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TECHNOLOGY AND LIVELIHOOD EDUCATION TEACHERS' TRAINING NEEDS: BASIS FOR ENHANCEMENT PROGRAM

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Abstract : This descriptive study was conducted to assess the training needs of Technology and Livelihood Education teachers which will serve as basis for developing teachers' enhancement program. The basis of the conceptual framework evolved from the concept Organization-Task-Person (OTP) conception of needs assessment as described by McGehee and Thaye to provide information about where and when training is needed in an organization. It is considered the core framework for needs assessment in the academic literature since most of the models developed have been based on the three-level framework (Holton, E. et al. 2000). This study covered select Technology and Livelihood Education teachers and school administrators from the Fourth Congressional District of Pangasinan Division II for the School Year 2023-2024. Percentage, mean/average, t-test, f-test, and analysis of variance (ANOVA) were used as statistical tools to quantify the data. It utilized the survey form through the use of questionnaire designed by the researcher for the purpose of the study. The instrument was validated by a group of experts. Their corrections, comments, and suggestions were considered in improving the questionnaire. The findings of the study show that there is no significant difference on the competency level when the teachers are grouped according to demographic profile. Findings also imply that there are significant differences identified in all the six components of standard competency and the competency level of the teachers. Three major needs identified are activities that would enhance competency of students in motivation and opportunities to acquire or enhance their skills, renewed professionalism, and rejuvenated teaching advocacy and calling. The study concludes that there exists a significant gap (difference) between the present competency level and the desired standard competency requirements of TLE teaching among the teachers. This study, thereby, recommends enhancement program, projects, and activities to address the competency needs requirement of the TLE teachers. The findings, conclusions, and recommendations of this study can be used as a basis for policy formulation on teachers' development/enhancement programs.

Keywords:enhancement program, technology and livelihood education

INTRODUCTION

A teacher's role in the present time involves more than simply standing in front of a group of students, sharing their thoughts on what they find meaningful. Teaching is one of the most complicated jobs today. Teaching the subject Technology and Livelihood Education (TLE) is even more challenging. It demands broad knowledge of the four components (Agri-Fishery, Computer and Entrepreneurship, Industrial Arts, and Home Economics) of the subject matter, curriculum and standards, enthusiasm, a caring attitude, creativity, love for learning, classroom management techniques, and a desire to make a difference in the lives of young people (Great Schools, n.d.).

The need to ensure the presence of highly qualified teachers in every classroom and to determine how best to define and prepare these qualified teachers has been an old age issue. One could be the best teacher with the best course materials, course activities, learning outcomes, and assessments at one point in time. But as time changes, courses are revised as in the case of TLE to suit the needs of the society, the employers, and the diversity of students; hence teachers must keep abreast of these changes. For instance, a teacher specializing in Agri-Fishery Arts may need to stay updated on the latest farming techniques or agricultural innovations to effectively educate students.

A way to find out what needs to be changed, improved, or updated is to evaluate the actual state of the teachers' knowledge, attitudes, skills, and strong aspects of their practice, as well as their weaknesses (Stronge & Tucker, 2003). This evaluation can be done through regular assessments, feedback from students, and professional development programs. By identifying areas for improvement, teachers can continuously enhance their teaching methods and adapt to the evolving needs of the education system.

Professional development keeps teachers up-to-date on new research, on how children learn, on emerging technology tools for the classroom, and on new curriculum resources. For example, a teacher of Information and Communication Technology in TLE may attend workshops on coding or digital literacy to stay current with technological advancements. Effective professional development enables educators to develop the competencies, such as the knowledge and skills they need to address students' learning challenges. This ongoing learning process ensures that teachers are equipped to provide quality education and support to their students.

The issuance of Department Order No. 43 in 2002, popularly known as BEC Order, restructured the elementary and secondary curriculum for the purpose of improving the standard of education in the country. This restructuring aimed to align the curriculum with the changing needs of society and the workforce. The Guidelines for the Pilot Implementation of the 2002 Secondary Education Curriculum (DepEd Order No.43 series of 2002) describes Teknolohiya at Edukasyong Pantahanan at Pangkabuhayan (TEPP) as one of the four component subjects of Makabayan, a learning area that serves as a practice environment for holistic learning.

TLE (per DepEd Order No. 37 series of 2003) is one of the learning areas of the Secondary Education Curriculum in Philippine secondary schools. As a subject, its component areas are: Home Economics, Agri-Fishery Arts, Industrial Arts, and Information and Communication Technology. It is also referred to as CP-TLE for Career Pathways in Technology and Livelihood Education. Technology and Livelihood Education is taught in schools, among other subjects, for students to learn how to have the basic necessities and the means to improve upon them in order to have a better life. Students in this subject are taught things like home education, sewing, cooking, etc., as well as how to be innovative with current technology so that they can find solutions to problems they may face in everyday life.

