COMPETENCE OF THE TLE TEACHERS FOR THE K TO 12 PROGRAM OF PUBLIC JUNIOR HIGH SCHOOLS IN THE DIVISION OF SAMAR

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APPROVAL SHEET

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DEDICATION

I humbly dedicate this research...

To the hardworking champions of technology,
and technical-vocational education in the country –
the T.L.E. Teachers;

To my understanding parents
who journeyed with me until after the completion of this
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To my gems, Thea & Amara,
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despite the difficulties, and

To Father God, for His kindness and
love bestowed upon me...

Daisy

ABSTRACT

This study assessed the competence of the Technology and Livelihood Education (TLE) teachers for the K to 12 Program of public junior high schools in the Department of Education (DepEd), Division of Samar, during the School Year 2015-2016. The teacher-respondents were "highly competent" in teaching Technology and Livelihood Education (TLE) along its four major components of Home Economics, Industrial Arts, Agriculture and Fishery Arts, and Information and Communications Technology, as reflected in the obtained weighted mean of 3.58. This means that they are capable of teaching the different components of T.L.E. under the K to 12 Program. The significance of the relationship between the levels of competence in teaching home economics. Agriculture and fishery arts, and ICT with their age and training/seminars attended indicate the need to propose programs/courses in these components which are differentiated according to the teachers' age and their attendance in training/seminars. More relevant training/seminars ought to be conducted for the teachers to improve their level of competence in teaching T.L.E. under K to 12 Program. The DepEd should reconsider the T.L.E. curriculum under the K to 12 Program particularly as regards its specialization into the four components.

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Chapter 1

THE PROBLEM AND ITS SETTING

Introduction

A great deal of emphasis has been placed on the teacher and teacher preparation as the teacher is a key element in the success of any education reform process. Onwuegbu (2001:1) describes teaching as the most important job in the world and, at the same time, the most difficult one. According to him, teaching is difficult because teachers have to deal with complex human behavior which, once established, is difficult to change; and the complexity increases if the teacher is not equipped to achieve such change. Secondly, the teacher is called to change and modify existing behaviors and to establish new ones as well. Olaitan and Agusiobo (2000:3-6) view teaching as practical efforts to bring about desirable changes in human learning, abilities, and behavior. Teachers as agents of change are thus central.

Subsequently, they must be competent and knowledgeable in order to impart the knowledge they could give to their students. It is a fact that as educators, they play varied and vital roles in the classroom. In addition, teachers are entrusted with responsibilities that range from the simplest to the most complex. It is very necessary that teachers understand their need to be motivated, so as to have motivated learners in the classroom.

More importantly, the teacher must himself come into possession of adequate knowledge of the objectives and standards of the curriculum, skills in teaching, interests, appreciation and ideals. He needs to exert effort to lead students into a life that is large, full, stimulating and satisfying. Some students seem naturally enthusiastic about learning, but many need or expect their teachers to inspire, challenge or stimulate them.

The Aquino administration put forth the blueprint for education which is to "bring back technical-vocational education in the public high schools to better link schooling to local industry needs and employment." According to the data from the National Examination and Testing Research Center (NETRC) in 2006-2007, out of the 1,305,207 total test takers, only 9,066 had high aptitude for college while the majority or 777,236 test takers had low aptitude for college (as cited by Valles, n.d.). The same was true for the school year 2007-2008, in as much as only 77,869 test takers had high aptitude for college as compared to the 726,665 test takers who had low aptitude for college.

However, out of the 1,305,207 total test takers, 711,526 had high aptitude for technical-vocational programs, with only 124,780 who had low aptitude for technical-vocational programs in 2006-2007. Although during the school year 2007-2008 the majority or 715,845 test takers registered a moderate aptitude for technical-vocational programs, the number was still nevertheless high. Meantime, as regard to the entrepreneurial skills, 757,356 test takers registered high aptitude in 2006-2007, and 717,232 in 2007-2008.

Valles (n.d.) pointed out that the data showed that the test takers had high aptitude for technical-vocational education but low aptitude for college. It is on this basic premise that in 2007, the Department of Education (DepEd) launched a reform initiative towards strengthening the technical and vocational high schools in the Philippines. This reform initiative is aimed at solving the mismatch in the labor market by providing the students with relevant and certifiable skills while in their secondary level of education. Hence, the technical-vocational education program is being strengthened as "there should be a balance between theoretical and practical work".

With the implementation of K to 12, the Philippines will produce holistically developed learners who have 21st century skills and are prepared for higher education, middle-level skills development, employment and entrepreneurship (TESDA Policy Brief, 2013). Under the K to 12 Program, the Technology and Livelihood Education (T.L.E.) encompasses the fields of Home Economics (H.E.), Industrial Arts (IA), Agri-Fishery Arts (AFA), Information Communication and Technology (ICT).

In essence, T.L.E. is geared towards the development of technological proficiency and is anchored on knowledge and information, entrepreneurial concepts, process and delivery, work values and life skills. This means that the T.L.E. 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 (K to 12 Basic Education Curriculum: Description of Framework, n.d.).

Based upon the tenet "Learn Earn Achieve Productivity (LEAP)", the T.L.E. features lessons that equip students with skills and values to become positive, productive, and market-oriented and customer-centered. It aims to respond to the demands of the job market by equipping the students with the crucial knowledge and skills so they can easily adapt and be flexible enough for employment.

In the Department of Education (DepEd), Division of Samar, public junior high schools are already gearing towards strengthening and upgrading of the Technology and Livelihood Education (T.L.E.). Amid the challenge to adapt to the changes in the platform of TLE for junior high school, teachers are central to curriculum implementation. They plan how they will teach a lesson and they construct the actual lesson with students as they teach, based on students' learning styles and how they will understand a lesson. Teachers' attitudes and beliefs about the curriculum map out the actual taught curriculum.

At present, the teachers' role in the modern education system has shifted from being the one who imparts knowledge to the one who guides or facilitates learning. To empower teachers to perform their new role, teachers must be prepared and skilled. In view of this, teachers must possess competence and readiness as would enable them to partake on the successful implementation of the TLE curriculum under the K to 12 Program. It is upon this thought that this present study was conducted.

Statement of the Problem

This study assessed the competence of the Technology and Livelihood Education (T.L.E.) teachers for the K to 12 Program of public junior high schools in the Department of Education (DepEd), Division of Samar, during the School Year 2015-2016.

Specifically, this study sought answers to the following questions:

1. What is the profile of the teacher-respondents in terms of:
    - 1.1 age;
    - 1.2 sex;
    - 1.3 average monthly income;
    - 1.4 educational attainment;
    - 1.5 grade level taught;
    - 1.6 relevant trainings/seminars attended for the past three years;
    - 1.7 latest performance rating using IPCRF, and
    - 1.8 attitude towards teaching technical-vocational education?
2. What is the level of competence of TLE teachers for the K to 12 program based on the National Competency-Based Standards for Teachers (NCBTS) performance evaluation instrument along
    - 2.1 social regard for learning;
    - 2.2 learning environment;

2.3 diversity of learners;

2.4 curriculum planning;

2.5 assessing and reporting;

2.6 community linkages, and

2.7 personal growth and personal development?

3. Are there significant differences in the level of competency of TLE teachers along the NCBTS aspects?

4. Is there a significant relationship between the level of competency of TLE teachers and their profile variates?

Hypotheses

The following hypotheses were tested in this study:

1. There are significant differences in the level of competency of TLE teachers along the NCBTS aspects?

2. There are no significant relationships between the level of competency of TLE teachers and their profile variates.

Theoretical Framework

The present study is anchored on theories on competence, readiness, and skills. More particularly, this study found theoretical inspirations from Bronfenbrenner's Ecological Systems Theory, Deci and Ryan's Self-Determination Theory.

At the core of the Ecological Systems Theory of Brofenbrenner (1989:187-249) is the individual's biological and psychological make-up. This make-up continues to be affected and modified by the individual's immediate physical and social environment (microsystem) as well as interactions among the systems within the environment (mesosystems). In addition, other broader social, political, and economic conditions (exosystem) influence the structure and availability of microsystems and the manner in which they affect the child. Finally, social, political, and economic conditions are themselves influenced by the general beliefs and attitudes (macrosystems) shared by members of the society (Dede and Ryan, 2001:793-828).

The theoretical framework is essentially based on an interactionist perspective in which individuals and the environment influence, and are influenced by each other in a continuous interaction (1989:187-249). Individuals are key agents in ecological systems. From an ecological perspective, the individual is both a postulate - that is, a basic entity whose existence is taken for granted - and a unit of measurement. As a postulate, an individual has several characteristics. First, he requires access to an environment, upon which he is dependent for knowledge. Second, he is interdependent with other. Third, he is time bound, or has a finite life cycle. Fourth, he has an innate tendency to preserve and expand life. Fifth, he has capacity for behavioral variability. Taken in this light, teacher competence/competences could here be summarized as the

ability, over time, to relate oneself both to the expectancies and demands of society, as well as to one's own qualifications/conditions.

This study also found basis on the Self Determination Theory of Deci and Ryan. Deci and Ryan (2002) believed that human nature shows persistent positive features, that it repeatedly shows effort, agency and commitment in their lives. These are called "inherent growth tendencies." They also espoused that people have innate psychological needs that are the basis for self-motivation and personality integration. One of these psychological needs is competence which, if satisfied, allows optimal function and growth. Competence is defined as seeking to control the outcome and experience mastery.

Teachers, as human beings, have innate psychological needs, particularly the need for competence. However, to actualize their inherent potential they need nurturing from the social environment. If this happens there are positive consequence such as well-being and growth in the teaching profession. But if not, there are negative consequences. Hence, the school organizations provide the framework from which teachers can measure their competences along national standards for eventual effective performance in terms of positive and quality learning outcomes.

In relation to this study, Newhouse (1999:148-166) points out, "rarely are teachers given the time or encouragement to reflect on their beliefs about learning or consider implementing new learning programs. According to John and Sutherland (in Watson, 2008: 179-191), it is important that teachers "engage

directly in the process of learning" being offered to students. This helps teachers "get on the inside of the innovation as well as increasing their confidence, competence, experience and understanding of the technology and its pedagogical implications."

Technology and Livelihood Education (T.L.E.), 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 in as much as it integrates, for instance, entrepreneurship with all the areas of T.L.E. More importantly, it integrates concepts, skills, and values.

Conceptual Framework

Figure 1 presents the research process schematically. It illustrates the respondents of the study, the research locale and the time frame during which the study was conducted, the variates involved as well as the outcome of the study.

As it is presented in Figure 1, the respondents were the T.L.E. teachers of public junior schools in the Department of Education (DepEd), Division of Samar, during the school year 2015-2016.

Bekić and Zlatić (2010:42-51) averred that key competences are those competences that are needed for performing any professional activity and they

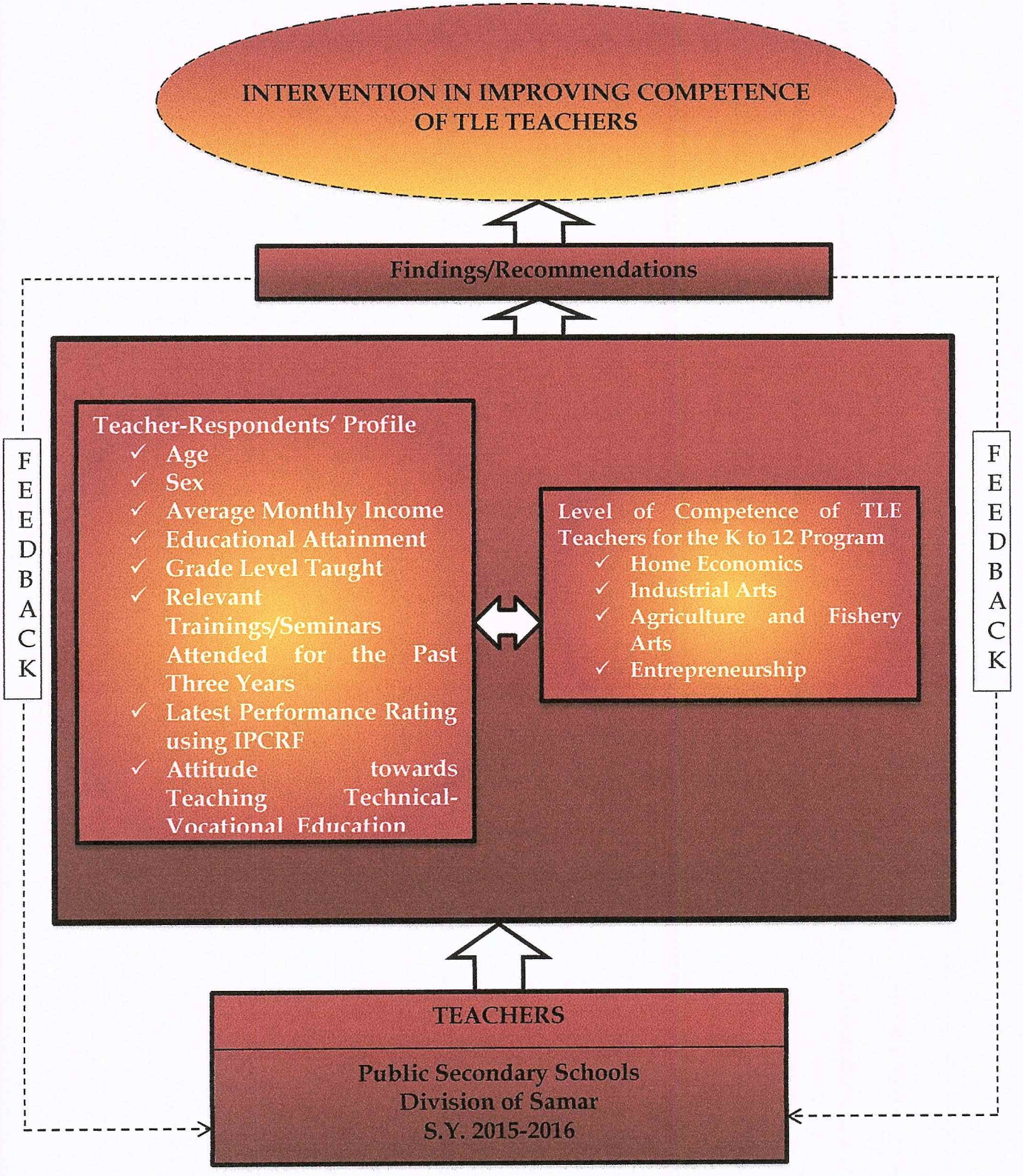

Figure 1. Conceptual Framework of the Study

include information-communication competences, social-working competences (ability of a person to make independent professional decisions, to combine his/her personal interest with the interests of a society), language competences (capability for oral and written communication in different languages), merits of an individual as such, cultural competence (familiarity with national, European and world culture).

Moreover, basic competences show specificities of the teaching profession and include organizational competences (ability of a teacher to successfully organize educational activities of students), didactic competences (ability of a teacher to transfer knowledge to students in a way that will make them interested in the learning process), pedagogical thinking (reflexive ability of a teacher related to his/her own activates and the planned activities), cognitive-creative competences (ability of a teacher to organize a process of learning with comprehension with students, to harmonize the goals of teaching with cognitive abilities of a student), psychological competence (ability of a teacher to respect a unique personality of a student in the teaching process), evaluative competences (ability of a teacher to objectively look upon students' achievements and the learning process, his/her own work, professional work of colleagues, positive and negative aspects in the system of education in its entirety), advisory competences, competence for a lifelong development of a teacher as a professional (ability of a teacher to develop professional skills, knowledge and

competences during his/her entire career) (Bekić and Zlatić (2010:42-51). On the other hand, special competences represent the level of competences of teachers for the content of the subject they teach and for the research of their own practice, in order to create one's own style of teaching, in the function of better achievements of students.

The present study assessed, explained, and described the basic competencies of the teacher-respondents in terms of their age, sex, average monthly income, educational attainment, grade level taught, relevant trainings/seminars attended for the past three years, and attitude towards technical-vocational education. More importantly, however, this study assessed the competence of TLE teachers for the K to 12 Program along the components of NCBTS.

The teacher-respondents' profile was correlated with their competence for the K to 12 Program along the components of NCBTS. Meantime, the teacher-respondents' perceptions of their competence for the K to 12 Program along the components of NCBTS were compared.

The results of this study would serve as bases for the formulation of a proposed program improvement for T.L.E. classes under the K to 12 Program, as ensured by the feedback loops, for the creation of competent T.L.E. teachers, as shown by the uppermost frame of the figure.

Significance of the Study

The benefits of this study would significantly redound to the students, school administrators and DepEd key officials, teachers, community, and future researchers.

Students. The results of this study would enable students to enjoy a pool of competent teachers teaching home economics, industrial arts, agriculture and fishery arts, and entrepreneurship under the K to 12 Program. Eventually, students would adjust their learning styles, study habits, and attitude to optimize the benefits of a more improved and focused technical-vocational education in the T.L.E. subject areas. This would, ultimately, enable students to possess the required entrepreneurial skills for future employment.

School administrators and DepEd key officials. The school administrators and key officials of the Department of Education would be able to lobby for the formulation and eventual implementation of a training and development scheme for the T.L.E. teachers along home economics, industrial arts, agriculture and fishery arts, and entrepreneurship to boost their competencies to prepare them for successful implementation of the K to 12 Program. In addition, they would be able to propose, plan and enact marketing strategies and information campaign about the status of T.L.E. under the K to 12 Program for better understanding by the parents and their children.

Teachers. The benefits for the teachers are manifold. For one, they would have baseline knowledge as regards their level of competency teaching the four

components, namely, home economics, industrial arts, agriculture and fishery arts, and entrepreneurship. Secondly, they would be encouraged to take technical-vocational competencies seriously and eventually acquire National Certificate (NC) inasmuch as it is a necessary requirement for them. Finally, this would inspire teachers to devise methodologies that are fine-tuned to the requirements of the four components of T.L.E., especially those that would promote "learning by doing" inside the classroom.

Community. The community would reap the benefits of skilled human resource who would contribute productively to the different sectors/industries of the community.

Future researchers. The future researchers would be provided with ample literature on the competence of teachers teaching T.L.E. in the K to 12 Program. With the precedence provided by this research, future researchers would be encouraged to conduct similar studies in other areas.

Scope and Delimitation

The descriptive type of research, with comparative and correlation analysis, was used to assess the competence of the TLE teachers for the K to 12 Program of public junior high schools in the Department of Education (DepEd), Division of Samar, during the School Year 2015-2016.

This study used a questionnaire as the primary data gathering instrument for this study. This was supplemented by pertinent documents, particularly the

IPCRF for teachers, to determine their latest performance rating, and the NCBTS to determine their attitude towards the K to 12 Program. All the teachers teaching T.L.E. in the different public secondary schools in the public junior high schools in the Department of Education (DepEd), Division of Samar, shown in Figure 2, served as the respondents of this study.

