asia and beyond in response to students and labor mobility*. In: *TVET@Asia*, 1, 1-8. http://www.tvet-online.asia/issue1/paryono_tvete1.pdf

- Paryono, P. (2015). Approaches to preparing TVET teachers and instructors in ASEAN member countries. In: TVET@Asia, issue 5, 1-27. http://www.tvet-online.asia/issue5/paryono_tvvet5.pdf
- Ratnata, I.W. (2013). Enhancing the image and attractiveness of TVET. In TVET@Asia, issue 1, 1-13. http://www.tvet-online.asia/issue1/ratnata_tvvet1.pdf
- Stanley, J. (2013). Global Validation Workshop on Policies and Practices on TVET Teachers and Instructors in the Arab Region, a Regional Study. Final Report. Paris, UNESCO
- Sunico, R.A., & Talili, I. N. (2015). The efficiency of Technical-Vocational Education and Training (TVET) Providers.
- TESDA. (2019). 2019 Study of the Employment of TVET Graduates. <https://www.tesda.gov.ph/About/TESDA/20863>
- Tomlinson C., (2012). Fulfilling the Promise of Differentiation.
- Weselby, C. (2012) What is Differentiated Instruction? Examples of How to Differentiate Instruction in the Classroom. Concordia University-Portland
- Wu, Q., Bai, B. & Zhu, X. (2019). Technical and Vocational Education and Training in the Philippines: Development and Status Quo