The 2010 Secondary Education Curriculum allocates 240 minutes per week for CP-TLE, which is equivalent to 1.2 units. However, CP-TLE is required to include practical work experience in the community, which may extend beyond its specified school hours. This practical experience allows students to apply their theoretical knowledge in real-life situations and gain hands-on skills that are essential for their future careers.

Two types of curriculum are provided for regular high schools (public and private). These are: Technical-Vocational Education-based TLE and Entrepreneurship Education-based TLE. The Technical-Vocational Education-based TLE focuses on technical skills development in various areas. For instance, a student specializing in Industrial Arts may learn welding techniques or carpentry skills during the exploratory phase. The Entrepreneurship Education-based TLE, on the other hand, emphasizes the learning of livelihood skills to prepare students for starting small enterprises. This could involve teaching students how to create a business plan, market their products, and manage finances effectively.

Having set the goals of TLE, what would be the standard qualifications of a teacher that would best impart the curriculum contents of TLE? These qualifications are often referred to as competencies and are defined in general or specific terms. Competency, in general, is defined as a set of knowledge, skills, behaviors, attitudes, and characteristics that distinguish one person from another. In the context of teaching TLE, a teacher's competencies may include technical expertise in their subject area, effective communication skills to engage students, and the ability to adapt teaching methods to cater to diverse learning needs.

In a study conducted by WONG Yu Fai (1996), he adopted the definition of competence offered by the European Tuning project, which states that competencies represent a dynamic combination of knowledge, understanding, skills, abilities, and values. This comprehensive view of competencies highlights the multifaceted nature of teaching and the importance of integrating various elements to effectively educate students.

In the training world, a comprehensive definition of competency is given as a cluster of related knowledge, skills, and attitudes that affect a major part of one's job, that correlates with performance on the job, that can be measured against well-accepted standards, and that can be improved via training and development. This definition underscores the continuous learning and improvement that teachers must undergo to meet the demands of their profession and provide quality education to their students. By honing their competencies and staying abreast of educational trends, teachers can create a nurturing and effective learning environment for their students.

Statement of the Problem

The study sought to determine the training needs of Technology and Livelihood Education (TLE) teachers of the Fourth Congressional District of Pangasinan Division II during the school year 2023-2024.

Specifically, it sought to answer the following sub-problems:

1. What is the demographic profile of Technology and Livelihood Education (TLE) teachers and administrators?
2. What is the competency level of TLE teachers as perceived by the teachers themselves and their department heads in terms of:
   - 2.1 Personal and professional competence,
   - 2.2 Competence in using knowledge of student skills and talents,
   - 2.3 Competence in using teaching techniques,
   - 2.4 Competence in monitoring and evaluation skills,
   - 2.5 Competence in establishing relations with family and society, and
   - 2.6 Competence in using knowledge of curriculum and content?
3. Is there a significant difference in competency level of TLE teachers when they are grouped according to demographic profile?
4. Is there a significant difference between the competency level of the TLE teachers as assessed by themselves and the administrators?
5. What are the standard teaching competency requirements of TLE teachers?
6. What are the gaps between the present competencies of TLE teachers and the standard teaching competencies?
7. What are the competency needs of TLE teachers?
8. What teachers' enhancement program could be proposed to address the needs of the TLE teachers?

METHODOLOGY

This chapter presents the research design, sources of data, instrumentation and data collection and the tools for data analysis.

Research Design

The study utilized the descriptive research design. Descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984). It often uses visual aids such as graphs and charts to aid the reader in understanding the data distribution. Because the human mind cannot extract the full import of a large mass of raw data, descriptive statistics is very important in reducing the data to manageable form. When in-depth, narrative descriptions of small number of cases are involved. Researchers use description as a tool to organize data into patterns that emerge during analysis. Those patterns aid the mind in comprehending a qualitative study and its implications (Knupfer & McLellan, 2001).

Descriptive research holds a valuable place within education because in contrast to laboratory experiments, the human nature of educational research is critical to the result. Educational environments and experiences inherently contain many extraneous variables that cannot be controlled in a realistic situation which often call for careful observation of specific life situations, and can require the collection of data from a large number of people spread throughout a wide geographic region. The descriptive component is critical to educational research because educational events cannot be reduced to a controlled laboratory environment. The types of questions generated in educational research require descriptions that help to explain the data and direct emergent prescriptions for educational events.