In Basey, Samar, the public secondary schools included were Basey National High School, Valeriano C. Yancha Memorial Agricultural School, San Fernando National High School, Old San Agustin National High School, Simeon Ocdol National High School, Mabini National High School, Burgos Integrated School. In Calbiga, Samar, a lone secondary school - Calbiga National High School - was included. In Daram, Samar, the schools included Daram National High School, Bacagay National High School, Birawan National High School, Parasan National High School, Bakhaw National High School, Baclayan National High School, Cabiton-an Integrated School, and Sua National High School. Two schools were included in Hinabangan, Samar, to wit: Hinabangan National High School and Bagacay National High School. In Jiabong, Jiabong National High School, Malino National High School and Casapa National High School were included in this study. Also included in this study were Marabut National High School and Osmeña National High School in Marabut, Samar; Motiong National High School and Calapi National High School in Motiong,

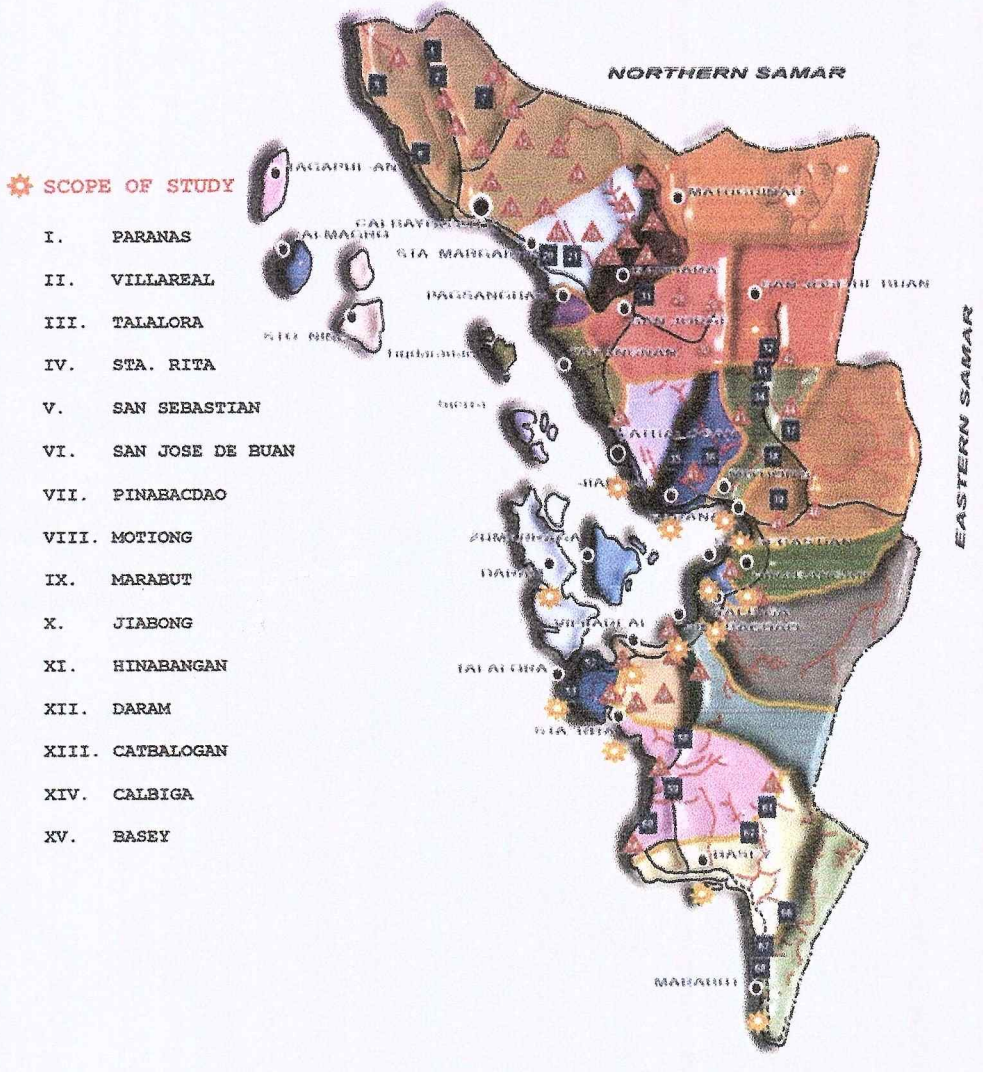

Figure 2. Map of Samar

Samar; Wright National High School, Casandig National High School, Tenani Integrated School, and Lawaan National High School in Paranas, Samar; Pinabacdao National High School, Parasanon National High School and Quintin Quijano Sr. Agricultural School in Pinabacdao, Samar; San Sebastian National High School in San Sebastian, Samar; Sta. Rita National High School, Tominamos Integrated School, Dampigan National High School, Hinangutdan National High School and Anibongon Integrated School in Sta. Rita, Samar; Independencia National High School in Talalora, Samar; Villareal National High School, Guintarcan National High School, San Andres National High School, Igot National High School, Plaridel National High School, Primitivo Torrechiva National High School, and Lamingao National High School in Villareal, Samar; Zumarraga National High School, Mualbual National High School, Bioso Integrated School, and San Isidro National High School in Zumarraga, Samar.

Descriptive as well as inferential statistical tools were used in the computation, analysis and interpretation of data.

Definition of Terms

To facilitate better understanding of this study, the researcher defined the following terms conceptually and operationally.

Agricultural arts and fishery. This term refers to the component of Technology and Livelihood Education (T.L.E.) which is devoted to the

instruction and practice of a variety of activities related to the cultivation of food and aquatic resources, including horticulture, sustainable farming, animal husbandry, aquaculture, among other things (K to 12 Primer, DepEd). In this study, the term was taken in the same context as it was defined in the above statement.

Competence. It is defined as the quality of being competent, adequacy, or the possession of required skill, knowledge, qualification, or capacity (Collins English Dictionary, 1986). In this study, the term was used to refer to the skill, knowledge, qualification or capacity to teach Technology and Livelihood Education (T.L.E.) under the K to 12 Program of public secondary school teachers in the 2nd Congressional District of DepEd, Division of Samar, based on their responses in the questionnaire made for the purpose.

Entrepreneurship. It is one of component areas of Technology and Livelihood Education (T.L.E.) under the K to 12 program which deals with the development of the students' capacity and willingness to organize and manage a business venture along with any of its risks in order to make a profit (K to 12 Primer, DepEd). In this study, the term was used in the same context as it was defined conceptually.

Home economics. It pertains to the field of study that deals with the economics and management of the home and community which includes such topics as consumer education, institutional management, interior design, home furnishing, cleaning, handicrafts, sewing, clothing and textiles, Commercial

cooking, cooking, nutrition, food preservation, hygiene, child development, and family relationships (K to 12 Primer, DepEd). In this study, the term was taken in the same context as defined in the foregoing statement.

Industrial arts. It refers to the field of study involved in the fabrication of objects in wood and/or metal using a variety of hand, power, or machine tools; covers topics such as small engine repair and automobile maintenance, technical drawing, among others (K to 12 Primer, DepEd). This was operationally defined as it was conceptually.

Readiness. The term refers to the ability of the teachers to facilitate and accelerate the transfer of knowledge if it is used as instructional tool; a factor of the successful implementation of changes in teaching (Hargreaves, 1992, cited by Bansavich, 2006: 3311-3316). In this study, this term referred to the readiness of the T.L.E. teachers for the K to 12 Program measured in terms of their level of competence in the NCBTS indicators.

Junior high schools. This term is defined as an institution where learners receive the secondary stages of compulsory education known as secondary education (Microsoft Encarta Encyclopedia, 2009). In this study, this term referred to the public secondary schools in the Second District of the Division of Samar, as shown in Figure 2.

Skills development. As defined conceptually, it refers to the technical and/or vocational skills below the level of a first university degree (Asian Development Bank, 2014). In this study, this referred to the technical-vocational

skills and entrepreneurial skills developed in one of the component areas of T.L.E.

TLE teachers. The term is conceptually defined as a person who helps others to acquire knowledge, competences or values; may provide instruction in literacy and numeracy, craftsmanship or vocational training, the arts, religion, civics, community roles, or life skills (Williamson and Clevenger-Bright, 2008:51). As used in this study, this term pertained to all teachers teaching Technology and Livelihood Education (T.L.E.) in the different public junior high schools in the Division of Samar.

Technical-vocational education. It is defined as the education when it involves, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills and knowledge relating to occupations in various sectors of economic and social life (Peano, et al., 2008).

Technology and Livelihood Education (T.L.E.). It is one of the learning areas of the Secondary Education Curriculum used in Philippine secondary schools, with the component areas of Home Economics, Agri-Fishery Arts, Industrial Arts, and Information and Communication Technology (en.wikipedia.org).

Chapter 2

REVIEW OF RELATED LITERATURE AND STUDIES

This chapter discusses ideas on Technology and Livelihood Education (T.L.E.) teachers, K to 12 Program, and other topics which provided ample literature to the present study. This chapter also includes discussions of findings of previous researches, locally as well as internationally, which were found relevant to the present study.

Related Literature

Being the primary education provider, the school system is put into a great responsibility to cope with changes and to enhance the quality of education by providing necessary ways to meet the goals and objectives of education - the improvement of the totality of man. Hence, various principles, policies and programs were conceptualized by stakeholders in education to improve the quality of education.

Despite changes in the education system, however, low performance and achievement gaps persist. In the National Achievement Test (NAT) for school year 2005-2006 a trend of disturbing results was revealed where Grade 6 pupils posted a passing average of 54.66 percent (Somerin, 2006). In addition, NAT results showed the mean percentage score for the elementary level, although registering a slight increase, was just as disheartening, at 64.81 percent in the

school year 2007-2008, 66.33 percent in 2008-2009, and 69.21 percent in 2009-2010 (Somerin, http://www.philstar.com/opinion/, 2011). The results of the NAT in 2012 revealed that the Mean Percentage Score (MPS) of Grade 3 pupils in the country was 56.98 percent, lower than the 2011 results at 59.58 percent and the 2007 initial results at 57.42 percent. English, Math, and Science scores dropped slightly (Rodriguez, 2014). Among 6th graders, MPS was 66.79 percent, slightly lower than the 2011 NAT Results at 68.14 percent, but higher than the 2006 initial results at 59.94 percent. There was also an increase in the scores in all subjects from 2006 to 2012.

These results are troubling, especially since people with only basic competencies are the most likely to be disadvantaged in the rising high-skill, high-wage service economy. Today, more people view education as a product to be used in a market place wherein the mark brand is quality for global competitiveness (Gloria, 2006).

Therefore, the country needs an "NCLB plus" agenda that infuses 21st century skills into core academic subjects. According to Conley (2007), the components of readiness of students for global competition are key cognitive strategies, key content, academic behaviors, and contextual skills and awareness which align well with the K to 12 vision for a 21st century education. Likewise, the K to 12 education underlying tenet of essential learning outcomes encompass knowledge of human cultures and the natural world, intellectual and practical skills, personal and social responsibilities, and integrative learning.

It is for this reason that the K to 12 Program is being implemented in the country not simply to add two more years of education but more importantly to enhance the basic education curriculum. It is aimed at giving time to students to strengthen competencies and academic skills and to provide specializations in the following: science and technology, music and arts, agriculture and fisheries, sports, business and entrepreneurship, among others, depending on the occupation or career that they intend to pursue. These two years will build on skills that are essential to their chosen field (DepEd Discussion Paper, 2010).

In essence, the K-12 Curriculum envisions holistically developed learners with 21st century skills (Deped Primer, 2011). At the core of this basic education program is the complete human development of every graduate which means that every student would have an understanding of the world around him and a passion for life-long learning while addressing every student's basic learning needs.

Technical Vocational Education and Training (TVET) is the secret behind the technological advancement and economic fortune of several developing nations across the globe (Dangote, 2013). TVET unlike other specialized skilled-focused education has very clear meanings, different taxonomies and diverse applications. Winer (2000) sees TVET as a formal learning experience that shapes the technical skills, human abilities, cognitive understanding, attitudes and work habits of learners in order to fit into workplaces and enhance steady progress in employment. But, Oni (2007) perceives TVET as a learning process that inculcates

in the learners essential skills and basic scientific knowledge. According to Badawi (2013), the adopted definition of TVET by UNESCO and International Labour Organization is a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life.

The definitions above aligned with the view of Lauglo (2006) that TVET is a deliberate education intervention designed for inculcating in learners essential skills required to make them more productive and effective in diverse areas of economic activity.

Nevertheless, technical-vocational education is embossed with negative social status (Aring, 2011). In addition, developing countries have little, if any, collaboration among employers or between employers and education. Indeed, few developing countries have a strong and organized private sector. There are usually few, if any, intermediaries who can connect both education and employers effectively, and few resources available to purchase and maintain expensive state-of-the-art equipment for learning globally competitive skills. Moreover, there is often no economic growth strategy linked to vocational education. Usually teachers are poorly paid and their social status lies far below that of teachers in academic education. Curricula are often narrow or out of date,

and there are no skill standards that reflect a sector's current and future skill needs.

The passage of the Enhanced Basic Education Curriculum will undeniably impact on technical vocational education and training (Tech-Voc). The Technical Education and Skills Development Authority (TESDA) has a vital role to play. Some are as follows: (a) the introduction of Tech-Voc education in Grades 7 and 8 to all junior high schools is the exploratory phase where common competencies such as use of hand tools, performance of mensuration and calculation, interpretation of plans and drawings, performance of shop maintenance and practicing occupational health safety will be included in the curriculum; (b) one of the four (4) tracks is Tech-Voc, with qualifications at the levels of National Certificate (NC) I and II shall be taken in Grades 9 to 12 to ensure that students taking the Tech-Voc track have employable skills when they exit Grade 10 (for NC I) and Grade 12 (for NC II); (c) basic education schools (public and private) that will offer the Tech-Voc track may establish their own facilities/workshops or adopt partnering schemes according to the guidelines that will be agreed upon by both the Department of Education (DepEd) and TESDA.

Two types of T.L.E. curriculum are provided for regular high schools (public and private). These are: Technical-Vocational Education-based T.L.E. and Entrepreneurship Education-based T.L.E (en.wikipedia.org). The Technical-Vocational Education-based T.L.E. is focused on technical skills development in any area. Five common competencies, based on the training regulations of

the Technical Education and Skills Development Authority (TESDA), are covered in the exploratory phase (Grades 7 and 8): mensuration and calculation, technical drafting, use of tools and equipment, maintenance of tools and equipment, and occupational health and safety. The specialization phase is from Grades 9 to 12.

On the other hand, the Entrepreneurship Education-based T.L.E. is focused on the learning of some livelihood skills every quarter, so that the student may be equipped to start a small household enterprise with family members. It covers three domains: Personal Entrepreneurial Competencies, Market and Environment, and Process and Delivery. The five common competencies from TESDA are integrated in the Process and Delivery domain (Department of Education Order No. 67 (2012), Enclosure No. 2).

Every school has a choice as to which stream to offer, with consideration for faculty, facilities and resources. Both streams are based on the training regulations, but the Entrepreneur based TLE embeds entrepreneurship concepts in the teaching of the various subjects in HE, IA, AFA, and ICT.

At the onset, TESDA needs to develop doable policies and strategies in support to the K to 12 program and considerably address challenges to Tech-Voc. As this necessitates major implications to the whole Philippine education system, the following are inputs for consideration: (a) ensure relevance of the outcomes of the education system to labor market which implies that Tech-Voc qualifications will have to be responsive to area demand for employability; (b) assure quality by setting standards for program content and program providers,

with the training regulations serving as inputs or guides to the curriculum to be developed by DepEd; the challenge for TESDA therefore is to improve efficiency in developing training standards that are area-based and sector-specific; (c) sustain value by establishing standards and processes for assessment and certification for high school students, in collaboration with DepEd; (d) assist DepEd in expanding the pool of certified technology and livelihood education (T.L.E.) trainers which are necessary inputs to the trainers' capability development programming; (e) use of e-learning or blended learning to increase access to quality Tech-Voc program, with the alternative learning systems (ALS) including the training of facilitators of learning shall be implemented by DepEd, in collaboration with TESDA; and (f) design and implement career advocacy program that will effectively help students and their parents to decide on the different career tracks of the high school program (TESDA Policy Brief, 2013).

Thus, TESDA's role in K to 12 is on curriculum development, particularly in T.L.E. and technical-vocational track, in trainers' development and assessment and certification (Taganas, 2013). In an online article, Villanueva explained that the curriculum guides, learning modules, and teachers' guides for 23 technical-vocational courses have been developed for incoming Grades 7 and 8, while the review of these materials for Grades 9 to 10 is currently on-going, specifically on the following skills and trades: Automotive Servicing, Mechanical Drafting, Computer Hardware Servicing, Horticulture, Shielded Metal Arc Welding, Consumer Electronics Servicing, Aqua Culture, Dressmaking/Tailoring,

Masonry, Care Giving, Household Services, Plumbing, Agri Crop Production, Fish Capture, Handicraft, Carpentry, RAC Servicing (DomRac), Electrical Installation and Maintenance, Bread and Pastry Production, Tile Setting, Animal Production, Food (Fish) Processing, and Beauty Care (Nail Care Services) (http://www.dole.gov.ph, 2013).

The question, however, is not the shift from a curriculum that offers simple and/or basic competencies but the readiness of teachers to implement a more responsive education curriculum through teaching. The alignment of the T.L.E. curriculum in the escalating demand of skilled employees will enable the graduate to obtain certification and employment. Thus, the need for the realistic and experiential learning aided by the right and adequate tools, equipment and machines for instruction is necessary. For one, careful consideration such as the teachers' ability to facilitate learning, evaluate learners' performance, and utilize assessment tools, among others must be taken into consideration.

It must be understood that as a subject in high school T.L.E. basically tackles the basic fundamentals of technicalities that can be found in people's everyday life. It provides students with practical experiences, technical knowledge and expertise in Home Economics, Agri-Fishery Arts, Industrial Arts, and Information and Communication Technology (ICT). Technology and Livelihood Education intends to develop knowledge, skills, values, and attitudes that will prepare the students for entry into the world of work. This will enable the students to gain understanding and acquire competency in various activities.

The study of TLE needs redirection to suit to the conditions in today's society and to promote advancement in knowledge and respond to the needs of individuals, families, and community. According to De Alca (2008), TLE as the 5th learning area in the curriculum is the "Laboratory of Life."

Among the learning areas, it is the most experimental, interactive, interdisciplinary, vocational, politico-economic and moral. It is the learning area that provides the students quality time to demonstrate practical knowledge and life skills that have been gained especially, the skills of empathy, vocational efficiency and solving problem of daily life. The DepEd is vested with the authority, accountability and responsibility for ensuring success to promote quality education. Quality education can provide people with the means to assess and construct their own values and provides a foundation for the continued Education that is essential to personal and professional fulfillment.

In all education system, the performance of teachers is one of the handfuls of factors determining school effectiveness and learning outcomes. Naik (2008) explains that teaching is noble, but demanding occupation. In order for teachers to maintain a high level of professional performance under these conditions, they must assume personal responsibility for their own performance, growth and development. Mohanty (2000) explains that teacher performance as the most crucial input in the field of education. Teachers are perhaps the most critical component of any system of education. How well they teach depends on motivation, qualification, experience, training, aptitude and a mass of other

factors, not the least of these being the environment and management structures with in which they perform their role. Teachers must be seen as part of the solution, not part of the problem. Poor pay, low status and morale are key causes of poor performance and corrupt behavior in the public sector. Across the world, millions of teachers, most of them women, are working tirelessly for poverty wages educating the next generation.

Standards of competence are intended for use as a guide for teacher educators as they design and approve programs for teacher preparation, a self-assessment guide for teachers in identifying their needs for professional development in student assessment, a guide for workshop instructors as they design professional development experiences for in-service teachers, and an impetus for educational measurement specialists and teacher trainers to conceptualize student assessment and teacher training in student assessment more broadly than has been the case in the past.

Related Studies

This section presents excerpts of researches found to be relevant to the conduct of this study.

Guiner (2011), in his dissertation entitled "Training Module in Industrial Arts for Instructors", utilized the descriptive research. From the results of the study, a training module in industrial arts for instructors was developed for industrial arts faculty of State Colleges and Universities in Region I to further

improve their teaching competency. The respondents of this study were composed of 61 instructors teaching five areas in industrial arts in state colleges and universities in Region I. Data were gathered, analyzed and interpreted and arrived of the following findings: (a) the level of competency of the instructor respondents in five areas in industrial arts revealed a "high competent" remark; (b) the five areas in Industrial Arts except Electricity with a mean average of (3.07) and Electronics (3.11) had mean ratings above 3.40, implying that only two indicators were considered constraints and all the rest were capabilities; and (c) the developed training module in industrial arts for instructors as well as the questionnaires were "very much valid" as to content and face validity.