This method was used in the study to gather, organize, analyze, and present the level of competency of TLE teachers. Gap analysis was used to determine the gaps between the competencies of TLE teachers and the acceptable competency levels.

Sources of Data

The population was composed of 5 administrators and 76 teachers, 19 males and 57 females from the select Technology and Livelihood Education teachers of the Fourth Congressional District of Pangasinan Division II.

Instrumentation and Data Collection

Two sets of assessment questionnaire were prepared and administered by the researcher - one for TLE teachers and another for school administrators. Inputs to the instrument were taken from the Ministry of National Education, Turkey (n.d.); National Institute of Health, USA; Teacher Education Council, DepEd Module 6.9; DepEd RPMS-PPST; and other foreign and local sources summarized in the review of literature. It was modified by the researcher to make it appropriate for teachers teaching TLE in the country.

Both assessment questionnaires were a checklist of 34 essential competencies for teaching TLE - 8 items for the personal and professional values, 3 items for knowledge of student skills and talents, 7 items each for teaching techniques and monitoring and evaluation skills, 4 items for relations with family and society, and 5 items on knowledge of content. Each of the 34 items was a short description of the skills. The teachers were requested to rate themselves while the administrators were requested to rate the teachers using the following guide.

Prior to the preparation of the self-assessment form for TLE teachers, a pre-testing, instrument was conducted to TLE teachers to determine the need to conduct the current study. In the pre-survey, more than 50% of the teachers indicated their need for training in the listed knowledge and skills related to teaching TLE.

The self-constructed questionnaire was forwarded to the adviser for comments and suggestions. Revisions were incorporated for the improvement of the instrument. The instrument was then validated by a group of experts. These experts are members of the faculty of the Graduate Studies and have been teaching Educational Management for more than a decade in the same institution. Their suggestions were considered in improving the questionnaire.

The researcher used the following steps in gathering the data.

1. The researcher prepared a letter of intent to conduct the study and sent it to the Schools Division Superintendent of Pangasinan Division II.
2. After the approval, copies of the endorsement letter from the Office of the Schools Division Superintendent were sent to the five public secondary schools in the Division through their school administrators and the researcher distributed the questionnaires.
3. The respondents were given a questionnaire and oriented by the researcher in answering the questions.
4. A week after, the questionnaires were retrieved. Finally, the data were analyzed and interpreted.

Gap analysis was done to identify the existing competency skills of the teachers, the gap between the present and the standard competency skills, and the needed skills for improvement among the TLE subject teachers.

A gap analysis is a quality-measurement tool used to identify the difference between present competency and desired (standard) competency and to recommend strategies for bringing the desired competency into actual practice. The process is summarized as follows:

1. *Set targets/expectations*

Gap analysis began with a thorough identification of the expectations from an external perspective which were used as benchmark in the interpretation of the competency scores of the TLE teachers.

The formulation of the six standard competencies and the skills under each of the competency was discussed in chapter 4. The numerical standard competency score was taken from RPMS-PPST, and was slightly modified based on the concepts presented in literature reviewed in the course of the study.

Table 2. Scale and descriptive ratings used in the analysis of the competency scores of the respondents

RPMS-PPST Rating		Used in the current study	
Numerical	Descriptive	Numerical	Descriptive
		4.51 - 5.00	Outstanding
3.51 – 4.00	Expert	3.51 – 4.50	Very Satisfactory
2.51 – 3.50	Experienced	2.51 – 3.50	Satisfactory
1.51 – 2.50	Fair	1.51 – 2.50	Poor
1.00 – 1.50	Lack	1.00 – 1.50	Needs Improvement

Being improved, relevant data about the process were collected. To determine the current-competency level of TLE teachers, the assessment tools proposed by the author were used.

2. Identify the gaps

Present competencies against desired (standard) competencies were identified. The causes of deviation from the ideal were, likewise, referred. The competency needs and specific improvement efforts that could bring greater efficiency to different parts of the process, i.e. to increase the competency of the TLE teachers, were also identified

3. Present and use the result.

In the present study, the results served as inputs in the design and development of an enhancement program for TLE teachers.

RESULTS AND DISCUSSION

This chapter deals with the presentation, analysis and interpretation of the data gathered relative to sub-problems in the study.

Demographic Profile of TLE Teachers and Administrators

Table 1. Profile of the Teacher - respondents according to Sex and Age

Sex/Age	Number of Teachers	Percentage
Sex		
Male	19	25%
Female	57	75%
Age (years)		
20-30	21	27.60%
31-40	31	40.80%
41-50	18	23.70%
51-60	6	7.90%

Table 1 shows that 57 or 75% of the TLE teacher-respondents are female and 19 or 25% are male. According to age, 21 or 27.60% are 20 to 30 years old, 31 or 40.80% are 31 to 40 years old, 18 or 23.70% are 41 to 50 years old, and 6 or 7.90% are 51 to 60 years old. The youngest TLE teacher is 23 years old and the oldest is 58 years old.