The previous study of Guiner was more in-depth because it developed a training module for industrial arts instructors. The present study was only concerned with the assessment of the competence of TLE teachers for the K to 12 program in junior high schools. Despite the difference, however, Guiner's study provided a bird's eye view of competence of teachers in technical-vocational field through a training module which, in a sense, what the present study wanted to provide – a basis for future intervention for TLE teachers.

Sali-ot (2011) determined the competencies of instructors and its correlation to the factors affecting the academic performance of students in Western Mindanao State University-External Studies Units, Western Mindanao, Philippines. The descriptive research method was employed in the conduct of the study. A questionnaire checklist was the main instrument in collecting data

from the respondents. The instructors are much competent in the five indicators of the teaching competencies. The most prevailing competency was communication with the learners, and the least prevailing is learner reinforcement-involvement. The most prevailing factor was intellectual, and the least prevailing was physical. There was moderate correlation between the competencies of college instructors and the factors affecting the academic performance of students.

Since the study of Sali-ot determined the competencies of instructors and its correlation to the factors affecting the academic performance of students in Western Mindanao State University-External Studies Units, Western Mindanao, Philippines, it is thus similar to the present study which also determined the teachers' competence in carrying out T.L.E. component areas under the K to 12 Program for junior high school students. They differed, however, in the respondents involved as well as in the research environment.

Fernandez (2013) looked into the teacher's competence and learner's performance in the Alternative Learning System (ALS). The descriptive survey method was employed in this study. It was found out that no significant relationship exists between teachers' competence and certain socio-demographic profile such as gender and educational background. Furthermore, there is no significant relationship between the teachers' competence and learners' performance. As regards teachers' competence, the following weaknesses were identified: manifest a thorough knowledge of the subject matter; formulate

questions to clarify a lesson; usage of various aids to make the subject matter in the module more interesting to learners; make use of a variety of teaching strategies to make the lessons in the module more interesting; and provide challenging task applicable to real life situations.

Despite the difference in focus, the two studies found similarity in terms of aspect of teaching-learning investigated. Fernandez and the present study delved into the teachers' competence. However, Fernandez focused on ALS whereas the present study focused on T.L.E. under the K to 12 Program.

Daguplo (2013) used cross-sectional survey design to assess the teaching competence of the graduate faculty of Southern Leyte State University. A total of 122 randomly selected graduate education students responded to the standardized questionnaire. Graduate students assessed their professors as very competent in two areas, namely, (i)Professional Ethics and (ii) Personal Qualities; and as competent in the areas of (i) Mastery of the Subject Matter, (ii) Teaching Skills), (iii) Classroom Management, (iv) Evaluation Skills, (v) Intrapersonal Qualities, and (vi) Aesthetic Qualities. Inferential analysis, however, revealed a "weak to moderate" correlation with the different areas of teaching skill. Only the educational degree of the SLSU Graduate Education Faculty is strongly correlated with personal qualities.

Inasmuch as the study of Daguplo focused on teaching competence, it was thus relevant to the present study which had a similar focus. However, the manifest difference was that Daguplo investigated the teaching competence of

the faculty members of the Graduate Department of Southern Leyte State University whereas the present study probed into the teaching competence of T.L.E. teachers in the junior high schools in DepEd, Division of Samar.

De Leon-Abao (2014) determined how the teachers' instructional competence influences the intermediate students' comprehension skills as well as their critical thinking ability. Utilizing the normative-evaluative method, findings revealed that the intermediate students obtained an above average performance in Following Directions. This reveals that the students are generally obedient. They are conscious of applying the skill in carrying out their varied activities/responsibilities because according to them careful compliance to standards and the like, engenders peace and order. On the other hand, both groups performed below average in Predicting Outcomes and Drawing Inferences respectively. Since reading is significant to success basically in an academic undertaking, the teachers' instructional competence as reflected in the findings is highly instrumental in the development of students' comprehension skills and critical thinking as these would eventually lead them to function effectively in society.

De Leon-Abao's study was broader in scope because it correlated the teachers' instructional competence with the students' comprehension skills which, the present study, did not delve anymore. The present study was just focused in making an assessment of the competence of TLE teachers for the K to

12 Program in junior high schools. Yet, the study of De Leon Abao provide insights as regards the significance of evaluating teachers' competence.

In assessing the competence level of social studies pre-service teachers in the School of Teacher Education, Saint Louis University, Baguio City, Philippines, Gutierrez (2014) categorized teaching competencies into four, namely: content, pedagogy, diversity, and professionalism based on Parker's Competencies of Social Studies Teachers and that of the National Competency-Based Teachers Standards given by the Department of Education. In the four categories that were mentioned, it was found out that students are very highly competent in diversity and highly competent in the areas content, pedagogy, and professionalism. The result of the study clearly shows that social studies pre-service teachers need support in order for them to clearly manifest the competencies they have along the four areas.

The parallelism between the study conducted by Gutierrez and the present study was on their focus - both focused on competence. Yet, they differed because Gutierrez dealt with the competences of pre-service teachers while the present study dealt with competences of TLE teachers already teaching in junior high schools.

Retome (2010) conducted a study to assess the T.L.E. program instruction of Southern Leyte State University-San Juan campus. It tried to evaluate the attitude of T.L.E. teachers towards work, students' personal view about the course, and the physical and learning environment of the school in relation to

T.L.E. program. It utilized descriptive survey using two types of self-made questionnaire. The attitudes of T.L.E. teachers toward the program are moderately positive while the students' personal view towards the course is moderately low. Both teachers and students believed that the school needs to update instructional materials, tools, and equipment, and improve classrooms particularly home technology building.

Insofar as the previous study of Retome assessed the T.L.E. instruction, it is thus similar to the present study which also assessed T.L.E. instruction in terms of the teachers' competence in teaching the four major components of T.L.E. They differed, however, because the previous study assessed specifically the T.L.E. curriculum whereas the present study assessed the competence of TLE teachers in teaching the four major components of T.L.E. under the K to 12 Program to junior high school students.

Likewise, Varela (2015) conducted a study to evaluate the performance of the third year college students taking up Bachelor in Secondary Education (BSEd), major in Technology and Livelihood Education (TLE) at the ASIST-Bangued Campus. A high level of knowledge, skills and attitudes was attained along Home Economics, "adequate" for Agricultural Arts, "high" for Entrepreneurship. The general performance rating of the teachers improves the desired learning competencies along Agricultural Arts and Entrepreneurship. Faculty must pursue post-graduate education relevant to the subjects being taught. College officials should send teachers for training and seminars or even

conduct the same within the campus to upgrade faculty with the new technologies or trends and issues related to their field of specialization. Vocational faculty must be sent for the appropriate National TVET schooling for them to acquire titles (TESDA National Competency levels NC's) as Trainer/Assessor, Training Master, Training Designer/Developer, in technology education and higher education training to equip all faculty qualifications in support to the Enhanced Basic Education Act of 2013 better known as K to 12.

Although the previous study was more complex since it evaluated the performance of the students taking up Bachelor in Secondary Education (BSEd), major in Technology and Livelihood Education (TLE), in preparation for their future careers as T.L.E. teachers, it is nevertheless cited here as it provided literature on the significance of high level of knowledge, skills and attitudes for better performance.

The aforementioned studies are discussed in this section as they provided insights into the conduct of this study. Although they differed in terms of focus, scope and methodology used, they are nevertheless relevant in formulating the focus of the present study.

Chapter 3

METHODOLOGY

This chapter includes the procedures used in the conduct of the study. This section specifically discusses the research design, instrumentation, validation of instrument, sampling procedure, data gathering procedure and statistical treatment of data.

Research Design

The present study utilized the descriptive type of research, with comparative and correlation analysis, in order to assess the competence of the Technology and Livelihood Education (T.L.E.) teachers for the K to 12 Program of public junior high schools in the Department of Education (DepEd), Division of Samar.

The descriptive method was used to explain, assess and describe the competence of the T.L.E. teachers for the K to 12 Program along social regard for learning, learning environment, diversity of learners, curriculum planning, assessing and reporting, community linkages, and personal growth and personal development. Comparative analysis was conducted in order to determine the differences in the level of competency of TLE teachers along the four components of home economics, industrial arts, agriculture and fishery arts, and entrepreneurship.

Also, correlation analysis was conducted in order to determine the relationship between the level of competency of TLE teachers in the four components and their profile.

Questionnaire and documents served as the research instruments for this study. Descriptive as well as inferential statistical tools were used to compute, analyze and interpret the data of this study.

Instrumentation

The questionnaire served as the primary data gathering instrument. This was supplemented by pertinent documents.

Questionnaire. As the primary data gathering instrument, there were four sets of questionnaires in relation to the four major components of TLE, namely: home economics, agriculture and fishery arts, industrial arts, and entrepreneurship.

The first part of the questionnaire contained items on the personal background information of the respondents such as their age, sex, among others. This was a supply type wherein which they had to fill in the needed information on the blank spaces provided in each item and/or place a check (/) mark on the appropriate boxes.

The second part of the questionnaire contained 10 attitude statements reflective of the teacher-respondents' attitude towards teaching based on the National Competency-Based Teacher Standards (NCBTS). The respondents'

responses in this section were quantitatively analyzed using the following five-point scale: 5 for strongly agree, 4 for agree, 3 for undecided, 2 for disagree, and 1 for strongly disagree.

The third part of the questionnaire was on the teachers' level of competence in teaching the four major components of T.L.E. based on the NCBTS performance evaluation instrument. The respondents' responses were quantified using the following five-point scale: 5 for very highly competent, 4 for highly competent, 3 for moderately competent, 2 for least competent, and 1 for not competent.

Documents. This served as a secondary data gathering instrument. The pertinent document which was used in this study was the (IPCRF) form, which specifically determined the teacher-respondents' latest performance rating.

Validation of Instrument

The questionnaire was validated using expert analysis for content validity and test re-test for reliability.

Draft copies of the questionnaires were submitted for content analysis to the Research Adviser. After the suggestions for content refinement and revisions were incorporated, the questionnaires were readied for pilot testing among ten T.L.E. teachers in Samar National School (SNS), Catbalogan City, which served as the venue of validation.

The reliability coefficient of each indicator for the questionnaire was posted at 0.854, interpreted as fairly high, adequate for individual measurement.

Sampling Procedure

The respondents of this study were the teachers teaching Technology and Livelihood Education (T.L.E.) in the different public secondary schools in the Second District of the Division of Samar. Total enumeration or universal sampling was used to determine the teacher-respondents of this study since there were only 95 T.L.E. teachers from public junior high schools in the Second District of the Division of Samar.

The 49 public junior high schools in the Division of Samar, which were included in this study were Basey National High School, Valeriano C. Yancha Memorial Agricultural School, San Fernando National High School, Old San Agustin National High School, Simeon Ocdol National High School, Mabini National High School, Burgos Integrated School. In Calbiga, Samar, a lone secondary school - Calbiga National High School - was included. In Daram, Samar, the schools included Daram National High School, Bacagay National High School, Birawan National High School, Parasan National High School, Bakhaw National High School, Baclayan National High School, Cabiton-an Integrated School, and Sua National High School.

Two schools were included in Hinabangan, Samar, to wit: Hinabangan National High School and Bagacay National High School. In Jiabong, Jiabong

National High School, Malino National High School and Casapa National High School were included in this study. Also included in this study were Marabut National High School and Osmeña National High School in Marabut, Samar; Motiong National High School and Calapi National High School in Motiong, Samar; Wright National High School, Casandig National High School, Tenani Integrated School, and Lawaan National High School in Paranas, Samar; Pinabacdao National High School, Parasanon National High School and Quintin Quijano Sr. Agricultural School in Pinabacdao, Samar; San Sebastian National High School in San Sebastian, Samar; Sta. Rita National High School, Tominamos Integrated School, Dampigan National High School, Hinangutdan National High School and Anibongon Integrated School in Sta. Rita, Samar; Independencia National High School in Talalora, Samar; Villareal National High School, Guintarcan National High School, San Andres National High School, Igot National High School, Plaridel National High School, Primitivo Torrechiva National High School, and Lamingao National High School in Villareal, Samar; Zumarraga National High School, Mualbual National High School, Bioso Integrated School, and San Isidro National High School in Zumarraga, Samar.

Data Gathering Procedure

The gathering of the needed data for this study proceeded with appropriate and necessary documentary requirements to support its legality and validity. A letter requesting permission to conduct this study approved by the

Dean of the Graduate School of Samar State University (SSU), Catbalogan City, was submitted to the Schools Division Superintendent of the Department of Education (DepEd), Division of Samar. Upon her approval, the same letter was attached to another letter addressed to the principals and/or heads of the different public secondary schools requesting for permission to administer the research instruments among the teacher-respondents of this study.

When their approval was secured, the researcher personally administered the questionnaires to the respondents, preferably during class hours to ensure 100 percent retrieval. Before proceeding to the tabulation of data, the researcher secured the RPAST forms of the teacher-respondents from the Records Personnel of each public secondary school to draw data on their latest performance rating.

Finally, the tabulation of data proceeded.

Statistical Treatment of Data

The data gathered from this study were tabulated, organized, analyzed and interpreted with the use of descriptive as well as inferential statistical tools, including frequency count, percentage, mean, weighted mean, Pearson Product Moment Coefficient of Correlation (Pearson r), Fisher's t-test, and One-Way Analysis of Variance (ANOVA).

Frequency count. This descriptive statistical tool was utilized to present the respondents' age and sex, average family monthly income, parents'

educational attainment, parents' occupation, among others as to the number of occurrences.

Percentage. This was used in the analysis and interpretation of data such as age and sex, average family monthly income, parents' educational attainment, parents' occupation, among others, as to the magnitude of occurrence.

Mean. This measure was employed to calculate the average age, of the respondents, among others.

Weighted mean. This was used to express the collective perception of the teacher-respondents as to their attitude towards technical-vocational education and level of competence of teacher-respondents in teaching the four components of T.L.E.

The following weighted ratings were used to interpret the data:

4.51-5.00 - Strongly Agree (SA)/
Very Highly Competent (VHC)

3.51-4.50 - Agree (A)/Highly Competent (HC)

2.51-3.50 - Undecided (U)/Moderately Competent (MC)

1.51-2.50 - Disagree (D)/Least Competent (LC)

1.00-1.50 - Strongly Disagree (SD)/Not Competent (NC)

Pearson Product-Moment Coefficient of Correlation (Pearson r). This statistical tool was employed to determine the relationship between the teacher-respondents' profile and their level of competence in teaching T.L.E. along four components.

Fisher's t-test. This tool was used to determine if there is significance in the relationship between the variates.

One-Way ANOVA. This statistical tool was used to determine the differences in level of competence in teaching T.L.E. of the teacher-respondents along the four major components.

Scheffe's test. This was used to determine the significance of the difference in level of competence in teaching T.L.E. of the teacher-respondents along the four major components.

The hypotheses of this study were tested at 0.05 level of significance, two-tailed hypothesis testing.

Chapter 4

PRESENTATION OF DATA, ANALYSIS AND INTERPRETATION

This chapter presents the data gathered, the analysis made to the data, and the interpretations derived therefrom. Included in this section are data on the respondents' personal profile, their level of competence along four major components of T.L.E., and the tests of hypotheses.

Profile of the Teacher-Respondents

Presented in this chapter are data on the respondents' age, sex, average monthly income, educational attainment, grade level taught, relevant trainings/seminars attended for the past three years, latest performance rating, and attitude towards teaching technical-vocational education.

Age. Table 1 presents the distribution of the respondents according to their age.

Table 1

Distribution of the Teacher-Respondents as to Age

Age	Frequency	Percentage
60-64	4	4.21
55-59	7	7.37
50-54	16	16.84
45-49	14	14.74
40-44	14	14.74
35-39	4	4.21
30-34	35	36.84
25-29	1	1.05
TOTAL	95	100.00
Mean	32.32	
SD	3.91	

As it is reflected in Table 4, 35 of the 95 teacher-respondents or 36.84 percent were aged between 30-34 years old, followed by 16 or 16.84 percent who belonged to the 50-54 age bracket, and 14 or 14.74 percent each for 45-49 and 40-44 age bracket. In addition, there were four teacher-respondents who were considered the oldest with ages ranging between 60-64 years old while there was one teacher-respondent who was considered the youngest age between 25-29 years old.

The mean age was posted at 32.32 or approximately 32 years old, with a standard deviation of 3.91, indicating a wide dispersion from the mean age. The results implied that the Technology and Livelihood Education (T.L.E.) teacher-respondents were in their early adulthood which is the age characterized by pursuit for personal as well as professional development (Erikson, n.d.).

Sex. Table 2 further shows the distribution of the teacher-respondents as to their sex.

Table 2

Teacher-Respondents' Distribution as to Sex

Gender	Frequency	Percentage
Male	43	45.26
Female	52	54.74
Total	95	100.00

Table 2 shows that most or 52 or 54.74 percent of the teachers teaching T.L.E. were females, with only 43 or 45.26 percent were males. The results in Table 2 imply that there was a slightly higher number of women teaching T.L.E.

than men. This phenomenon could be because women have already penetrated works/tasks which were once strictly for men.

Average monthly income. Table 3 shows the distribution of the teacher-respondents according to their average monthly income.

Table 3

Distribution of Teacher-Respondents as to Average Monthly Income

Monthly Income	Frequency	Percentage
Php 15,000.00 and below	13	13.68
Php 20,001.00-Php 25,000.00	37	38.95
Php 15,001.00-Php 20,000.00	29	30.53
Php 30,001.00 and above	7	7.37
Php 25,001.00-Php 30,000.00	9	9.47
Total	95	100.00
Mean	23,171.02	
SD	9,993.69	

The highest income was between Php 25,001.00 and Php 30,000.00 which was earned by nine or 9.47 percent teacher-respondents. The lowest income was between Php 15,000.00 and below which was earned by 13 or 13.68 percent teacher-respondents. Most of the teachers or 37 (out of 95) or 38.95 percent earned an income between Php 20,001.00 and Php 25,000.00. The mean income was posted at Php 23,171.02, indicating an income above the income poverty threshold which, during the 1st semester of 2014, was posted at Php 6,125.00 per month for a family of five members for their basic needs for food, and an income

of Php 8,778.00 to meet the food and non-food requirements of a family of five members (National Statistical Coordination Board, 2014). Also, this result implied that the teachers in the 2nd District of the Division of Samar are earning more than the poverty threshold based on the data from the National Statistical Coordination Board. Hence, the teachers are earning more than enough to provide food and non-food requirements for their families.

Educational attainment. The distribution of the respondents based on their level of education is presented in Table 4.

Table 4

Distribution of the Teacher-Respondents as to their Educational Attainment

Education	Frequency	Percentage
With Degree in Graduate Programs	41	43.16
With Units in Graduate Degree Programs	37	38.95
Bachelor's Degree	17	17.89
Total	95	100.00

It is reflected in Table 4 that 41 of the 95 T.L.E. teachers have earned degrees in graduate programs, followed by 37 or 38.95 percent with units in graduate programs and the remaining 17 or 17.89 percent with only their baccalaureate degrees. These results in Table 4 imply that most of the T.L.E. teachers pursued graduate education for their professional development which further reflects what Erikson postulated that individuals in early adulthood are

at the prime of their lives and thus, seek to pursue continued career development goals.

Grade level taught. Table 5 reflects the results of the distribution of the teacher-respondents according to their grade level taught.

Table 5

Distribution of the Teacher-Respondents as to their Grade Level Taught

Grade Level	Frequency	Percentage
Grade 7	26	27.37
Grade 8	19	20.00
Grade 9	28	29.47
Grade 10	22	23.16
Total	95	100.00

As it is reflected in Table 5, there were 28 T.L.E. teachers from Grade 9 who responded to this study, followed by 26 (27.37 percent) from Grade 7, 22 (23.16 percent) from Grade 10, and 19 (20 percent) from Grade 8. These results imply that there were more T.L.E. teachers from Grade 9 who were willing to assess their level of competence in teaching the four components of T.L.E.

Latest performance rating. Table 6 shows the data as to the distribution of the teacher-respondents according to their latest performance rating.

Table 6

Latest Performance Rating of Teacher-Respondents

Performance	Frequency	Percent
8.5	20	21.05
8.4	7	7.37
8.3	5	5.26
8.2	19	20.00
8.0	11	11.58
7.6	1	1.05
7.5	6	6.32
7.3	7	7.37
7.0	12	12.63
6.9	4	4.21
6.7	1	1.05
6.4	1	1.05
6.3	1	1.05
Total	95	100.00
Mean	7.88	Very Satisfactory
SD	1.29	

Legend:
8.60 – 10.00 - Outstanding
6.60 – 8.59 - Very Satisfactory
4.60 – 6.59 - Satisfactory
2.60 – 4.59 - Unsatisfactory
2.59 and below - Poor

The table on the respondents' latest performance rating shows that there were 20 T.L.E. teachers who rated themselves with 8.5, with a descriptive interpretation of "very satisfactory", followed by 19 teacher-respondents who earned a rating of 8.2, likewise a "very satisfactory" performance and 12 teacher-respondents with a rating of 7.0, or a "very satisfactory" performance. The highest rating earned was posted at 8.5 whereas the lowest was 6.3 obtained by one teacher-respondent, thus interpreted as "satisfactory" performance.

The mean rating was posted at 7.88, interpreted as "very satisfactory" performance. The data in the table implied that most of the teacher-respondents exceeded expectations, and all goals, objectives and targets were achieved above the established standards. It meant further that their performance exceeded the 15 percent to 29 percent planned targets, but falls short of what is considered an outstanding performance (DepEd RPMS Form).

Attitude towards teaching Technical-Vocational Education. Table 7 shows the teacher-respondents' attitude towards teaching technical-vocational education.

Majority of the statements were agreed upon by the respondents. In fact, of these six statements, the statement "Technical-vocational education is aligned with the requirements of the marketplace/workplace" obtained the highest weighted mean at 4.47, followed by "Technical-vocational education enables an active student-teacher interaction in the classroom", with an obtained weighted mean at 4.11, and "Teaching technical-vocational curriculum engages my students in active learning", with an obtained weighted mean at 4.00.

Meanwhile, there were two statements to which the teacher-respondents felt strongly. These were "Teaching technical-vocational education paves the way for me to contribute to better understanding by students of the real-life situation of the workplace", with an obtained weighted mean at 4.71, and "Teaching technical-vocational education harnesses my interests and passion for innovation and creativity", with an obtained weighted mean of 4.67.

Table 7

Teacher-Respondents' Attitude towards Teaching Technical-Vocational Education

Attitude Statements	Weighted Mean	Descriptive Interpretation
1. Teaching technical-vocational education enables the development of the required 21st Century skills for global competitiveness.	4.01	Agree
2. Teaching technical-vocational education is the key towards economic success.	3.59	Agree
3. Teaching technical-vocational education to students expands their understanding and provides them with general enlightenment.	3.42	Undecided
4. Teaching technical-vocational education harnesses my interests and passion for innovation and creativity.	4.67	Strongly Agree
5. Teaching technical-vocational education paves the way for me to contribute to better understanding by students of the real-life situation of the workplace.	4.71	Strongly Agree
6. Technical-vocational education is aligned with the requirements of the marketplace/workplace.	4.47	Agree
7. Technical-vocational education takes into consideration the varied interest, abilities and maturity levels of students when the choice of career is made as deciding point.	3.48	Undecided
8. Teaching technical-vocational curriculum engages my students in active learning.	4.00	Agree
9. Technical-vocational education enables an active student-teacher interaction in the classroom.	4.11	Agree
10. Technical-vocational education minimizes the job-skill mismatch in the workplace.	3.53	Agree
Grand Total	**39.99**	
Grand Mean	**3.99**	**Agree**

Legend:

4.51-5.00	Strongly Agree (SA)
3.51-4.50	Agree (A)
2.51-3.50	Undecided (U)
1.51-2.00	Disagree (D)
1.00-1.50	Strongly Disagree (SD)

Nevertheless, there were two statement to which the teacher-respondents felt unsure and/or uncertain about. These were "Technical-vocational education takes into consideration the varied interest, abilities and maturity levels of students when the choice of career is made as deciding point", with an obtained weighted mean of 3.48, and "Teaching technical-vocational education to students expands their understanding and provides them with general enlightenment", with an obtained weighted mean of 3.42.

On the whole, the teacher-respondents' attitude towards teaching technical-vocational education obtained a weighted mean of 3.99, with a descriptive interpretation of "agree". This implied that the teacher-respondents had positive attitude towards teaching technical-vocational education. This likewise reflects a basic fact: that technical-vocational education is believed to be the means by which students (learners, in general) can better understand real-life scenario.

Level of Competence of T.L.E. Teachers for the K to 12 Program along the Four Components

The succeeding discussions deal with the teacher-respondents' level of competence in teaching T.L.E. component areas under the K to 12 Program of the Department of Education (DepEd).

Home Economics component. This section presents one major sub-component of home economics (H.E.) - cookery. Table 8 presents the teacher-respondents' level of competence in this sub-component.

As it is reflected in the table, three indicators of competence were perceived as "very highly competent", with the "Proper storage of measuring devices, kitchen tools and equipment" obtaining the highest weighted mean at 4.71, followed by "Checking and sanitizing measuring devices, kitchen tools and equipment" with a weighed mean of 4.67. As a whole, as regards use of standard measuring device, kitchen tools, and equipment, the teacher-respondents were "very highly competent" as evidenced by the obtained weighted mean posted at 4.58.

The table likewise shows that the teacher-respondents perceived themselves as "highly competent" with respect to "Measuring of ingredients according to recipe requirements", with an obtained mean of 4.37, "Practical application of mensuration and calculation of measuring devices, kitchen tools and equipment according to manufacturers' manual", with an obtained mean of 4.00, and "Demonstrating understanding of measuring devices, tools, and equipment for dry and liquid ingredients, special ingredients, tables of weights and measures", with an obtained mean of 3.67. Over-all, the teacher-respondents were "highly competent" in mensuration and calculation of cookery equipment, tools, and ingredients, as shown by the obtained weighted mean of 3.72.

Table 8

Level of Competence of Teacher-Respondents in Cookery as Sub-Component of Home Economics under the K to 12 Program of DepEd

Competence Indicators	Weighted Mean	Descriptive Interpretation
A. Use of Standard Measuring Device, Kitchen Tools and Equipment	**4.58**	**Very Highly Competent**
1. Demonstrate understanding of standard measuring devices, kitchen tools and equipment by making an album of these tools, properly labelled and classified according to use.	4.49	Highly Competent
2. Checking and sanitizing measuring devices, kitchen tools and equipment.	4.67	Very Highly Competent
3. Calibrating measuring devices, kitchen tools and equipment.	4.58	Very Highly Competent
4. Enumerating standard operational procedures, principles and techniques in maintaining measuring devices, kitchen tools and equipment.	4.45	Highly Competent
5. Proper storage of measuring devices, kitchen tools and equipment.	4.71	Very Highly Competent
B. Mensuration and Calculation	**3.72**	**Highly Competent**
1. Demonstrate understanding of measuring devices, tools, and equipment for dry and liquid ingredients, special ingredients, tables of weights and measures.	3.67	Highly Competent
2. Practical application of mensuration and calculation of measuring devices, kitchen tools and equipment according to manufacturers' manual.	4.00	Highly Competent
3. Completing work tasks performed using the four fundamental operations of addition, subtraction, multiplication and division.	3.33	Moderately Competent
4. Measuring of ingredients according to recipe requirements.	4.37	Highly Competent

Table 8 continued

Competence Indicators	Weighted Mean	Descriptive Interpretation
5. Record keeping of all materials and equipment.	3.21	Moderately Competent
C. Maintenance of Tools and Equipment	**4.23**	**Highly Competent**
1. Maintaining and storing kitchen tools, utensils and equipment according to specification and job requirement.	4.05	Highly Competent
2. Labeling and storing tools, utensils and equipment according to specifications.	4.09	Highly Competent
3. Perform basic preventive maintenance of kitchen tools and equipment.	4.20	Highly Competent
4. Segregation of functional and non-functional tools.	4.34	Highly Competent
5. Regular monitoring and evaluation of the condition of kitchen tools and equipment.	4.47	Highly Competent
D. Interpretation of Plans and Drawings	**2.58**	**Moderately Competent**
1. Collecting different sketch plans and lay-outs of kitchen types.	2.67	Moderately Competent
2. Drawing lines, symbols and signs appropriate for cooking tasks.	2.34	Least Competent
3. Trade Mathematics in kitchen drawing plans and lay-outs.	2.20	Least Competent
4. Read and interpret blueprints of kitchen.	2.31	Least Competent
5. Designing the facilities and fixtures considering the principles of ergonomics.	3.36	Moderately Competent
E. Occupational Safety and Health	**4.14**	**Highly Competent**
1. Identifying health, safety and security procedures in the workplace by making appropriate signage in the kitchen.	4.39	Highly Competent

Table 8 continued

Competence Indicators	Weighted Mean	Descriptive Interpretation
2. Implementing work station ergonomics.	4.37	Highly Competent
3. Listing down problems and making necessary solutions to hazardous and risky workplace condition by reporting accidents in the work place.	4.53	Very Highly Competent
4. Observing and practicing Philippine Occupational Health and Safety Standards (OHS) regulations and indicators such as Clean Air Act, Electrical and Fire Safety Code, Disaster Preparedness and Management, and Emergency-Related Drills and Trainings.	4.01	Highly Competent
5. Designing the facilities and fixtures considering the principles of ergonomics.	3.41	Moderately Competent
Grand Total	**19.25**	
Grand Mean	**3.85**	**Highly Competent**

Legend:

4.51-5.00	Very Highly Competent (VHC)
3.51-4.50	Highly Competent (HC)
2.51-3.50	Moderately Competent (MC)
1.51-2.50	Least Competent (LC)
1.00-1.50	Not Competent (NC)

As to maintenance of tools and equipment, the teacher-respondents perceived themselves as "highly competent" in all the indicators, but were particularly high in competence in regularly monitoring and evaluation of the condition of kitchen tools and equipment with an obtained mean of 4.47, segregation of functional and non-functional tools with an obtained mean of 4.34, and performing basic preventive maintenance of kitchen tools and equipment

with an obtained mean of 4.20. As a whole, the teacher-respondents were "highly competent" in maintaining tools and equipment, as shown by the weighted mean of 4.23.

As far as interpreting plans and drawings of kitchen lay-outs, the teacher-respondents were "least competent" in "drawing lines, symbols and signs appropriate for cooking tasks", with a weighted mean of 2.34, "reading and interpreting blueprints of kitchen", with a weighted mean of 2.31, and "trading Mathematics in kitchen drawing plans and lay-outs", with a weighted mean of 2.20. As a whole, however, the teacher-respondents were "moderately competent" in interpreting plans and drawings of kitchen types, as shown by the weighted mean of 2.58.

As to occupational safety and health, the teacher-respondents were "very highly competent" in "Listing down problems and making necessary solutions to hazardous and risky workplace condition by reporting accidents in the work place", as shown by the weighted mean of 4.53, but were "moderately competent" in "Designing the facilities and fixtures considering the principles of ergonomics", with an obtained weighted mean of 3.41. The teacher-respondents were, however, "highly competent" in all other indicators, with the competence in "Implementing work station ergonomics", with an obtained mean of 4.37. As a whole, the teacher-respondents were "highly competent" in occupational safety and health, as shown by the weighted mean of 4.14.

Conclusively, the teacher-respondents were "highly competent" in cookery sub-component of home economics, as seen in the obtained weighted mean of 3.85. This meant that the teachers teaching Home Economics under the K to 12 Program exceeded the expectations of standards of competency in teaching sub-components of H.E., particularly cookery.

Industrial arts. This section presents one sub-component of industrial arts (I.A.), namely, automotive. Table 9 presents the level of competence of T.L.E. teachers teaching this sub-component.

Three indicators of use of hand tools by the teacher-respondents were rated as "very highly competent". Of these three, the competence of "selecting, arranging and maintaining hand tools using standard operational procedures, principles and techniques", was the highest obtained mean at 4.77, followed by the competence to "demonstrate understanding of planning and preparing tools for task requirements such as cutting, bending/holding, driving, marking, measuring, and tightening/loosening", with a weighted mean of 4.59, and the competence of "identifying procedures in operating hand tools", with a weighted mean of 4.53. As a whole, the teacher-respondents were "very highly competent" in using hand tools, as evidenced by the obtained weighted mean at 4.47.

Table 9

Level of Competence of Teacher-Respondents in Automotive as Sub-Component of Industrial Arts under the K to 12 Program

Competence Indicators	Weighted Mean	Descriptive Interpretation
A. Use of Hand Tools	**4.57**	**Very Highly Competent**
1. Demonstrate understanding of planning and preparing tools for task requirements such as cutting, bending/holding, driving, marking, measuring, and tightening/loosening.	4.59	Very Highly Competent
2. Identifying procedures in operating hand tools.	4.53	Very Highly Competent
3. Observing safety requirements in using hand tools, including inspecting and testing functionality of tools for repair and recycling in preparation for their usability.	4.49	Highly Competent
4. Demonstrate understanding of common faults in handling hand tools, including making reports of malfunctions of hand tools in unplanned/unusual events.	4.46	Highly Competent
5. Selecting, arranging and maintaining hand tools using standard operational procedures, principles and techniques.	4.77	Very Highly Competent
B. Performing Mensuration and Calculation	**3.58**	**Highly Competent**
1. Demonstrate understanding of types of measuring instruments according to tasks such as feeler gauge, torque wrench, calipers, and industrial thermometer.	3.57	Highly Competent
2. Demonstrate understanding of techniques in measuring and determining tolerance/allowance of parts/components.	3.59	Highly Competent
3. Demonstrate understanding of calculation/conversion of measurement such as linear measurement, liquid capacity and thermal measurement.	3.73	Highly Competent
4. Calibrating, safe handling procedures and caring of measuring instruments.	3.66	Highly Competent
5. Record keeping of all measurements and calculations.	3.33	Moderately Competent

Table 9 continued

Competence Indicators	Weighted Mean	Descriptive Interpretation
C. Interpret Plans and Drawings	**3.53**	**Highly Competent**
1. Drawing signs, symbols and abbreviations such as those used in traffic signs.	3.51	Highly Competent
2. Identifying symbols used in plans and drawings such as those used in pictorial drawings of engine parts.	3.27	Moderately Competent
3. Demonstrating technical drawings and schematic diagrams such as those electrical circuit diagrams in automobiles.	3.68	Highly Competent
4. Labelling of automotive parts.	3.65	Highly Competent
5. Identifying units of measurements used in technical drawings and schematic diagrams.	3.53	Highly Competent
D. Performing Shop Maintenance	**3.78**	**Highly Competent**
1. Demonstrate understanding on workshop policies and service procedures.	3.33	Moderately Competent
2. Practice standard safe handling of tools, materials, and equipment, including understanding of types and usage of cleaning chemicals.	4.31	Highly Competent
3. Practice of total quality management (TQM) in the work place, including inspecting and evaluating the existing condition of tools, equipment and work area.	4.01	Highly Competent
4. Demonstrating the practice of waste management as regard to cleaning chemicals/materials.	3.23	Moderately Competent
5. Demonstrate understanding on the effects of automotive wastes to humanity through implementation of environmental protection policies.	4.00	Highly Competent
E. Practicing Occupational Health and Safety Procedures	**4.27**	**Highly Competent**
1. Identifying hazards and risks and control.	4.62	Very Highly Competent

Table 9 continued

Competence Indicators	Weighted Mean	Descriptive Interpretation
2. Implementing and practicing organizational safety and health protocol through making contingency measures in line with standard organizational procedures.	4.31	Highly Competent
3. Listing down problems and making necessary solutions to hazardous and risky workplace condition by reporting accidents in the work place.	4.27	Highly Competent
4. Observing and practicing Philippine Occupational Health and Safety Standards (OHS) regulations and indicators such as Clean Air Act, Electrical and Fire Safety Code, Disaster Preparedness and Management, and Emergency-Related Drills and Trainings.	4.22	Highly Competent
5. Designing the facilities and fixtures considering the principles of ergonomics.	3.91	Highly Competent
Grand Total	**19.73**	
Grand Mean	**3.95**	**Highly Competent**

Legend:

4.51-5.00	Very Highly Competent (VHC)
3.51-4.50	Highly Competent (HC)
2.51-3.50	Moderately Competent (MC)
1.51-2.50	Least Competent (LC)
1.00-1.50	Not Competent (NC)

Of the five indicators of the level of competence in performing mensuration and calculation, teacher-respondents indicated one indicator which they are "moderately competent". This is the competence in "record keeping of all measurements and calculations", with an obtained mean of 3.33. The remaining four indicators where identified by the teacher-respondents as aspect where they are "highly competent". Of these four, the competence to

"demonstrate understanding of calculation/conversion of measurement such as linear measurement, liquid capacity and thermal measurement" obtained the highest weighted mean at 3.73. Over-all, the level of competence of teacher-respondents in performing mensuration and calculation was 3.58, interpreted as "highly competent".

As regards interpreting plans and drawings, the teacher-respondents were "highly competent", with an obtained weighted mean of 3.53. They were particularly "highly competent" in demonstrating technical drawings and schematic diagrams such as those electrical circuit diagrams in automobiles, with an obtained mean of 3.68, labelling of automotive parts, with an obtained mean of 3.65, identifying units of measurements used in technical drawings and schematic diagrams, with an obtained mean of 3.53, and drawing signs, symbols and abbreviations such as those used in traffic signs, with an obtained mean of 3.51.

In performing shop maintenance, it was revealed that the teacher-respondents were "highly competent" as proven by the obtained weighted mean of 3.78. However, two indicators were revealed as "moderately competent", namely, "demonstrating understanding on workshop policies and service procedures", with an obtained mean of 3.33, and "demonstrating the practice of waste management as regard to cleaning chemicals/materials", with an obtained mean of 3.23.

As to the teacher-respondents' level of competence in practicing occupational health and safety, the teacher-respondents identified one indicator

as an aspect of automotive which they are "very highly competent". This was "Identifying hazards and risks and control", with an obtained mean of 4.62. The remaining four indicators were perceived as "highly competent", with their competence in "implementing and practicing organizational safety and health protocol through making contingency measures in line with standard organizational procedures", obtaining the highest weighted mean at 4.31.

As a whole, the teacher-respondents were "highly competent" in teaching the component of industrial arts, particularly automotive, as indicated by the obtained weighted mean of 3.95.

Agriculture and fishery arts. This section presents one aspect of agriculture and fishery arts which is crop production. Table 10 shows the level of competence of teacher-respondents with respect to crop production.

As to preparing materials and tools, the teacher-respondents were "moderately competent", as shown by the weighted mean of 3.17. They were particularly "moderately competent" in demonstrating understanding of safety practices during operations of farm equipment, including their calibration - 3.31, demonstrating understanding of farm tools (e.g. power tools and handheld tools) and safety practices of these equipment - 3.23, demonstrating understanding of pre-operation procedures and check-up - 3.17, demonstrating understanding of manuals of farm equipment and specifications, including the different parts and functions - 3.13, and demonstrating understanding of preventive maintenance of farm equipment such as storing and upkeep of farm equipment- 3.01.