The data reveals that majority of the TLE teachers are mostly female. It also shows that most of the respondents are 31 to 40 years old.

Table 2. Profile of the Respondents according to Undergraduate Degree/ Major of TLE Teachers

Undergraduate Degree/Major	Number of Teachers	Percentage
Computer-Related Courses	14	18.40%
BSIT - Computer Education	6	
BSIT - Electronics	2	
BSE - Computer Education	1	
BS Computer Science	2	
BS Math - Computer	1	
BSOA - Computer Education	1	
BS Computer Education	1	
Home Economics	28	36.80%
BSIE – Home Economics	19	
BSTLE – Home Economics	1	
BSIE – Garments Trade	3	
BSIE – Girls Trade	2	
BSIE – Food Technology	3	
Industrial Arts	16	21.10%
BSIE –Industrial Arts	13	

Mechanical Technology		1	
Civil Engineering Technology		2	
Agri-Business	7		9.20%
Agri-Fishery		4	
Animal Husbandry		1	
Agriculture Education		1	
Agribusiness Management		1	
Business Related Courses	7		9.20%
Entrepreneurship		1	
Management		2	
Office Administration		1	
Marketing Management		1	
Distributive Arts		2	
Others	4		5.30%
BSE – English		1	
Nutrition		1	
Hotel and Restaurant Management		2	

The table shows that most of the teachers, 28 or 36.80%, are majors of Home Economics, followed by 16 or 21.10% who are graduates of Industrial Arts, and then by 14 or 18.40% who are computer-related graduates. The least numbers of TLE teachers, 7 or 9.20%, have Agri-business education; and another, 7 or 9.20%, have business-related courses. Four or 5.30% are graduates of other courses like BSE English, Hotel Management, and Nutrition.

Based from the above data, 5.30% of teachers who are teaching TLE subject are graduates of other courses and 9.20% are graduates of business-related courses. This results to lack of pedagogical skills, as well as of adequate knowledge of the subject matter they teach (Figueredo, V. and Anzalone S. 2003).

Table 3. Profile of the Respondents according to Years of Teaching Experience of TLE Teachers

Teaching Experience	Number of Teachers	Percentage
0 -5	34	45%
6-10	20	26%
11-15	9	12%
16-20	8	11%
21-25	3	4%
26-30	1	1%
31-35	1	1%
Total	76	100%

The table shows that 34 or 45% of the TLE teachers have 0 to 5 years of teaching experience, 20 or 26% have 6 to 10 years of teaching experience, 9 or 12% have 11 to 15 years of teaching experience, 8 or 11% have 16 to 20 years of teaching experience, and 3 or 4% have 21 to 25 years of teaching experience. One teacher has 26 to 30 years of teaching experience and another one has 31 to 25 years of teaching experience.

The data shows that majority of the TLE teachers have six years or less teaching experience. A detailed inspection of the data gathered indicates that the teaching experiences of the teachers are spent on teaching the TLE subject.

Table 4. Profile of the Respondents according to Attendance to Seminars of TLE Teachers

Attendance to Seminars (hours)	Number of Teachers	Percentage
None	37	48.68%
1 - 5	27	35.53%
6 - 10	9	11.84%
11 - 15	2	2.63%
16 – 20	1	1.32%
Total	76	100%

The table shows that most of the TLE teachers, 37 or 48.68% have not attended any seminar/training, 27 or 35.53% have attended 1 to 5 hours of seminar/ training, and 9 or 11.84% have attended 11 to 15 hours of seminar/training. Two (2) teachers have attended 11 to 15 hours of seminar/training, and one teacher has attended 16 to 20 hours of seminar/training.

The distribution reflects the lack of motivation of TLE teachers to attend seminars. Based on personal observations and experiences of the author of the current study, possible explanations on the lack of motivation to attend seminars/ training is the DepEd policy of giving credit for promotion on seminars attended with 3 days or more duration. Most of the teachers are not willing or do not have the time and money to attend seminars/training or they are not given opportunity to attend by their superiors because there are only limited slots for different schools.