Table 10

Level of Competence of Teacher-Respondents in Crop Production as Sub-Component of Agriculture and Fishery Arts under the K to 12 Program

Competence Indicators	Weighted Mean	Descriptive Interpretation
A. Preparing Materials and Tools	**3.17**	**Moderately Competent**
1. Demonstrate understanding of farm tools (e.g. power tools and handheld tools) and safety practices of these equipment.	3.23	Moderately Competent
2. Demonstrate understanding of manuals of farm equipment and specifications, including the different parts and functions.	3.13	Moderately Competent
3. Demonstrate understanding of pre-operation procedures and check-up.	3.17	Moderately Competent
4. Demonstrate understanding of safety practices during operations of farm equipment, including their calibration.	3.31	Moderately Competent
5. Demonstrate understanding of preventive maintenance of farm equipment such as storing and upkeep of farm equipment.	3.01	Moderately Competent
B. Preparing Estimation and Calculation	**3.38**	**Moderately Competent**
1. Problem solving and mathematical calculation of farm plan and budget, financial statement, cash flow and certain crop production project and determine return on investment (ROI), and depreciation cost using various forms of computing depreciation.	4.01	Highly Competent
2. Perform basic mathematical operations of total sales, total expenses, gross and net profit of farm produce.	3.65	Highly Competent
3. Make systems of measurements and conversions of different cost estimations of farm produce.	3.01	Moderately Competent
4. Make percentages and ratios of extent of accomplishment as per program of work, work estimates and cash flow budget.	3.11	Moderately Competent
5. Record keeping of all measurements and calculations.	3.13	Moderately Competent

Table 10 continued

Competence Indicators	Weighted Mean	Descriptive Interpretation
C. Interpreting Plans and Lay-outs	**2.99**	**Moderately Competent**
1. Interpret farm plans and lay-outs (field lay-out, sketch and plan)	2.78	Moderately Competent
2. Interpret planting systems in crop production.	3.01	Moderately Competent
3. Demonstrate understanding on farm lay-outs, particularly on proper planting method/system based on field lay-outs.	3.19	Moderately Competent
4. Demonstrate understanding on the irrigation plan and its appropriateness for the planting systems.	2.99	Moderately Competent
5. Understand government plans on irrigation systems.	3.00	Moderately Competent
D. Applying Safety Measures in Farm Operations	**3.39**	**Moderately Competent**
1. Apply personal protective equipment (PPE) used in farms, including basic first aid and farm emergency procedures regarding safety working environment.	4.00	Highly Competent
2. Apply procedure in cleaning and storing farm outfits, including technic in storing materials and chemicals.	4.09	Highly Competent
3. Demonstrate understanding on use and handling of different farm chemicals.	3.41	Moderately Competent
4. Demonstrate understanding of government requirements for proper waste disposal, including appropriate labelling of harmful farm chemicals.	2.83	Moderately Competent
5. Apply solid waste management system in farming.	2.65	Moderately Competent
Grand Total	**12.93**	
Grand Mean	**3.23**	**Moderately Competent**

Legend:

4.51-5.00	Very Highly Competent (VHC)
3.51-4.50	Highly Competent (HC)
2.51-3.50	Moderately Competent (MC)
1.51-2.50	Least Competent (LC)
1.00-1.50	Not Competent (NC)

As to preparing estimation and calculation, the teacher-respondents were "moderately competent" as shown in the obtained weighted mean of 3.38. Two indicators were, however, identified as "highly competent". These were "Problem solving and mathematical calculation of farm plan and budget, financial statement, cash flow and certain crop production project and determine return on investment (ROI), and depreciation cost using various forms of computing depreciation", with an obtained weighted mean of 4.01, and "Perform basic mathematical operations of total sales, total expenses, gross and net profit of farm produce", with an obtained weighted mean of 3.65.

As regards interpreting plans and lay-outs, the teacher-respondents were "moderately competent" as shown by the weighted mean of 2.99. The level of competence of the teacher-respondents in demonstrating understanding on farm lay-outs, particularly on proper planting method/system based on field lay-outs -3.19, interpreting planting systems in crop production - 3.01, understanding government plans on irrigation systems - 3.00, demonstrating understanding on the irrigation plan and its appropriateness for the planting systems - 2.99, and interpreting farm plans and lay-outs (field lay-out, sketch and plan) - 2.78, were interpreted as "moderately competent".

Two of the indicators of applying safety measures in farm operations were identified as aspects which the teacher-respondents were "highly competent". These were "applying procedure in cleaning and storing farm outfits, including technic in storing materials and chemicals", with an obtained weighted mean of

4.09, and "applying personal protective equipment (PPE) used in farms, including basic first aid and farm emergency procedures regarding safety working environment", with an obtained weighted mean of 4.00. As a whole, the teacher-respondents were "moderately competent in applying safety measures in farm operations", with an obtained weighted mean of 3.39.

As a whole, the teacher-respondents were "moderately competent" in teaching crop production as sub-component of agriculture and fishery arts under the K to 12 Program.

Information and communications technology (ICT). This section presents the computer hardware servicing sub-component of ICT under the K to 12 Program. Table 11 presents the level of competence of the teacher-respondents in computer hardware servicing.

The table yields the level of competence of the teacher-respondents as to use of hand tools in computer hardware servicing. The results show that only with respect to the proper storage of tools and materials for computer was the teacher-respondents competent as seen in the obtained mean at 4.01. In all the remaining four indicators, the teacher-respondents were only "moderately competent" such as in identifying tasks and selecting tools, including preparation of plan in maintaining a personal computer, with an obtained mean of 3.27, operating hand tools, including enumerating the functions of hand tools,

Table 11

Level of Competence of Teacher-Respondents in Computer Hardware Servicing as Sub-Component of ICT under the K to 12 Program

Competence Indicators	Weighted Mean	Descriptive Interpretation
A. Use of Hand Tools	**3.34**	**Moderately Competent**
1. Identifying tasks and selecting tools, including preparation of plan in maintaining a personal computer.	3.27	Moderately Competent
2. Operating hand tools, including enumerating the functions of hand tools.	3.22	Moderately Competent
3. Identifying the common faults of using hand tools, including writing reports on malfunctions in unusual events.	3.13	Moderately Competent
4. Enumerating standard operational procedures, principles and techniques in maintaining tools.	3.05	Moderately Competent
5. Proper storage of tools and materials for computer.	4.01	Highly Competent
B. Performing Mensuration and Calculation	**3.26**	**Moderately Competent**
1. Measuring and identifying types of components such as memory and data storage capacity.	4.09	Highly Competent
2. Obtaining correct specifications of the relevant sources such as storage drive and their interface.	3.17	Moderately Competent
3. Converting (e.g. bytes to kilobytes, megabytes, gigabytes to terabytes) and calculating using the four fundamental operations of addition, subtraction, multiplication and division, in completing work tasks.	2.97	Moderately Competent
4. Identifying types of memory modules.	2.88	Moderately Competent
5. Record keeping of all materials and equipment.	3.19	Moderately Competent
C. Preparing and Interpreting Technical Drawings	**2.54**	**Moderately Competent**
1. Selecting drawing conventions.	2.01	Least Competent
2. Using symbols and graphic organizers such as in the preparation of system and program flowcharts.	2.34	Least Competent

Table 11 continued

Competence Indicators	Weighted Mean	Descriptive Interpretation
3. Flowcharting and interpreting flowcharts.	2.38	Least Competent
4. Correct drawings are identified and equipment are selected and used in accordance with job requirements.	3.00	Moderately Competent
5. Dimensions of the key features of the objects depicted in the drawings are correctly identified.	2.99	Moderately Competent
D. Practicing Occupational and Health Safety Procedures	**4.02**	**Highly Competent**
1. Identifying hazards and risks and control for users and technicians, equipment damage and data loss and environment.	4.03	Highly Competent
2. Implementing work station ergonomics.	4.10	Highly Competent
3. Listing down problems and making necessary solutions to hazardous and risky workplace condition by reporting accidents in the work place.	3.89	Highly Competent
4. Observing and practicing Philippine Occupational Health and Safety Standards (OHS) regulations and indicators such as Clean Air Act, Electrical and Fire Safety Code, Disaster Preparedness and Management, and Emergency-Related Drills and Trainings.	3.87	Highly Competent
5. Designing the facilities and fixtures considering the principles of ergonomics.	4.19	Highly Competent
Grand Total	**13.16**	
Grand Mean	**3.29**	**Moderately Competent**

Legend:

4.51-5.00	Very Highly Competent (VHC)
3.51-4.50	Highly Competent (HC)
2.51-3.50	Moderately Competent (MC)
1.51-2.50	Least Competent (LC)
1.00-1.50	Not Competent (NC)

with an obtained mean of 3.22, among others. On the whole, the teacher-respondents were "moderately competent" in the use of hand tools in computer hardware servicing, with an obtained mean of 3.34.

Only with respect to measuring and identifying types of components such as memory and data storage capacity, with an obtained mean of 4.09, was the teacher-respondents "highly competent". All the four remaining indicators the teacher-respondents were identified as "moderately competent. As a whole, in terms of performing mensuration and calculation, the teacher-respondents were "moderately competent", with an obtained mean of 3.26.

Three indicators of preparing and interpreting technical drawings, namely, flowcharting and interpreting flowcharts, using symbols and graphic organizers such as in the preparation of system and program flowcharts, and selecting drawing conventions obtained weighted means of 2.38, 2.34, and 2.01, respectively, all with descriptive interpretations of "least competent". On the whole, the teacher-respondents were "moderately competent" in preparing and interpreting technical drawings, as shown by the weighted mean of 2.54.

Meanwhile, all indicators pertaining to practicing occupational and health safety procedures in computer hardware servicing were identified as "highly competent". In fact, the over-all weighted mean was 4.02, interpreted as "highly competent.

Conclusively, the teacher-respondents were "moderately competent" in computer hardware servicing as reflected in the weighted mean of 3.29.

Summary of level of competence along four components. Table 12 shows the summary of the level of competence of the teacher-respondents along the four components of T.L.E. under the K to 12 Program.

Table 12

Summary of the Level of Competence of Teacher-Respondents along Four Sub-Components of T.L.E.

	Four Components of T.L.E.	Weighted Mean	Interpretation
I.	Home Economics	3.85	HC
II.	Industrial Arts	3.95	HC
III.	Agriculture and Fishery Arts	3.23	MC
IV.	Information and Communications Technology	3.29	MC
	Grand Total	14.32	
	Grand Mean	3.58	HC

Legend:

4.51-5.00	Very Highly Competent (VHC)
3.51-4.50	Highly Competent (HC)
2.51-3.50	Moderately Competent (MC)
1.51-2.50	Least Competent (LC)
1.00-1.50	Not Competent (NC)

As it is seen in Table 12, the teacher-respondents were "highly competent" in teaching Technology and Livelihood Education (T.L.E.) along its four major components of Home Economics, Industrial Arts, Agriculture and Fishery Arts, and Information and Communications Technology, as reflected in the obtained weighted mean of 3.58. This means that they are capable of teaching the different components of T.L.E. under the K to 12 Program.

Comparison of Differences in the Level of Competency of T.L.E. Teachers along the Four Components

Table 13 shows the results of the computation of One-Way ANOVA to determine the differences in the level of competency of T.L.E. teachers along the four components, namely, home economics, industrial arts, agriculture and fishery arts, and ICT.

As seen in Table 13 in the next page, there were no significant differences in the level of competence of the T.L.E. teachers along four components, as shown by their p-values which were p › 0.001 level of significance. This resulted to the acceptance of the null hypothesis which states that "There are no

Table 13

Comparison of the Differences in the Level of Competency of T.L.E. Teachers along Four Components of T.L.E. under the K to 12 Program

Components of T.L.E.	KW Statistic	p-value
Home Economics	3.339	.188$^{(ns)}$
Industrial Arts	4.681	.096$^{(ns)}$
Agriculture and Fishery Arts	5.903	.052$^{(ns)}$
ICT	3.541	.170$^{(ns)}$

significant differences in the level of competency of T.L.E. teachers along the four components". This implies further that the teachers teaching T.L.E. were

comparatively the same in their capabilities to teach the said component areas because in reality, there is no specialization that exists among T.L.E. teachers - that is, a teacher teaching cookery is not necessary a food technology major, and conversely, a teacher teaching crop production is not necessarily an agriculture graduate.

The reality of the situation is that the new T.L.E. curriculum in the K to 12 Program requires specialization of teaching the different component areas, however, the teachers were graduates of Bachelor of Secondary Education, major in T.L.E. which did not actually specialize in their Teacher Education course. Worse still, there are teachers teaching T.L.E. which are not necessarily T.L.E. graduates.

Correlation between the Level of Competency of T.L.E. Teachers and their Profile Variates

Table 14 shows the results of the computation of the correlation between the level of competency of T.L.E. teachers along the four components and their profile variates.

Only the teacher-respondents' age and attendance in relevant trainings and seminars were correlated with their level of competence in teaching home economics. A moderate positive correlation between the teacher-respondents' age and their level of competency in home economics existed with $r_s = .42$. However, said correlation was highly significant at $p < 0.01$ level of significance.

Table 14

Correlations between Profile Variables and Level of Competency of T.L.E. Teachers along Four Components

Profile Variable	Level of Competence along Four Components of T.L.E.			
	Home Economics	Industrial Arts	A & F.A.	ICT
Age[a]	.42**	.27	.24	.23
Sex[b]	.12	.08	.20	.18
Average Monthly Income[b]	.21	.18	.15	.06
Educational Attainment[c]	.31	.04	.15	.24
Grade Level Taught[a]	.14	.09	.26	.13
Trainings/Seminars Attended[d]	.37**	.20	.29**	.39**
Latest Performance Rating[c]	.32	.30	.13	.27
Attitude towards Teaching Tech-Voc Education	.19	.20	.17	.17

* significant; ** Highly Significant; [a-Pearson's r; b-Point Biserial; c-Eta; d – Spearman's]

Thus, the hypothesis which stated that "there is no significant relationship between the level of competency in home economics of teacher-respondents and their age" is rejected. This means that the level of competence of teachers in teaching home economics is significantly related to their age. This means that a younger T.L.E. teacher is perhaps more competent in teaching home economics than an older teacher because the former is more dynamic and still has the physical strength to innovate newer teaching methodologies than the latter who may already be tired.

A moderate positive correlation between the teacher-respondents' attendance in relevant trainings/seminars for the last three years and their level of competency in home economics existed with $r_s = .37$. However, said

correlation was highly significant at $p < 0.01$ level of significance. Thus, the hypothesis which stated that "there is no significant relationship between the level of competency in home economics of teacher-respondents and their attendance in relevant trainings/seminars for the last three years" is rejected. This means that the level of competence of teachers in teaching home economics is significantly related to their attendance in trainings/seminars. This means that the more trainings/seminars relevant to their teaching home economics is attended by the teacher-respondent, the more competent he/she becomes in teaching the said subject.

Only the teacher-respondents' attendance in trainings/seminars is related to their level of competence in teaching agriculture and fishery arts. A moderate positive correlation between the teacher-respondents' attendance in relevant trainings/seminars for the last three years and their level of competency in agriculture and fishery arts existed with $r_s = .29$. However, said correlation was highly significant at $p < 0.01$ level of significance. Thus, the hypothesis which stated that "there is no significant relationship between the level of competency in agriculture and fishery arts of teacher-respondents and their attendance in relevant trainings/seminars for the last three years" is rejected. This means that the level of competence of teachers in teaching agriculture and fishery arts is significantly related to their attendance in trainings/seminars. This means that the more trainings/seminars relevant to their teaching the said subject is attended by the teacher-respondent, the more competent he/she becomes.

Finally, the teacher-respondents' level of competence in teaching ICT is related to their attendance in trainings/seminars. A moderate positive correlation between the teacher-respondents' attendance in relevant trainings/seminars for the last three years and their level of competency in ICT existed with $r_s = .39$. However, said correlation was highly significant at $p < 0.01$ level of significance. Thus, the hypothesis which stated that "there is no significant relationship between the level of competency in ICT of teacher-respondents and their attendance in relevant trainings/seminars for the last three years" is rejected. This means that the level of competence of teachers in teaching ICT is significantly related to their attendance in trainings/seminars. This means that the more trainings/seminars relevant to their teaching the said subject is attended by the teacher-respondent, the more competent he/she becomes.

Chapter 5

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

This chapter presents the summary of findings, the conclusions derived therefrom, and the recommendations made thereon.

Summary of Findings

The following were the major findings of the study:

1. Four (4.21 percent) respondents belonged to the age bracket 60-64 years old, which was the oldest age bracket, whereas one (1.05 percent) respondent was aged between 25 and 29 years old, the youngest age bracket. Of the 95 respondents, majority of them (35 or 36.84 percent) were aged between 30-34 years old. The mean age was, however, posted at 32.32 or approximately 32 years old, with a standard deviation of 3.91, indicating a wide dispersion from the mean age.

2. Most or 52 or 54.74 percent of the teachers teaching T.L.E. were females, with only 43 or 45.26 percent were males.

3. The highest income was between Php 25,001.00 and Php 30,000.00 which was earned by nine or 9.47 percent teacher-respondents. The lowest income was between Php 15,000.00 and below which was earned by 13 or 13.68 percent teacher-respondents. Most of the teachers or 37 (out of 95) or 38.95 percent earned an income between Php 20,001.00 and Php 25,000.00. The mean

income was posted at Php 23,171.02, indicating an income above the income poverty threshold.

4. Forty-one of the 95 T.L.E. teachers have earned degrees in graduate programs, followed by 37 or 38.95 percent with units in graduate programs and the remaining 17 or 17.89 percent with only their baccalaureate degrees. These results in Table 4 imply that most of the T.L.E. teachers pursued graduate education for their professional development which further reflects what Erikson postulated that individuals in early adulthood are at the prime of their lives and thus, seek to pursue continued career development goals.

5. There were 28 T.L.E. teachers from Grade 9 who responded to this study, followed by 26 (27.37 percent) from Grade 7, 22 (23.16 percent) from Grade 10, and 19 (20 percent) from Grade 8.

6. There were 20 T.L.E. teachers who rated themselves with 8.5, with a descriptive interpretation of "very satisfactory", followed by 19 teacher-respondents who earned a rating of 8.2, likewise a "very satisfactory" performance and 12 teacher-respondents with a rating of 7.0, or a "very satisfactory" performance. The highest rating earned was posted at 8.5 whereas the lowest was 6.3 obtained by one teacher-respondent, thus interpreted as "satisfactory" performance. The mean rating was posted at 7.88, interpreted as "very satisfactory" performance.

7. Majority of the statements were agreed upon by the respondents. In fact, of these six statements, the statement "Technical-vocational education is

aligned with the requirements of the marketplace/workplace" obtained the highest weighted mean at 4.47, followed by "Technical-vocational education enables an active student-teacher interaction in the classroom", with an obtained weighted mean at 4.11, and "Teaching technical-vocational curriculum engages my students in active learning", with an obtained weighted mean at 4.00.

Meanwhile, there were two statements to which the teacher-respondents felt strongly. These were "Teaching technical-vocational education paves the way for me to contribute to better understanding by students of the real-life situation of the workplace", with an obtained weighted mean at 4.71, and "Teaching technical-vocational education harnesses my interests and passion for innovation and creativity", with an obtained weighted mean of 4.67.

Nevertheless, there were two statement to which the teacher-respondents felt unsure and/or uncertain about. These were "Technical-vocational education takes into consideration the varied interest, abilities and maturity levels of students when the choice of career is made as deciding point", with an obtained weighted mean of 3.48, and "Teaching technical-vocational education to students expands their understanding and provides them with general enlightenment", with an obtained weighted mean of 3.42.

On the whole, the teacher-respondents' attitude towards teaching technical-vocational education obtained a weighted mean of 3.99, with a descriptive interpretation of "agree".

8. Three indicators of competence were perceived as "very highly competent", with the "Proper storage of measuring devices, kitchen tools and equipment" obtaining the highest weighted mean at 4.71, followed by "Checking and sanitizing measuring devices, kitchen tools and equipment" with a weighed mean of 4.67. As a whole, as regards use of standard measuring device, kitchen tools, and equipment, the teacher-respondents were "very highly competent" as evidenced by the obtained weighted mean posted at 4.58. The teacher-respondents perceived themselves as "highly competent" with respect to "Measuring of ingredients according to recipe requirements", with an obtained mean of 4.37, "Practical application of mensuration and calculation of measuring devices, kitchen tools and equipment according to manufacturers' manual", with an obtained mean of 4.00, and "Demonstrating understanding of measuring devices, tools, and equipment for dry and liquid ingredients, special ingredients, tables of weights and measures", with an obtained mean of 3.67. Over-all, the teacher-respondents were "highly competent" in mensuration and calculation of cookery equipment, tools, and ingredients, as shown by the obtained weighted mean of 3.72.

As to maintenance of tools and equipment, the teacher-respondents perceived themselves as "highly competent" in all the indicators, but were particularly high in competence in regularly monitoring and evaluation of the condition of kitchen tools and equipment with an obtained mean of 4.47, segregation of functional and non-functional tools with an obtained mean of 4.34,

and performing basic preventive maintenance of kitchen tools and equipment with an obtained mean of 4.20. As a whole, the teacher-respondents were "highly competent" in maintaining tools and equipment, as shown by the weighted mean of 4.23.

As far as interpreting plans and drawings of kitchen lay-outs, the teacher-respondents were "least competent" in "drawing lines, symbols and signs appropriate for cooking tasks", with a weighted mean of 2.34, "reading and interpreting blueprints of kitchen", with a weighted mean of 2.31, and "trading Mathematics in kitchen drawing plans and lay-outs", with a weighted mean of 2.20. As a whole, however, the teacher-respondents were "moderately competent" in interpreting plans and drawings of kitchen types, as shown by the weighted mean of 2.58.

As to occupational safety and health, the teacher-respondents were "very highly competent" in "Listing down problems and making necessary solutions to hazardous and risky workplace condition by reporting accidents in the work place", as shown by the weighted mean of 4.53, but were "moderately competent" in "Designing the facilities and fixtures considering the principles of ergonomics", with an obtained weighted mean of 3.41. The teacher-respondents were, however, "highly competent" in all other indicators, with the competence in "Implementing work station ergonomics", with an obtained mean of 4.37. As a whole, the teacher-respondents were "highly competent" in occupational safety and health, as shown by the weighted mean of 4.14.

Conclusively, the teacher-respondents were "highly competent" in cookery sub-component of home economics, as seen in the obtained weighted mean of 3.85. This meant that the teachers teaching Home Economics under the K to 12 Program exceeded the expectations of standards of competency in teaching sub-components of H.E., particularly cookery.

Three indicators of use of hand tools by the teacher-respondents were rated as "very highly competent". Of these three, the competence of "selecting, arranging and maintaining hand tools using standard operational procedures, principles and techniques", was the highest obtained mean at 4.77, followed by the competence to "demonstrate understanding of planning and preparing tools for task requirements such as cutting, bending/holding, driving, marking, measuring, and tightening/loosening", with a weighted mean of 4.59, and the competence of "identifying procedures in operating hand tools", with a weighted mean of 4.53. As a whole, the teacher-respondents were "very highly competent" in using hand tools, as evidenced by the obtained weighted mean at 4.47.

Of the five indicators of the level of competence in performing mensuration and calculation, teacher-respondents indicated one indicator which they are "moderately competent". This is the competence in "record keeping of all measurements and calculations", with an obtained mean of 3.33. The remaining four indicators where identified by the teacher-respondents as aspect where they are "highly competent". Of these four, the competence to

"demonstrate understanding of calculation/conversion of measurement such as linear measurement, liquid capacity and thermal measurement" obtained the highest weighted mean at 3.73. Over-all, the level of competence of teacher-respondents in performing mensuration and calculation was 3.58, interpreted as "highly competent".

As regards interpreting plans and drawings, the teacher-respondents were "highly competent", with an obtained weighted mean of 3.53. They were particularly "highly competent" in demonstrating technical drawings and schematic diagrams such as those electrical circuit diagrams in automobiles, with an obtained mean of 3.68, labelling of automotive parts, with an obtained mean of 3.65, identifying units of measurements used in technical drawings and schematic diagrams, with an obtained mean of 3.53, and drawing signs, symbols and abbreviations such as those used in traffic signs, with an obtained mean of 3.51.

In performing shop maintenance, it was revealed that the teacher-respondents were "highly competent" as proven by the obtained weighted mean of 3.78. However, two indicators were revealed as "moderately competent", namely, "demonstrating understanding on workshop policies and service procedures", with an obtained mean of 3.33, and "demonstrating the practice of waste management as regard to cleaning chemicals/materials", with an obtained mean of 3.23.

As to the teacher-respondents' level of competence in practicing occupational health and safety, the teacher-respondents identified one indicator

as an aspect of automotive which they are "very highly competent". This was "Identifying hazards and risks and control", with an obtained mean of 4.62. The remaining four indicators were perceived as "highly competent", with their competence in "implementing and practicing organizational safety and health protocol through making contingency measures in line with standard organizational procedures", obtaining the highest weighted mean at 4.31.

As a whole, the teacher-respondents were "highly competent" in teaching the component of industrial arts, particularly automotive, as indicated by the obtained weighted mean of 3.95.

As to preparing materials and tools, the teacher-respondents were "moderately competent", as shown by the weighted mean of 3.17. They were particularly "moderately competent" in demonstrating understanding of safety practices during operations of farm equipment, including their calibration - 3.31, demonstrating understanding of farm tools (e.g. power tools and handheld tools) and safety practices of these equipment - 3.23, demonstrating understanding of pre-operation procedures and check-up - 3.17, demonstrating understanding of manuals of farm equipment and specifications, including the different parts and functions - 3.13, and demonstrating understanding of preventive maintenance of farm equipment such as storing and upkeep of farm equipment- 3.01.

As to preparing estimation and calculation, the teacher-respondents were "moderately competent" as shown in the obtained weighted mean of 3.38. Two indicators were, however, identified as "highly competent". These were

"Problem solving and mathematical calculation of farm plan and budget, financial statement, cash flow and certain crop production project and determine return on investment (ROI), and depreciation cost using various forms of computing depreciation", with an obtained weighted mean of 4.01, and "Perform basic mathematical operations of total sales, total expenses, gross and net profit of farm produce", with an obtained weighted mean of 3.65.

As regards interpreting plans and lay-outs, the teacher-respondents were "moderately competent" as shown by the weighted mean of 2.99. The level of competence of the teacher-respondents in demonstrating understanding on farm lay-outs, particularly on proper planting method/system based on field lay-outs -3.19, interpreting planting systems in crop production - 3.01, understanding government plans on irrigation systems - 3.00, demonstrating understanding on the irrigation plan and its appropriateness for the planting systems - 2.99, and interpreting farm plans and lay-outs (field lay-out, sketch and plan) - 2.78, were interpreted as "moderately competent".

Two of the indicators of applying safety measures in farm operations were identified as aspects which the teacher-respondents were "highly competent". These were "applying procedure in cleaning and storing farm outfits, including technic in storing materials and chemicals", with an obtained weighted mean of 4.09, and "applying personal protective equipment (PPE) used in farms, including basic first aid and farm emergency procedures regarding safety working environment", with an obtained weighted mean of 4.00. As a whole, the

teacher-respondents were "moderately competent in applying safety measures in farm operations", with an obtained weighted mean of 3.39.

As a whole, the teacher-respondents were "moderately competent" in teaching crop production as sub-component of agriculture and fishery arts under the K to 12 Program.

The results show that only with respect to the proper storage of tools and materials for computer was the teacher-respondents competent as seen in the obtained mean at 4.01. In all the remaining four indicators, the teacher-respondents were only "moderately competent" such as in identifying tasks and selecting tools, including preparation of plan in maintaining a personal computer, with an obtained mean of 3.27, operating hand tools, including enumerating the functions of hand tools, with an obtained mean of 3.22, among others. On the whole, the teacher-respondents were "moderately competent" in the use of hand tools in computer hardware servicing, with an obtained mean of 3.34.

Only with respect to measuring and identifying types of components such as memory and data storage capacity, with an obtained mean of 4.09, was the teacher-respondents "highly competent". All the four remaining indicators the teacher-respondents were identified as "moderately competent. As a whole, in terms of performing mensuration and calculation, the teacher-respondents were "moderately competent", with an obtained mean of 3.26.

Three indicators of preparing and interpreting technical drawings, namely, flowcharting and interpreting flowcharts, using symbols and graphic organizers such as in the preparation of system and program flowcharts, and selecting drawing conventions obtained weighted means of 2.38, 2.34, and 2.01, respectively, all with descriptive interpretations of "least competent". On the whole, the teacher-respondents were "moderately competent" in preparing and interpreting technical drawings, as shown by the weighted mean of 2.54.

Meanwhile, all indicators pertaining to practicing occupational and health safety procedures in computer hardware servicing were identified as "highly competent". In fact, the over-all weighted mean was 4.02, interpreted as "highly competent.

Conclusively, the teacher-respondents were "moderately competent" in computer hardware servicing as reflected in the weighted mean of 3.29.

The teacher-respondents were "highly competent" in teaching Technology and Livelihood Education (T.L.E.) along its four major components of Home Economics, Industrial Arts, Agriculture and Fishery Arts, and Information and Communications Technology, as reflected in the obtained weighted mean of 3.58. This means that they are capable of teaching the different components of T.L.E. under the K to 12 Program.

9. There were no significant differences in the level of competence of the T.L.E. teachers along four components, as shown by their p-values which were p › 0.001 level of significance. This resulted to the acceptance of the null hypothesis

which states that "There are no significant differences in the level of competency of T.L.E. teachers along the four components".

10. Only the teacher-respondents' age and attendance in relevant trainings and seminars were correlated with their level of competence in teaching home economics. A moderate positive correlation between the teacher-respondents' age and their level of competency in home economics existed with $r_s = .42$. However, said correlation was highly significant at $p < 0.01$ level of significance. Thus, the hypothesis which stated that "there is no significant relationship between the level of competency in home economics of teacher-respondents and their age" is rejected. This means that the level of competence of teachers in teaching home economics is significantly related to their age. This means that a younger T.L.E. teacher is perhaps more competent in teaching home economics than an older teacher because the former is more dynamic and still has the physical strength to innovate newer teaching methodologies than the latter who may already be tired.

A moderate positive correlation between the teacher-respondents' attendance in relevant trainings/seminars for the last three years and their level of competency in home economics existed with $r_s = .37$. However, said correlation was highly significant at $p < 0.01$ level of significance. Thus, the hypothesis which stated that "there is no significant relationship between the level of competency in home economics of teacher-respondents and their attendance in relevant trainings/seminars for the last three years" is rejected.

This means that the level of competence of teachers in teaching home economics is significantly related to their attendance in trainings/seminars. This means that the more trainings/seminars relevant to their teaching home economics is attended by the teacher-respondent, the more competent he/she becomes in teaching the said subject.

Only the teacher-respondents' attendance in trainings/seminars is related to their level of competence in teaching agriculture and fishery arts. A moderate positive correlation between the teacher-respondents' attendance in relevant trainings/seminars for the last three years and their level of competency in agriculture and fishery arts existed with $r_s = .29$. However, said correlation was highly significant at $p < 0.01$ level of significance. Thus, the hypothesis which stated that "there is no significant relationship between the level of competency in agriculture and fishery arts of teacher-respondents and their attendance in relevant trainings/seminars for the last three years" is rejected. This means that the level of competence of teachers in teaching agriculture and fishery arts is significantly related to their attendance in trainings/seminars. This means that the more trainings/seminars relevant to their teaching the said subject is attended by the teacher-respondent, the more competent he/she becomes.

Finally, the teacher-respondents' level of competence in teaching ICT is related to their attendance in trainings/seminars. A moderate positive correlation between the teacher-respondents' attendance in relevant trainings/seminars for the last three years and their level of competency in ICT

existed with $r_s = .39$. However, said correlation was highly significant at $p < 0.01$ level of significance. Thus, the hypothesis which stated that "there is no significant relationship between the level of competency in ICT of teacher-respondents and their attendance in relevant trainings/seminars for the last three years" is rejected. This means that the level of competence of teachers in teaching ICT is significantly related to their attendance in trainings/seminars. This means that the more trainings/seminars relevant to their teaching the said subject is attended by the teacher-respondent, the more competent he/she becomes.

Conclusions

The following conclusions were made on the basis of the findings of this study:

1. The teachers come from diverse socio-demographic backgrounds and hence, have varied levels of knowledge, skills, and qualifications. This diversity in backgrounds must be considered in initiating and formulating professional development programs for teachers along the four major components of Technology and Livelihood Education (T.L.E.).

2. The teachers' level of competence in teaching the four major components of T.L.E. is "moderately competent". This reflects the fact that T.L.E. teachers in the Division of Samar are competent in teaching the four major competencies of said subject.

3. The no significant difference in the level of competence in teaching the four major components of TLE signify a basic flaw of the educational system and how it implements an educational thrust. In theory, the TLE program under the K to 12 Curriculum is highly specialized with the first two lower grade levels as exploratory while the higher two grade levels specialized. In reality, however, one teacher teaches all the core competencies in T.L.E. as well as the specializations per grade level. Hence, there is no specialization that occurs on the part of the teachers as they teach all the sub-components along the major components.

4. The significance of the relationship between the level of competence in teaching home economics, agriculture and fishery arts, and ICT with their age and trainings/seminars attended indicate the need to propose programs/courses in these components which are differentiated according to the teachers' age and their attendance in trainings/seminars.

5. More relevant trainings/seminars ought to be conducted for the teachers to improve their level of competence in teaching T.L.E. under the K to 12 Program.

Recommendations

The recommendations herein proposed need careful consideration.

1. The DepEd should reconsider the T.L.E. curriculum under the K to 12 Program particularly as regards its specialization into the four components.

2. The teachers must strive to get the national certification from TESDA which the law requires for them to teach in T.L.E. under the K to 12 Program.

3. Trainings/Seminars on the four components of T.L.E. must be conducted with particular emphasis on the specialized technical-vocational skills needed per sub-components of the major fields of T.L.E.

4. A follow-up research needs to be conducted.

5. A priority improvement area must be mapped out by the curriculum planners of DepEd in order to address the present scenario of T.L.E. in the K to 12 Program.

BIBLIOGRAPHY

A. BOOKS

Conley, D. T. *Toward a More Comprehensive Conception of College Readiness.* Eugene, Oregon, U.S.A.: Educational Policy Improvement Center, 2007.

Dede, Paquette and John Ryan. *Bronfenbrenner's Ecological systems Theory.* New York: John Wiley, 2001.

Lauglo, J. *Research for TVET Policy Developmen*t. Capacity Building International, Bonn, Germany, 2006.

Olaitan, S. and Agusiobo O. *Principles of Teaching Practice.* New York: John Wiley and Sons, 2000.

B. JOURNALS/MAGAZINES/PERIODICALS

Bekic, D. and Zlatic, L. "Teacher Education and Training System in Serbia", in: Karras, K. G. and Wolhuter, C. C. (eds.). *International Handbook on Teacher Education WorldWide: Training, Issues and Challenges for Teachers Profession,* Athens: Atropos Edition, 2010.

Gloria, Ricardo T. "Moving for Action and Results". *The Teachers Magazine: The Philippine Journal of Education,* Vol. LXXXV, No. 3, August 2006.

Newhouse, P. "Examining How Teachers Adjust to the Availability of Portable Computers". *Australian Journal of Educational Technology,* 15 (2), 148-166, 1999.

Oni, C. S. "Globalization and Its Implications for Vocational Education in Nigeria". *Essay in Education*, Vol. 21, pp. 30-34, 2007.

Watson, G. "Models of Information Technology Teacher Professional Development that Engage Teachers' Hearts and Minds", *Journal of Information Technology for Teacher Education,* 10 (1-2), 179-191, 2008.

Winer, R.K. "Rung by up the health career ladder". American Vocational Journal, 48(7), pp. 18-27, 2000.

C. UNPUBLISHED MATERIALS

Albarico, Shela H. "Adequacy of Instructional Materials Used by Teachers in Teaching Technology and Livelihood Education". Unpublished Master's Thesis, Mindanao State University, Iligan City, January 2014.

Crisol, Lourd Greggory D. "A Comparative Study of the Attitudes between the Students and Teachers of Two Public Elementary Schools in Northern Mindanao toward the K to 12 Curriculum Shift". Unpublished Master's Thesis, Mindanao State University, Iligan City, March 2014.

Daguplo, Marvin S. "Teaching Competence of the Graduate Education Faculty in Southern Leyte State University", Unpublished Master's Thesis, Southern Leyte State University, Philippines.

Fernandez, Raymond M. “Teachers’ Competence and Learners’ Performance in the Alternative Learning System Towards An Enriched Instructional Program”, Unpublished Doctoral Dissertation, Pamantasan ng Lungsod ng Maynila, Manila, Philippines.

Guiner, Dante B. “Competencies of Technology and Livelihood Education (T.L.E.) Instructors: Inputs to a Training Module in Idustrial Arts”. Unpublished Dissertation, Don Mariano Marcos Memorial State University, La Union, Philippines, 2013.

Lascuna, Lucelyn D., et al. “Adequacy of Instructional Materials in the Intermediate Grades of Iligan City Central School”. Unpublished Master’s Thesis, Mindanao State University-Illigan, 2005.

Retome, Vangilit G. “Instructional Assessment of Technology and Livelihood education (T.L.E.) Program”. Unpublished master’s Thesis, Southern Leyte State University-San Juan Campus, 2010.

Valera, Calixto L. “The Technology and Livelihood Education Performance of Bachelor of Secondary Education (BSED) Students of Abra State Institute of Science and Technology- Bangued Campus”. Unpublished Dissertation, University of Northern Philippines, march 2014.

D. ELECTRONIC AND OTHER SOURCES

Abano, Imelda V. 'Ph must invest more in voc-tech education to lick poverty, joblessness - TESDA". Retrieved from http://www.interaksyon.com, November 11, 2012.

Aring, Monika. "Technical and Vocational Education and Training: A Study of Promising Models in International Development". A Paper Submitted to the Education Development Center, Inc. (EDC), United States Agency for International Development (USAID), Newton, Massachusetts, U.S.A.: Education Development Center, April 2011.

Bansavich, J. (2006) Factors Influencing Preservice Teachers' Readiness to Integrate Technology into Their Instruction. In C. Crawford, R. Carlsen, K. Mcferrin, J. Price, R. Weber & D. Willis (Eds.), Proceedings of Society for Information Technology & Teacher Education International Conference 2006 (pp.3311-3316). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE). Retrieved february 13, 2017 from https://www.learntechlib.org/p/22603.

Brofenbrenner, Urie. "Ecological Systems Theory". In Vasta, Ross, Annals of Child Development, Vol. 6. London, UK: Jessica Kingsley Publishers, 187-249, 1989.

Collins English Dictionary - Complete & Unabridged 2012 Digital Edition William Collins Sons & Co, Ltd. 1979, 1986 HarperCollins Publishers 1998, 2000, 2003, 2005, 2006, 2007, 2009, 2012

Dangote, A. Dangote advocates technical education for industrial growth. Retrieved at http://planipolis.iiep.unesco.org. 2013.

Department of Education. Discussion Paper on the Enhanced K + 12 basic Education Program, 2010.

Department of Education. K to 12 Basic Education Program Primer DepEd updates. Retrieved from http://www.deped.gov.ph/, 2011.