Table 5. Profile of Administrators according to Sex, Age, Undergraduate Degree/Major, Years as Administrator, Years as a Teacher, and Years as TLE Teacher

Gender	Age	Undergraduate Degree/Major	Years as Administrator	Years as Teacher	Years as TLE Teachers
M	41	BSIE/Industrial Arts	6	16	10
M	41	BSIE/Architecture	7	16	11
F	40	BSE/Mathematics	6	17	None
F	42	BSIE/Home Economics	5	16	16
F	55	BSA/Agronomy	13	20	NA

Table 5 shows that out of the five administrators in the Division of La Union, two are males and three are females. In terms of age, one is 40 years old, two are 41 years old, one is 42 years old, and one is 55 years old. All the administrators are 40 years or older. According to undergraduate degree, three of the administrators completed BS Industrial Engineering, one completed BS Education, and one completed BS Agronomy. All of them have been administrators for 6 years or more, where in one has been for 13 years, the longest so far. All of the administrators have more than 16 years of teaching experience, in which 10 years or more is spent on teaching TLE subject, except for one who has not taught TLE in her 17 years of teaching experience.

Table 6. Competency Level according to Years of Teaching Experience

Teaching Experience (years)	Competency Score	
	Numerical	Descriptive
0 – 10	2.66	Intermediate
6 – 10	2.92	Intermediate
11 – 15	2.80	Intermediate
16 – 20	2.69	Intermediate
21 – 25	3.27	Intermediate
26 – 30	3.37	Intermediate
31 – 35	3.37	Intermediate
Over-all mean	3.01	Intermediate

It can be observed in Table 6 that the competency scores are within the range of intermediate competency; however, the numerical score generally increases as teaching experience increases. Teachers with the highest competency score of 3.37 are those with more than 25 years of teaching experience and the lowest at 2.66 are those with less than 5 years of experience.

Table 7. Competency Level according to Undergraduate Degree/major

Undergraduate Degree/Major	Competency Score	
	Numerical	Descriptive
Computer-Related Courses	2.76	Intermediate
BSIT - Computer Education		
BSIT - Electronics		
BSE - Computer Education		
BS Computer Science		
BS Math - Computer		
BSOA - Computer Education		
BS Computer Education		
Home Economics	2.93	Intermediate
BSIE – Home Economics		
BSTLE – Home Economics		
BSIE – Garments Trade		
BSIE – Girls Trade		
BSIE – Food Technology		
Industrial Arts	2.79	Intermediate
BSIE –Industrial Arts		
Mechanical Technology		
Civil Engineering Technology		

Agri-Business Agri-Fishery Animal Husbandry Agriculture Education Agribusiness Management	2.73	Intermediate
Business-Related Courses Entrepreneurship Management Office Administration Marketing Management Distributive Arts	2.44	Limited
Others BSE – English Nutrition Hotel and Restaurant Management	2.66	Intermediate
Over-all mean	2.82	Intermediate

In terms of undergraduate degree completed, shown in Table 7, the highest competency score is the Home Economics Majors at 2.93, followed by the Industrial Arts graduates at 2.79, and then by the graduates of Computer Related Courses at 2.76, which all mean intermediate competency. The lowest is the graduates of Business-Related Courses, at 2.44, which implies limited competency.

Table 8. Competency Level according to Seminars Attended

Attendance to Seminars (hours)	Competency Score	
	Numerical	Descriptive
None	2.92	Intermediate
1 – 5	2.70	Intermediate
6 – 10	2.64	Intermediate
11 – 15	3.12	Intermediate
16 – 20	3.12	Intermediate
Over-all Mean	2.68	Intermediate

The competency level of TLE teachers, when grouped according to number of hours of seminar attended, is highest among those who have attended more than 15 hours of seminar/training, at 3.12, followed by teachers who have not attended any seminar/training, at 2.92.

Competency level of TLE teachers, in terms of the six areas of competency

2.1 As Assessed by the Teachers Themselves

The competency scores of the teachers are presented in terms of the Key Skill Requirements (KSR) in the six components of the Standard Competency for TLE teachers in two ways: 1) by number of teachers and percentage on three groupings of numerical competency scores, and 2) by mean of the numerical response of the teachers on the assessment form. The competency scores are grouped into three ranges: numerical score of 1.00 to 2.50 to include scores of 1 (Basic competency) and 2 (Limited competency), numerical score of 2.51 to 3.50 to include scores of 3 (Intermediate competency), and numerical score of 3.51 to 5.00 to include scores of 4 (Advanced competency) and 5 (Expert competency).