Innovative Strategies in Technical and Vocational Education and Training for Accelerated Human Resource Development in South Asia. Asian Development Bank, Mandaluyong City, Philippines, January 2014.

K to 12 Basic Education Curriculum: Description of Framework, n.d.

Motomura, Koichi, et al. "Technical/Vocational Education and Training in Laguna". A Paper Presented by the Working Group 2, n.d.

Peano, Serge, et al. "Investment in Technical-Vocational Education and Training (TVET) in the Philippines". International Institute for Educational Planning, United Nations Educational, Scientific and Cultural Organization, Paris, France, 2008.

Syjuco, Augusto. "The Philippine Technical-Vocational Education and Training (TVET) System". A Policy Brief Submitted to the Technical Education and Skills Development Authority (TESDA), n.d. Retrieved at boboysyjuco@tesda.gov.ph. 2006.

Taganas, Imelda B. "Leading the Electrical Practitioners towards Global Recognition: K to 12: The Benefits and Effects it will Bring to the Filipino Educational System". A Paper Presented during the 38th Annual National Convention and 3E XPO, Institute of Integrated Electrical Engineers of the Philippines, Inc. (IIEE0, November 29, 2013.

"TechVoc Policy Implications of the K to 12: Enhanced Basic Education". TESDA Policy Brief, Issue 02, December 2013, TESDA Planning Office, Manila.

Valles, Milagros Camps. "An Approach Used in Strengthening the Technical-Vocational Education Program (STVEP), DepEd, Philippines". A Paper Presented as Director of the Tech-Voc Office Department of Education, Pasig City, to the Asian Development Bank (ADB), n.d.

Williamson, McDiarmid, G. & Clevenger-Bright M. "Rethinking Teacher Capacity", in Cochran-Smith, M., Feiman-Nemser, S. & Mc Intyre, D. (Eds.): Handbook of research on Teacher Education. Enduring questions in changing contexts. New York/Abingdon: Routledge/Taylor & Francis, 2008.

_____. "Baldoz: TESDA to cascade high standard tech-voc education on K-12". Retrieved from http://www.dole.gov.ph, June 03, 2013.

_____. "Knowledge Economy Fact Sheet". Economic and Social Research Council, Swindon, UK, 2005.

_____. "21st Century Skills, Education and Competitiveness". A Resource and Policy Guide, Partnership for 21st Century Skills, Tucson, Arizona, 2008.

_____. "Competency Assessment Questionnaire for Direct Support Supervisors". hay group, November 2010.

APPENDICES

Republic of the Philippines
SAMAR STATE UNIVERSITY
COLLEGE OF GRADUATE STUDIES
Catbalogan City

December 28, 2015

Dear Respondents,

Good day!

I am a bonafide student of the Samar State University (SSU), Catbalogan City, and is currently enrolled in the Master of Arts in Education, major in Technology and Livelihood Education (T.L.E.) program. Furthermore, I am conducting a study entitled "Readiness of TLE Teachers for the K to 12 Program of Public Secondary Schools in the 2nd District of the Division of Samar", in partial fulfilment of the requirements of the degree for which I am enrolled in.

In view of this, you are chosen to be one of the respondents of this study. Rest assured that your responses will be treated with utmost confidentiality and will be used for research purposes only.

Thank you very much and more power!

Sincerely yours,

DAISY V. OREO
Researcher

QUESTIONNAIRE FOR THE TEACHER-RESPONDENTS
(CROP PRODUCTION)

Directions: This questionnaire consists of three important parts. Please read each item carefully and their corresponding instructions for answering. Do not leave any item unanswered.

Part I. Teacher-Respondents' Profile

Directions: This part of the questionnaire contains items about your personal information. Please answer the following items by filling in the blank spaces provided and/or by placing a check (/) mark on the appropriate boxes in each item.

Name (Optional) _____

Age _____ Sex ( ) Male ( ) Female

Average Monthly Income
( ) Php 15,000.00 and below
( ) Php 15,001.00-Php 20,000.00
( ) Php 20,001.00-Php 25,000.00
( ) Php 25,001.00-Php 30,000.00
( ) Php 30,001.00 and above

Educational Attainment
( ) Bachelor's Degree
( ) With Units in Graduate Degree Programs
( ) With Degree in Graduate Programs
( ) Others, please specify _____

Grade Level Taught ( ) 7th ( ) 8th ( ) 9th ( ) 10th

Relevant Trainings/Seminars Attended for the Past Three Years

_____

_____

_____

(NOTE: Please use a separate sheet for this item if the blank spaces provided are not enough.)

Latest Performance Rating (in numerical equivalent, e.g. 95, 96...) _____

Part II. Attitude towards Teaching Technical-Vocational Education

Directions: *Below are statements that reflect your attitude towards teaching technical-vocational education. Please indicate your disposition by checking the appropriate column in the table using the following scale:*

5 - Strongly Agree (SA)
4 - Agree (A)
3 - Undecided (U)
2 - Disagree (D)
1 - Strongly Disagree (SD)

Attitude Statements	Responses				
	SA (5)	A (4)	U (3)	D (2)	SD (1)
1. Teaching technical-vocational education enables the development of the required 21st Century skills for global competitiveness.					
2. Teaching technical-vocational education is the key towards economic success.					
3. Teaching technical-vocational education to students expands their understanding and provides them with general enlightenment.					
4. Teaching technical-vocational education harnesses my interests and passion for innovation and creativity.					
5. Teaching technical-vocational education paves the way for me to contribute to better understanding by students of the real-life situation of the workplace.					
6. Technical-vocational education is aligned with the requirements of the marketplace/workplace.					
7. Technical-vocational education takes into consideration the varied interest, abilities and maturity levels of students when the choice of career is made as deciding point.					
8. Teaching technical-vocational curriculum engages my students in active learning.					
9. Technical-vocational education enables an active student-teacher interaction in the classroom.					
10. Technical-vocational education minimizes the job-skill mismatch in the workplace.					

Part III. Teacher-Respondents' Competence in Teaching TLE under the K to 12 Program

Directions: The following checklist reflect statements that refer to your competence in teaching the different component areas of TLE under the K to 12 Program. Please indicate your level of competence in these different areas by checking the appropriate column in the table using the following scale:

5 - Very Highly Competent (VHC)
4 - *Highly Competent (HC)*
3 - Moderately Competent (MC)
2 - Least Competent (LC)
1 - Not Competent (NC)

Competence Indicators	Responses				
	VHC (5)	HC (4)	MC (3)	LC (2)	NC (1)
A. Preparing Materials and Tools					
1. Demonstrate understanding of farm tools (e.g. power tools and handheld tools) and safety practices of these equipment.					
2. Demonstrate understanding of manuals of farm equipment and specifications, including the different parts and functions.					
3. Demonstrate understanding of pre-operation procedures and check-up.					
4. Demonstrate understanding of safety practices during operations of farm equipment, including their calibration.					
5. Demonstrate understanding of preventive maintenance of farm equipment such as storing and upkeep of farm equipment.					
B. Preparing Estimation and Calculation					
1. Problem solving and mathematical calculation of farm plan and budget, financial statement, cash flow and certain crop production project and determine return on investment (ROI), and depreciation cost using various forms of computing depreciation.					
2. Perform basic mathematical operations of total sales, total expenses, gross and					

net profit of farm produce.					
3. Make systems of measurements and conversions of different cost estimations of farm produce.					
4. Make percentages and ratios of extent of accomplishment as per program of work, work estimates and cash flow budget.					
5. Record keeping of all measurements and calculations.					
C. Interpreting Plans and Lay-outs					
1. Interpret farm plans and lay-outs (field lay-out, sketch and plan)					
2. Interpret planting systems in crop production.					
3. Demonstrate understanding on farm lay-outs, particularly on proper planting method/system based on field lay-outs.					
4. Demonstrate understanding on the irrigation plan and its appropriateness for the planting systems.					
5. Understand government plans on irrigation systems.					
D. Applying Safety Measures in Farm Operations					
1. Apply personal protective equipment (PPE) used in farms, including basic first aid and farm emergency procedures regarding safety working environment.					
2. Apply procedure in cleaning and storing farm outfits, including technic in storing materials and chemicals.					
3. Demonstrate understanding on use and handling of different farm chemicals.					
4. Demonstrate understanding of government requirements for proper waste disposal, including appropriate labelling of harmful farm chemicals.					
5. Apply solid waste management system in farming.					

Thank you very much!

Republic of the Philippines
SAMAR STATE UNIVERSITY
COLLEGE OF GRADUATE STUDIES
Catbalogan City

December 28, 2015

Dear Respondents,

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Thank you very much and more power!

Sincerely yours,

DAISY V. OREO
Researcher

QUESTIONNAIRE FOR THE TEACHER-RESPONDENTS *(ANIMAL PRODUCTION)*

Directions: This questionnaire consists of three important parts. Please read each item carefully and their corresponding instructions for answering. Do not leave any item unanswered.

Part I. Teacher-Respondents' Profile

Directions: This part of the questionnaire contains items about your personal information. Please answer the following items by filling in the blank spaces provided and/or by placing a check (/) mark on the appropriate boxes in each item.

Name (Optional) _____

Age _____ Sex ( ) Male ( ) Female

Average Monthly Income
( ) Php 15,000.00 and below
( ) Php 15,001.00-Php 20,000.00
( ) Php 20,001.00-Php 25,000.00
( ) Php 25,001.00-Php 30,000.00
( ) Php 30,001.00 and above

Educational Attainment
( ) Bachelor's Degree
( ) With Units in Graduate Degree Programs
( ) With Degree in Graduate Programs
( ) Others, please specify _____

Grade Level Taught ( ) 7th ( ) 8th ( ) 9th ( ) 10th

Relevant Trainings/Seminars Attended for the Past Three Years

_____

_____

_____

(NOTE: Please use a separate sheet for this item if the blank spaces provided are not enough.)

Latest Performance Rating (in numerical equivalent, e.g. 95, 96...) _____

Part II. Attitude towards Teaching Technical-Vocational Education

Directions: *Below are statements that reflect your attitude towards teaching technical-vocational education. Please indicate your disposition by checking the appropriate column in the table using the following scale:*

5 - Strongly Agree (SA)
4 - Agree (A)
3 - Undecided (U)
2 - Disagree (D)
1 - Strongly Disagree (SD)

Attitude Statements	Responses				
	SA (5)	A (4)	U (3)	D (2)	SD (1)
1. Teaching technical-vocational education enables the development of the required 21st Century skills for global competitiveness.					
2. Teaching technical-vocational education is the key towards economic success.					
3. Teaching technical-vocational education to students expands their understanding and provides them with general enlightenment.					
4. Teaching technical-vocational education harnesses my interests and passion for innovation and creativity.					
5. Teaching technical-vocational education paves the way for me to contribute to better understanding by students of the real-life situation of the workplace.					
6. Technical-vocational education is aligned with the requirements of the marketplace/workplace.					
7. Technical-vocational education takes into consideration the varied interest, abilities and maturity levels of students when the choice of career is made as deciding point.					
8. Teaching technical-vocational curriculum engages my students in active learning.					
9. Technical-vocational education enables an active student-teacher interaction in the classroom.					
10. Technical-vocational education minimizes the job-skill mismatch in the workplace.					

Part III. Teacher-Respondents' Competence in Teaching TLE under the K to 12 Program

Directions: The following checklist reflect statements that refer to your competence in teaching the different component areas of TLE under the K to 12 Program. Please indicate your level of competence in these different areas by checking the appropriate column in the table using the following scale:

5 - Very Highly Competent (VHC)
4 - *Highly Competent (HC)*
3 - Moderately Competent (MC)
2 - Least Competent (LC)
1 - Not Competent (NC)

Competence Indicators	Responses				
	VHC (5)	HC (4)	MC (3)	LC (2)	NC (1)
A. Preparing Materials and Tools					
1. Demonstrate understanding of farm tools (e.g. power tools and handheld tools) and safety practices of these equipment.					
2. Demonstrate understanding of manuals of farm equipment and specifications, including the different parts and functions.					
3. Demonstrate understanding of pre-operation procedures and check-up.					
4. Demonstrate understanding of safety practices during operations of farm equipment, including their calibration.					
5. Demonstrate understanding of preventive maintenance of farm equipment such as storing and upkeep of farm equipment.					
B. Preparing Estimation and Calculation					
1. Problem solving and mathematical calculation of budget, financial statement, cash flow and determine return on investment (ROI), and depreciation cost using various forms of computing depreciation of number of materials needed to house chicken,					

goat and cattle.						
2. Perform basic mathematical operations of total sales, total expenses, gross and net profit of poultry and livestock facilities.						
3. Make systems of measurements and conversions of feed rates.						
4. Make percentages and ratios of extent of accomplishment as per program of work, work estimates and cash flow budget.						
5. Record keeping of all measurements and calculations.						
C. Interpreting Plans and Lay-outs						
1. Identify types of housing for poultry and livestock production.						
2. Interpret different components of poultry and livestock production, including provision of illustrations of different types of housing for poultry and livestock.						
3. Demonstrate understanding on lay-outs of poultry and livestock facilities.						
4. Demonstrate understanding on the basic building codes in constructing poultry and livestock houses, including signs and symbols on building codes.						
5. Understand government plans on poultry and livestock raising.						
D. Applying Safety Measures in Farm Operations						
1. Apply personal protective equipment (PPE) used in poultry and livestock raising, including basic first aid and farm emergency procedures regarding safety working environment.						
2. Apply procedure in cleaning and storing farm outfits, including techniques in storing materials and hazardous chemicals.						
3. Demonstrate understanding on operational health and safety working						

procedures in poultry and livestock facilities.					
4. Demonstrate understanding of government requirements for proper waste disposal, including appropriate labelling of harmful farm chemicals.					
5. Apply solid waste management system in poultry and livestock raising.					

Thank you very much!

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December 28, 2015

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Thank you very much and more power!

Sincerely yours,

DAISY V. OREO
Researcher

QUESTIONNAIRE FOR THE TEACHER-RESPONDENTS *(AQUACULTURE)*

Directions: This questionnaire consists of three important parts. Please read each item carefully and their corresponding instructions for answering. Do not leave any item unanswered.

Part I. Teacher-Respondents' Profile

Directions: This part of the questionnaire contains items about your personal information. Please answer the following items by filling in the blank spaces provided and/or by placing a check (/) mark on the appropriate boxes in each item.

Name (Optional) _____

Age _____ Sex ( ) Male ( ) Female

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( ) Php 30,001.00 and above

Educational Attainment
( ) Bachelor's Degree
( ) With Units in Graduate Degree Programs
( ) With Degree in Graduate Programs
( ) Others, please specify _____

Grade Level Taught ( ) 7th ( ) 8th ( ) 9th ( ) 10th

Relevant Trainings/Seminars Attended for the Past Three Years

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(NOTE: Please use a separate sheet for this item if the blank spaces provided are not enough.)

Latest Performance Rating (in numerical equivalent, e.g. 95, 96...) _____

Part II. Attitude towards Teaching Technical-Vocational Education

Directions: *Below are statements that reflect your attitude towards teaching technical-vocational education. Please indicate your disposition by checking the appropriate column in the table using the following scale:*

5 - Strongly Agree (SA)
4 - Agree (A)
3 - Undecided (U)
2 - Disagree (D)
1 - Strongly Disagree (SD)

Attitude Statements	Responses				
	SA (5)	A (4)	U (3)	D (2)	SD (1)
1. Teaching technical-vocational education enables the development of the required 21st Century skills for global competitiveness.					
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3. Teaching technical-vocational education to students expands their understanding and provides them with general enlightenment.					
4. Teaching technical-vocational education harnesses my interests and passion for innovation and creativity.					
5. Teaching technical-vocational education paves the way for me to contribute to better understanding by students of the real-life situation of the workplace.					
6. Technical-vocational education is aligned with the requirements of the marketplace/workplace.					
7. Technical-vocational education takes into consideration the varied interest, abilities and maturity levels of students when the choice of career is made as deciding point.					
8. Teaching technical-vocational curriculum engages my students in active learning.					
9. Technical-vocational education enables an active student-teacher interaction in the classroom.					
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Directions: The following checklist reflect statements that refer to your competence in teaching the different component areas of TLE under the K to 12 Program. Please indicate your level of competence in these different areas by checking the appropriate column in the table using the following scale:

5 - Very Highly Competent (VHC)
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3 - Moderately Competent (MC)
2 - Least Competent (LC)
1 - Not Competent (NC)

Competence Indicators	Responses				
	VHC (5)	HC (4)	MC (3)	LC (2)	NC (1)
A. Preparing Materials and Tools					
1. Demonstrate understanding of fishery tools (e.g. Secchi discs, salino meter, digging blade, cutting tools, motorized water pump, paddle wheel, etc.) and safety practices of these equipment.					
2. Demonstrate understanding of manuals of aquaculture equipment and facilities such as fish tank, fish pen, fish cage, and fish pond.					
3. Demonstrate understanding of pre-operation procedures and check-up.					
4. Demonstrate understanding of safety practices during operations of fishery/aquaculture equipment, including their calibration.					
5. Demonstrate understanding of preventive maintenance of fishery/aquaculture equipment such as storing and upkeep of farm equipment.					
B. Preparing Estimation and Calculation					
1. Problem solving and mathematical calculation of budget in installing an aquaculture facility.					
2. Perform basic mathematical operations of total sales, total expenses, gross and					

net profit from fishery and aquaculture facility.					
3. Make systems of measurements and conversions of feed ratios.					
4. Make percentages and ratios of extent of accomplishment as per program of work, work estimates and cash flow budget, including fish diet regimen and crude protein diet necessary in aquaculture facilities.					
5. Record keeping of all measurements and calculations.					
C. Drawing the Lay-out Plan for Ponds, Tanks, Pens, and Cages,					
1. Identify types of designs of ponds, tanks, pens and cages, including compartments, gate locations, dikes, water supply canals, stock room and other such facilities.					
2. Interpret different components of ponds, tanks, pen and cages.					
3. Drawing the lay-outs of ponds, tanks, pens and cages using the given system for construction, ratio and scale and support system for aquaculture raising.					
4. Demonstrate understanding on the basic constructing principles of ponds, tanks, pens and cages.					
5. Understand government plans on aquaculture raising.					
D. **Applying Safety Measures in Farm Operations**					
1. Apply personal protective equipment (PPE) used in aquaculture raising.					
2. Apply procedure in cleaning and storing aquaculture outfits, including techniques in storing materials and hazardous chemicals.					
3. Demonstrate understanding on operational health and safety working procedures in aquaculture facilities/sites.					
4. Demonstrate understanding of					

government requirements for proper waste disposal, including appropriate labelling of harmful farm chemicals.					
5. Apply solid waste management system in aquaculture.					

Thank you very much!