Table 9. Frequency and Percentage of Teachers by Competency Score in Component I: Personal and Professional Competency

Competency Skill Requirement	1.00-2,50	Percentage	2.51-3.50	Percentage	3.51-5.00	Percentage
1. Conduct of researches to improve learning-teaching process	15	20%	46	60%	15	20%
2. Conduct of regular self – assessment	31	41%	32	42%	13	17%
3. Preparation of papers for presentation in technical conferences/symposia	16	21%	41	54%	19	25%
4. Use of tools for critical assessment	28	37%	36	47%	12	16%

As shown in Table 9, almost half of the TLE teachers assessed themselves with intermediate competency (2.51-3.50) in all the four areas under component 1: 61% on conduct of researches, 42% on conduct of regular self-assessment, 54% on preparation of papers for presentation, and 47% on use of tools for critical assessment. At most, 25% of the teachers assessed themselves as having advanced competency or expert competency (3.51-5.00): 19% on conduct of researches, 17% on conduct of regular self-assessment, 25% on preparation of papers for presentation, and 16% on use of tools for critical assessment. A big percentage of the teachers assessed themselves as having limited competency or basic competency (1.00–2.50): 20% on conduct of researches, 41% on conduct of regular self-assessment, 21% on preparation of papers for presentation, and 37% on use of tools for critical assessment.

Table 10. Numerical and Descriptive Mean Competency Score in Component I: Personal and Professional Competency

Competency Skill Requirement	Competency Assessment Score	
	Numerical	Descriptive
1. Conduct of researches to improve learning-teaching process	3.01	Intermediate
2. Conduct of regular self –assessment	2.63	Intermediate
3. Preparation of papers for presentation in technical conferences/symposia	3.00	Intermediate
4. Use of tools for critical assessment	2.64	Intermediate
Over-all mean	2.82	Intermediate

Table 10 shows the mean numerical competency scores of the TLE teachers in each of the key areas under component 1. The highest competency score is on the conduct of researches to improve learning-teaching process at 3.01, followed by on preparation of technical papers for presentation in technical conferences/ symposia at 3.00, on use of tools for critical assessment at 2.74, and last, on conduct of regular assessment at 2.73. The over-all mean competency is 2.82 which means intermediate competency.

Table 11. Frequency and Percentage of Teachers by Competency Score in Component II: Knowledge of Student Skills and Talents

Competency Skill Requirement	1.00-2,50	Percentage	2.51-3.50	Percentage	3.51-5.00	Percentage
1. Measurement and evaluation of talents, skills, and interests of students	5	7%	48	63%	23	30%
2. Planning and conduct of outdoor activities	38	50%	24	32%	14	18%
3. Conduct of interview/ conference with students and their parents to identify their talents, skills, and interests in the different learning areas of TLE	33	43%	28	37%	15	20%

Table 11 shows 63% assessed themselves with intermediate competency (2.51- 3.50) in measurement and evaluation of talents, skills, and interest of students under component II: 50% assessed themselves with limited to basic competency (1.00-2.50) on planning and conduct of outdoor activities; and 43% assessed themselves with limited to basic competency (1.00-2.50) on conduct of interview/conference with the students and their parents to identify their talents, skills, and interest in the different learning areas of TLE.

Table 12. Numerical and Descriptive Mean Competency Score in Component II: Knowledge of Student Skills and Talents

Competency Skill Requirement	Competency Assessment Score	
	Numerical	Descriptive
1. Measurement and evaluation of talents, skills, and interests of students	3.32	Intermediate
2. Planning and conduct of outdoor activities	2.55	Intermediate
3. Conduct of interview/ conference with the students and their parents to identify their talents, skills, and interests in the different learning areas of TLE	2.64	Intermediate
Over-all mean	2.84	Intermediate

The mean competency scores of TLE teachers in component II, as shown in table 12, are all within the range of intermediate competency. Numerical score is highest at 3.32 on measurement and evaluation of talents, skills, and interests of students; followed by 2.64 on conduct of interview/conference with the students and their parents to identify their talents, skills, and interest in the different learning areas of TLE; and last at 2.55 on planning and conduct of outdoor activities.

The scores imply that outdoor activities are not prioritized by TLE teachers as learning activity and most of the teaching-learning processes only take place inside their classroom.

Table 13. Frequency and Percentage of Teachers by Competency Score in Component III: Teaching Techniques Competency

Competency Skill Requirement	1.00-2,50	Percent-age	2.51-3.50	Percent-age	3.51-5.00	Percent-age
1. Knowledge on the proper use of the latest tools and techniques in relation to teaching TLE	10	13%	43	57%	23	30%
2. Resource management strategies	15	20%	45	59%	16	21%

3. Access to and how to use technological sources related to teaching – learning (database, online sources and etc.) materials	20	26%	35	46%	21	28%
4. Motivating students to improve themselves	7	9%	38	50%	31	41%
5. Finding alternative means if the school has no provisions for a laboratory site in the area being taught	15	20%	37	49%	24	31%
6. Development of new ideas and new designs and skills in doing project making activities	15	20%	42	55%	19	25%
7. Improvising tools to supplement the available tools in the school	11	14%	43	57%	22	29%

As presented in table 13, almost half of the TLE teachers assessed themselves with intermediate competency (2.51- 3.50) in all the seven areas under component III: 59% on resource management strategies, 57% on knowledge on the proper use of the latest tools and techniques in relation to teaching TLE and on improvising tools to supplement the available tools in the school, 55% on development of new ideas and new designs and skills in doing project making activities, 50% on motivating students to improve themselves, and 49% on finding alternative means if the school has no provisions for a laboratory site in the area being taught.

Table 14. Numerical and Descriptive Mean Competency Score in Component III: Teaching Techniques Competency

Competency Requirements	Competency Assessment Score	
	Numerical	Descriptive
1. Knowledge on the proper use of the latest tools and techniques in relation to teaching TLE	3.18	Intermediate
2. Resource management strategies	3.00	Intermediate
3. Access to and how to use technological sources related to teaching – learning (database, online sources and etc.) materials	3.01	Intermediate
4. Motivating students to improve themselves	3.39	Intermediate
5. Finding alternative means if the school has no provisions for a laboratory site in the area being taught	3.12	Intermediate
6. Development of new ideas and new designs and skills in doing project making activities	3.11	Intermediate
7. Improvising tools to supplement the available tools in the school	3.13	Intermediate
Over-all mean	3.13	Intermediate

Table 14 presents that the mean competency scores of TLE teachers on the seven skills under component III are within the range of intermediate competency. The numerical competency scores equivalent are as follows: 3.39 on motivating students to improve themselves, 3.18 on knowledge on the proper use of the latest tools and techniques in relation to teaching TLE, 3.13 on improvising tools to supplement the available tools in the school, 3.12 on finding alternative means if the school has no provisions for a laboratory site in the area being taught, 3.11 on development of new ideas and new designs and skills in doing project making activities, 3.01 on access to and how to use technological sources related to teaching-learning (database, online sources and etc.) materials, and 3.00 on resource management strategies.

Recommendations

Programs/projects/activities to make the teachers closer to the community. Programs to include tapping resources and personalities from the industry, government agencies, and non-government organizations.

1. Development of an effective Observation Process for both administrators and teachers o to include not only the criteria for rating of existing competencies but also feedback mechanism and observer-teacher conferencing strategies for the improvement of the teachers' teaching competency. The process should be able to identify excellent and low performing teachers. It should also include a monitoring scheme to determine improvements along areas that need improvement for low performing teachers.

1. Mandatory monthly retooling activities on topics like:
    1. Conduct of research,
    2. Preparation of paper for presentation,
    3. Construction of test instruments,
    4. Alternative testing methods, and
    5. Non-traditional assessment tools.

    Moral and value recovery programs to remind the teachers on the advocacies of teaching and to rekindle their interest for self-improvement for the benefit of the students and the community.

    An evaluation of the assessment tool used in this study is, likewise, recommended. It is suggested that teacher evaluation be conducted by peers, students, and administrators.

REFERENCES

Burch, Noel (n.d.). Four stages of learning. Cited in Wikipedia. Available at http://en.wikipedia.org/wiki/Four_stages_of_competence