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Researcher

QUESTIONNAIRE FOR THE TEACHER-RESPONDENTS
(AUTOMOTIVE)

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	SA (5)	A (4)	U (3)	D (2)	SD (1)
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3. Teaching technical-vocational education to students expands their understanding and provides them with general enlightenment.					
4. Teaching technical-vocational education harnesses my interests and passion for innovation and creativity.					
5. Teaching technical-vocational education paves the way for me to contribute to better understanding by students of the real-life situation of the workplace.					
6. Technical-vocational education is aligned with the requirements of the marketplace/workplace.					
7. Technical-vocational education takes into consideration the varied interest, abilities and maturity levels of students when the choice of career is made as deciding point.					
8. Teaching technical-vocational curriculum engages my students in active learning.					
9. Technical-vocational education enables an active student-teacher interaction in the classroom.					
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5 - **Very Highly Competent (VHC)**
4 - ***Highly Competent (HC)***
3 - **Moderately Competent (MC)**
2 - **Least Competent (LC)**
1 - **Not Competent (NC)**

Competence Indicators	Responses				
	VHC (5)	HC (4)	MC (3)	LC (2)	NC (1)
A. Use of Hand Tools					
1. Demonstrate understanding of planning and preparing tools for task requirements such as cutting, bending/holding, driving, marking, measuring, and tightening/loosening.					
2. Identifying procedures in operating hand tools.					
3. *Observing safety requirements in using* hand tools, including inspecting and testing functionality of tools for repair and recycling in preparation for their usability.					
4. *Demonstrate understanding of* common faults in handling hand tools, including making reports of malfunctions of hand tools in unplanned/unusual events.					
5. Selecting, arranging and maintaining hand tools using standard operational procedures, principles and techniques.					
B. Performing Mensuration and *Calculation*					
1. Demonstrate understanding of types of measuring instruments according to tasks such as feeler gauge, torque					

wrench, calipers, and industrial thermometer.					
2. Demonstrate understanding of techniques in measuring and determining tolerance/allowance of parts/components.					
3. Demonstrate understanding of calculation/conversion of measurement such as linear measurement, liquid capacity and thermal measurement.					
4. Calibrating, safe handling procedures and caring of measuring instruments.					
5. Record keeping of all measurements and calculations.					
C. Interpret Plans and Drawings					
1. Drawing signs, symbols and abbreviations such as those used in traffic signs.					
2. Identifying symbols used in plans and drawings such as those used in pictorial drawings of engine parts.					
3. Demonstrating technical drawings and schematic diagrams such as those electrical circuit diagrams in automobiles.					
4. Labelling of automotive parts.					
5. Identifying units of measurements used in technical drawings and schematic diagrams.					
D. **Performing Shop Maintenance**					
1. Demonstrate understanding on workshop policies and service procedures.					
2. Practice standard safe handling of tools, materials, and equipment, including understanding of types and usage of cleaning chemicals.					
3. Practice of total quality management (TQM) in the work place, including inspecting and evaluating the existing condition of tools, equipment and					

work area.					
4. Demonstrating the practice of waste management as regard to cleaning chemicals/materials.					
5. Demonstrate understanding on the effects of automotive wastes to humanity through implementation of environmental protection policies.					
E. Practicing Occupational Health and *Safety Procedures*					
1. Identifying hazards and risks and control.					
2. Implementing and practicing organizational safety and health protocol through making contingency measures in line with standard organizational procedures.					
3. Listing down problems and making necessary solutions to hazardous and risky workplace condition by reporting accidents in the work place.					
4. Observing and practicing Philippine Occupational Health and Safety Standards (OHS) regulations and indicators such as Clean Air Act, Electrical and Fire Safety Code, Disaster Preparedness and Management, and Emergency-Related Drills and Trainings.					
5. Designing the facilities and fixtures considering the principles of ergonomics.					

Thank you very much!

Republic of the Philippines
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Dear Respondents,

Good day!

I am a bonafide student of the Samar State University (SSU), Catbalogan City, and is currently enrolled in the Master of Arts in Education, major in Technology and Livelihood Education (T.L.E.) program. Furthermore, I am conducting a study entitled "Readiness of TLE Teachers for the K to 12 Program of Public Secondary Schools in the 2nd District of the Division of Samar", in partial fulfilment of the requirements of the degree for which I am enrolled in.

In view of this, you are chosen to be one of the respondents of this study. Rest assured that your responses will be treated with utmost confidentiality and will be used for research purposes only.

Thank you very much and more power!

Sincerely yours,

DAISY V. OREO
Researcher

QUESTIONNAIRE FOR THE TEACHER-RESPONDENTS *(CARPENTRY)*

Directions: This questionnaire consists of three important parts. Please read each item carefully and their corresponding instructions for answering. Do not leave any item unanswered.

Part I. Teacher-Respondents' Profile

Directions: This part of the questionnaire contains items about your personal information. Please answer the following items by filling in the blank spaces provided and/or by placing a check (/) mark on the appropriate boxes in each item.

Name (Optional) _____

Age _____ Sex ( ) Male ( ) Female

Average Monthly Income
( ) Php 15,000.00 and below
( ) Php 15,001.00-Php 20,000.00
( ) Php 20,001.00-Php 25,000.00
( ) Php 25,001.00-Php 30,000.00
( ) Php 30,001.00 and above

Educational Attainment
( ) Bachelor's Degree
( ) With Units in Graduate Degree Programs
( ) With Degree in Graduate Programs
( ) Others, please specify _____

Grade Level Taught ( ) 7th ( ) 8th ( ) 9th ( ) 10th

Relevant Trainings/Seminars Attended for the Past Three Years

_____

_____

_____

(NOTE: Please use a separate sheet for this item if the blank spaces provided are not enough.)

Latest Performance Rating (in numerical equivalent, e.g. 95, 96...) _____

Part II. Attitude towards Teaching Technical-Vocational Education

Directions: *Below are statements that reflect your attitude towards teaching technical-vocational education. Please indicate your disposition by checking the appropriate column in the table using the following scale:*

5	-	**Strongly Agree (SA)**
4	-	**Agree (A)**
3	-	**Undecided (U)**
2	-	**Disagree (D)**
1	-	**Strongly Disagree (SD)**

Attitude Statements	Responses				
	SA (5)	A (4)	U (3)	D (2)	SD (1)
1. Teaching technical-vocational education enables the development of the required 21st Century skills for global competitiveness.					
2. Teaching technical-vocational education is the key towards economic success.					
3. Teaching technical-vocational education to students expands their understanding and provides them with general enlightenment.					
4. Teaching technical-vocational education harnesses my interests and passion for innovation and creativity.					
5. Teaching technical-vocational education paves the way for me to contribute to better understanding by students of the real-life situation of the workplace.					
6. Technical-vocational education is aligned with the requirements of the marketplace/workplace.					
7. Technical-vocational education takes into consideration the varied interest, abilities and maturity levels of students when the choice of career is made as deciding point.					
8. Teaching technical-vocational curriculum engages my students in active learning.					
9. Technical-vocational education enables an active student-teacher interaction in the classroom.					
10. Technical-vocational education minimizes the job-skill mismatch in the workplace.					

Part III. Teacher-Respondents' Competence in Teaching TLE under the K to 12 Program

Directions: The following checklist reflect statements that refer to your competence in teaching the different component areas of TLE under the K to 12 Program. Please indicate your level of competence in these different areas by checking the appropriate column in the table using the following scale:

5 - **Very Highly Competent (VHC)**
4 - ***Highly Competent (HC)***
3 - **Moderately Competent (MC)**
2 - **Least Competent (LC)**
1 - **Not Competent (NC)**

Competence Indicators	Responses				
	VHC (5)	HC (4)	MC (3)	LC (2)	NC (1)
A. Preparing Construction Materials and Tools					
1. Enumerating and describing the tools and materials used in carpentry works.					
2. Demonstrate understanding of the different forms such as job order slip, tools and materials requisition slip, borrower's slip, requisition procedures, and others.					
3. Demonstrate understanding of procedures in receiving and handling tools and materials for carpentry works.					
4. Inspecting tools and materials received by writing possible defects and/or damages of materials and tools used in carpentry.					
5. Proper storage of tools and materials for carpentry.					
B. Maintaining Tools and Equipment					
1. Demonstrate understanding of types of tools and equipment for carpentry.					
2. Performing the actual segregation of functional and non-functional tools and equipment.					
3. Demonstrate understanding of					

appropriate cleaning materials/solvent according to types of tools and materials for carpentry.					
4. Practice of preventive maintenance and technique as per Occupational Health and Safety Procedures.					
5. Record keeping of all materials and equipment.					
C. Perform Mensuration and Calculation					
1. Demonstrate understanding of measuring tools according to carpentry job requirement.					
2. Practicing the kinds of measurement such as measuring lengths, width, and thickness of pieces of wood.					
3. Understanding ratio and proportion in doing carpentry work.					
4. Identifying units of measurements used in technical drawings and schematic diagrams for carpentry works.					
5. Understanding conversion units in doing carpentry work.					
D. ***Interpreting Drawings and Plans***					
1. Drawing and describing the different signs and symbols used in the project plans.					
2. Interpreting technical plans and schematic diagrams in carpentry, including explaining the specific lines in the drawing.					
3. Demonstrate correct freehand sketching.					
4. Demonstrating the dimensions and specifications of carpentry work according to job requirements.					
5. Preparing the tools and materials needed for carpentry work as per technical drawing and schematic diagram.					
E. Practicing Occupational Health and Safety Procedures					

1. Identifying hazards and risks and control.					
2. Implementing and practicing organizational safety and health protocol through making contingency measures in line with standard organizational procedures.					
3. Listing down problems and making necessary solutions to hazardous and risky workplace condition by reporting accidents in the work place.					
4. Observing and practicing Philippine Occupational Health and Safety Standards (OHS) regulations and indicators such as Clean Air Act, Electrical and Fire Safety Code, Disaster Preparedness and Management, and Emergency-Related Drills and Trainings.					
5. Designing the facilities and fixtures considering the principles of ergonomics.					

Thank you very much!

Republic of the Philippines
SAMAR STATE UNIVERSITY
COLLEGE OF GRADUATE STUDIES
Catbalogan City

December 28, 2015

Dear Respondents,

Good day!

I am a bonafide student of the Samar State University (SSU), Catbalogan City, and is currently enrolled in the Master of Arts in Education, major in Technology and Livelihood Education (T.L.E.) program. Furthermore, I am conducting a study entitled "Readiness of TLE Teachers for the K to 12 Program of Public Secondary Schools in the 2nd District of the Division of Samar", in partial fulfilment of the requirements of the degree for which I am enrolled in.

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Thank you very much and more power!

Sincerely yours,

DAISY V. OREO
Researcher

QUESTIONNAIRE FOR THE TEACHER-RESPONDENTS
(COMPUTER HARDWARE SERVICING)

Directions: This questionnaire consists of three important parts. Please read each item carefully and their corresponding instructions for answering. Do not leave any item unanswered.

Part I. Teacher-Respondents' Profile

Directions: This part of the questionnaire contains items about your personal information. Please answer the following items by filling in the blank spaces provided and/or by placing a check (/) mark on the appropriate boxes in each item.

Name (Optional) _____

Age _____ Sex ( ) Male ( ) Female

Average Monthly Income
( ) Php 15,000.00 and below
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( ) Php 20,001.00-Php 25,000.00
( ) Php 25,001.00-Php 30,000.00
( ) Php 30,001.00 and above

Educational Attainment
( ) Bachelor's Degree
( ) With Units in Graduate Degree Programs
( ) With Degree in Graduate Programs
( ) Others, please specify _____

Grade Level Taught ( ) 7th ( ) 8th ( ) 9th ( ) 10th

Relevant Trainings/Seminars Attended for the Past Three Years

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(NOTE: Please use a separate sheet for this item if the blank spaces provided are not enough.)

Latest Performance Rating (in numerical equivalent, e.g. 95, 96...) _____

Part II. Attitude towards Teaching Technical-Vocational Education

Directions: *Below are statements that reflect your attitude towards teaching technical-vocational education. Please indicate your disposition by checking the appropriate column in the table using the following scale:*

5	**-**	**Strongly Agree (SA)**
4	**-**	**Agree (A)**
3	**-**	**Undecided (U)**
2	**-**	**Disagree (D)**
1	**-**	**Strongly Disagree (SD)**

Attitude Statements	Responses				
	SA (5)	A (4)	U (3)	D (2)	SD (1)
1. Teaching technical-vocational education enables the development of the required 21st Century skills for global competitiveness.					
2. Teaching technical-vocational education is the key towards economic success.					
3. Teaching technical-vocational education to students expands their understanding and provides them with general enlightenment.					
4. Teaching technical-vocational education harnesses my interests and passion for innovation and creativity.					
5. Teaching technical-vocational education paves the way for me to contribute to better understanding by students of the real-life situation of the workplace.					
6. Technical-vocational education is aligned with the requirements of the marketplace/workplace.					
7. Technical-vocational education takes into consideration the varied interest, abilities and maturity levels of students when the choice of career is made as deciding point.					
8. Teaching technical-vocational curriculum engages my students in active learning.					
9. Technical-vocational education enables an active student-teacher interaction in the classroom.					
10. Technical-vocational education minimizes the job-skill mismatch in the workplace.					

Part III. Teacher-Respondents' Competence in Teaching TLE under the K to 12 Program

Directions: The following checklist reflect statements that refer to your competence in teaching the different component areas of TLE under the K to 12 Program. Please indicate your level of competence in these different areas by checking the appropriate column in the table using the following scale:

5 - **Very Highly Competent (VHC)**
4 - ***Highly Competent (HC)***
3 - **Moderately Competent (MC)**
2 - **Least Competent (LC)**
1 - **Not Competent (NC)**

Competence Indicators	Responses				
	VHC (5)	HC (4)	MC (3)	LC (2)	NC (1)
A. Use of Hand Tools					
1. Identifying tasks and selecting tools, including preparation of plan in maintaining a personal computer.					
2. Operating hand tools, including enumerating the functions of hand tools.					
3. Identifying the common faults of using hand tools, including writing reports on malfunctions in unusual events.					
4. Enumerating standard operational procedures, principles and techniques in maintaining tools.					
5. Proper storage of tools and materials for computer.					
B. *Performing Mensuration and* Calculation					
1. Measuring and identifying types of components such as memory and data storage capacity.					
2. Obtaining correct specifications of the relevant sources such as storage drive and their interface.					
3. Converting (e.g. bytes to kilobytes, megabytes, gigabytes to terabytes) and calculating using the four fundamental operations of addition, subtraction,					

	multiplication and division, in completing work tasks.					
4.	Identifying types of memory modules.					
5.	Record keeping of all materials and *equipment.*					
C.	**Preparing and Interpreting Technical Drawings**					
1.	Selecting drawing conventions.					
2.	*Using symbols and graphic organizers* such as in the preparation of system and program flowcharts.					
3.	Flowcharting and interpreting *flowcharts.*					
4.	Correct drawings are identified and equipment are selected and used in accordance with job requirements.					
5.	*Dimensions of the key features of the* objects depicted in the drawings are correctly identified.					
D.	**Practicing Occupational and Health *Safety Procedures***					
1.	Identifying hazards and risks and control for users and technicians, equipment damage and data loss and *environment.*					
2.	Implementing work station ergonomics.					
3.	Listing down problems and making *necessary solutions to hazardous and* risky workplace condition by reporting accidents in the work place.					
4.	Observing and practicing Philippine *Occupational Health and Safety* Standards (OHS) regulations and indicators such as Clean Air Act, Electrical and Fire Safety Code, *Disaster Preparedness and* Management, and Emergency-Related Drills and Trainings.					
5.	Designing the facilities and fixtures *considering the principles of* ergonomics.					

Thank you very much!

Republic of the Philippines
SAMAR STATE UNIVERSITY
COLLEGE OF GRADUATE STUDIES
Catbalogan City

December 28, 2015

Dear Respondents,

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Thank you very much and more power!

Sincerely yours,

DAISY V. OREO
Researcher

QUESTIONNAIRE FOR THE TEACHER-RESPONDENTS
(COOKERY)

Directions: This questionnaire consists of three important parts. Please read each item carefully and their corresponding instructions for answering. Do not leave any item unanswered.

Part I. Teacher-Respondents' Profile

Directions: This part of the questionnaire contains items about your personal information. Please answer the following items by filling in the blank spaces provided and/or by placing a check (/) mark on the appropriate boxes in each item.

Name (Optional) _____

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Relevant Trainings/Seminars Attended for the Past Three Years

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Part II. Attitude towards Teaching Technical-Vocational Education

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5 - Strongly Agree (SA)
4 - Agree (A)
3 - Undecided (U)
2 - Disagree (D)
1 - Strongly Disagree (SD)

Attitude Statements	Responses				
	SA (5)	A (4)	U (3)	D (2)	SD (1)
1. Teaching technical-vocational education enables the development of the required 21st Century skills for global competitiveness.					
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5. Teaching technical-vocational education paves the way for me to contribute to better understanding by students of the real-life situation of the workplace.					
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4 - ***Highly Competent (HC)***
3 - **Moderately Competent (MC)**
2 - **Least Competent (LC)**
1 - **Not Competent (NC)**

Competence Indicators	Responses				
	VHC (5)	HC (4)	MC (3)	LC (2)	NC (1)
A. Use of Standard Measuring Device, Kitchen Tools and Equipment					
1. Demonstrate understanding of standard measuring devices, kitchen tools and equipment by making an album of these tools, properly labelled and classified according to use.					
2. Checking and sanitizing measuring devices, kitchen tools and equipment.					
3. Calibrating measuring devices, kitchen tools and equipment.					
4. Enumerating standard operational procedures, principles and techniques in maintaining measuring devices, kitchen tools and equipment.					
5. Proper storage of measuring devices, kitchen tools and equipment.					
B. Mensuration and Calculation					
1. Demonstrate understanding of measuring devices, tools, and equipment for dry and liquid ingredients, special ingredients, tables of weights and measures.					
2. Practical application of mensuration and calculation of measuring devices,					

	kitchen tools and equipment according to manufacturers' manual.					
3.	Completing work tasks performed using the four fundamental operations of *addition, subtraction, multiplication and* division.					
4.	Measuring of ingredients according to recipe requirements.					
5.	*Record keeping of all materials and* equipment.					
C.	**Maintenance of Tools and Equipment**					
1.	*Maintaining and storing kitchen tools, utensils and equipment* according to specification and job requirement.					
2.	Labeling and storing tools, utensils *and equipment according to* specifications.					
3.	Perform basic preventive maintenance of kitchen tools and equipment.					
4.	*Segregation of functional and non-*functional tools.					
5.	Regular monitoring and evaluation of the condition of kitchen tools and equipment.					
D.	**Interpretation of Plans and Drawings**					
1.	Collecting different sketch plans and lay-outs of kitchen types.					
2.	*Drawing lines, symbols and signs* appropriate for cooking tasks.					
3.	Trade Mathematics in kitchen drawing plans and lay-outs.					
4.	Read and interpret blueprints of *kitchen.*					
5.	Designing the facilities and fixtures considering the principles of ergonomics.					
E.	**Occupational Safety and Health**					
1.	Identifying health, safety and security procedures in the workplace					

by making appropriate signage in the kitchen.					
2. Implementing work station ergonomics.					
3. Listing down problems and making necessary solutions to hazardous and risky workplace condition by reporting accidents in the work place.					
4. Observing and practicing Philippine Occupational Health and Safety Standards (OHS) regulations and indicators such as Clean Air Act, Electrical and Fire Safety Code, Disaster Preparedness and Management, and Emergency-Related Drills and Trainings.					
5. Designing the facilities and fixtures considering the principles of ergonomics.					

Thank you very much!

CURRICULUM VITAE

CURRICULUM VITAE

PERSONAL BACKGROUND INFORMATION

Name:	**DAISY O. DELGADO**
Address:	Brgy. Mahayag, Villareal, Western Samar
Date of Birth:	December 23, 1988
Place of Birth:	Villareal, Western Samar
Civil Status:	Married
Spouse:	Ernesto C. Delgado Jr.
Parents:	
Father:	DIOSCORO L. OREO
Mother:	HELEN V. OREO
Present Position:	Secondary School Teacher I

EDUCATIONAL BACKGROUND

Elementary:	Villareal I Central Elementary School Villareal, Western Samar 1994-2001 Salutatorian
Secondary:	Villareal National High School Villareal, Western Samar 2001-2005 Salutatorian
Tertiary:	Marikina Polytechnic College Marikina City 2005-2009
COURSE	Bachelor of Technical Teacher Education (Food Service Management)

Graduate: Samar State University
Catbalogan City
2013-Present

DEGREE Master of Arts in Education (MAEd)
(Technology and Livelihood Education)

LIST OF TABLES

LIST OF FIGURE