Caparas,H. Technology and livelihood education. Retrieved from http://en.wikipedia.org/w/index.php? Title=Technology_and_Livelihood&oldid=558902782
Department of Education Order No. 43 series of 2002
Department of Education Order No. 37 series of 2003
Department of Education Memorandum No. 468 series 2008
Department of Education Memorandum No. 399 series of 2009
Department of Education Order No. 76 series of 2010
Department of Education Order No. 67 series of 2012, Enclosure No. 2
Department of Education Order No. 31 series of 2012
Department of Education, Philippines. National Competency-Based Teacher Standards
Department of Education and Training, Perth, Western Australia. (2004). Competency framework for teachers.
Dubois, J. & Rothwel, W.(2004).Competency-based or a traditional approach to training? *ProQuest Education Journals,58-4 p.46*. Retrieved from http://vetbiotech.um.ac.ir/parameters/vpb2/filemanager/behsazi/EnglishArticles/ traditional%20approach.pdf
Edutopia staff.(n.d.). Why is teacher development important? Retrieved from http://www.edutopia.org/teacher-development-introduction
Engineering Statistics Handbook. Available at http://www.itl.nist.gov/div898/handbook/index.htm
Figueredo, V. and Anzalone, S (2003). Alternative models for secondary education in developing countries: Rationale and realities. Improving educational quality (IEG) project. Washington, DC: American Institute of Research.
Gap Analysis. Retrieved from http://www.businessdictionary.com/definition/gap-analysis.html
Great Schools.(n.d.) What makes a great teacher? Retrieved from http://www. greatschools.org/improvement/quality-teaching/79-what-makes-a-great-teacher.gs
Guilford, J. and Frucher. B. (1973). Fundamental statistics in psychology and education. New York: MC Graw-Hill
Guiner, D. (2013). Competencies of technology and livelihood education (TLE) instructors: Input to a training module in industrial arts. *E – International Scientific Research Journal*, VOLUME – V, ISSUE – 2
Holton, E., Bates, R. and Naquin, S. (2000). Large-scale performance driven training needs assessment: A case study. *Public Personnel Management*, 29 (2). Summer 249–268. As cited in Ghufli,Ali (2009). Training needs analysis: A case study of the Abu Dhabi police.
Knupfer, N. and McLellan, H. (2001). Descriptive research methodologies
Lefgren, L. & Jacob, B. (2003). When principals rate teachers. *Education Next*. Spring 2006. 6 (2)
Ministry of Education, Quebec.(n.d.) Scales of competency levels, secondary school education, cycle two. Available at http://www.mels.gouv.qc.ca/DGFj/de/echellessec.htm
Ministry of National Education, Turkish Republic (2006).Generic teacher competencies. Available at http://otmg.meb.gov.tr/belgeler/otmg/Generic_Teacher_Competencies.pdf
Mizell, H. (2010). Why professional development matters. Retrieved from http://www.Learningforward.org/advancing/whypdmatters.cfm
National Park Service, USA..(n.d.) What is competency-based training? Retrieved from http://www.nps.gov/training/uc/whcbt.htm
New Mexico Public Education Department, Educator Quality Division (2005). Guidelines for the New Mexico annual teacher performance evaluation: Third Edition. *Retrieved from teachnm.org/uploads/docs/eval_guide.pdf*
Pantic, N., Wubbels, T. & Mainhard, T. (2011). Teacher competence as a basis for teacher education: Comparing views of teachers and teacher educators in five Western Balkan Countries. *Comparative Education Review*, 55, (2) 165-188.
Parry, S. R. (1996). The quest for competence. *Training Magazine*. July 1996, 48-56. Cited in Sawant, B. and Avinash D. (2012). Competency mapping of the employees: A study of CIMMCO Spinning Mill, SOLAPUR. *Rising Research Journal Publication, Global J. of Arts & Mgmt.*, 2012: 2 (2)
Passos, A. A comparative analysis of teacher competence and its effect on pupil performance in upper primary schools in Mozambique and other Sacmeq countries. University of Pretoria 2009. Available in http://www.yumpu.com/en/ document/ view/4598729/a-comparative-analysis-of-teacher-competence-and-its-sacmeq
Republic Act No. 105233. Basic Education Act of 2013 Section 8
Retome, V. Instructional assessment of technology and livelihood education (TLE) program. Published Online: August 2012, 9; August 2012doi: http://dx.doi.org/10.7719/jpair.v9i1.14
Santos,L .(n.d.). Teacher education council. The Philippine basic curriculum: Module 2. Department of Education
SEAMEO INNOTECH. K to 12 toolkit. Reference guide for teacher educators, school administrators and teachers
Spasovski, R. (2009).Teacher competence as a basis for teacher education: Tuning teacher education curricula in five western Balkan countries. Retrieved from http://htk.tlu.ee/tepe/wp-content/uploads/2009/05/spasovski.pdf
Stronge, J. & Tucker, P (2003). Handbook on teacher evaluation: Assessing and improving performance. Larchmont, NY: Eye on education
Teacher Education Council, Department of Education.(n.d). Module 6.9, Curriculum and instruction: The teaching of technology and livelihood education
Thanasoulus, D.(2002). What do teachers bring to the teaching-learning process? Retrieved from www.TEFL.net

WONG T. (1996). RELATIONSHIP BETWEEN TEACHER COMPETENCE AND TEACHERS' INFERENCES OF STUDENTS' MULTIDIMENSIONAL SELF-CONCEPT. MASTER'S THESIS. RETRIEVED FROM HTTP://WWW.FED.CUHK.EDU.HK/EN/CUMPHIL/96FWONG/ABSTRACT.HTM

Zuzovsky,R.(n.d.). Teachers' qualifications and their impact on student achievement: Findings from TIMSS 2003 data for Israel. Available in http://www.isbe.state.il.us/GMWG/pdf/growth_model_case_study.pdf