TECHNOLOGY AND LIVELIHOOD EDUCATION (TLE) TEACHERS' TEACHING BELIEFS AND TECHNOLOGICAL LITERACY: THEIR RELATIONSHIP TO STUDENTS' PERFORMANCE

A Thesis
Presented to
The Faculty of Graduate Studies
Samar State University
Catbalogan City

In Partial Fulfillment
of the Requirements of the Degree
Master of Arts
Major in Home Economics

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March 2009

APPROVAL SHEET

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ACKNOWLEDGMENT

The researcher wishes to express her heartfelt and profound gratitude to every one who in one way or another helped her succeed in this educational endeavor.

First and foremost thank you to **Almighty God**, whom the researcher believes, made every thing and all circumstances possible for **Him** to finish this research endeavor. In truth **His** promise of provision and protection never failed. The researcher also thanks **Him** for the gift of teaching.

To **Dr. Marianita B. Conde**, the researcher's adviser for her competent guidance, constant encouragement, patience and untiring support from the preparation of the proposal up to its completion.

To the chairman of the panel of examiners, **Dr. Marilyn D. Cardoso**, for her brilliant mind which contributed a lot in the refinement of the manuscript. A great statistician, wizard and adept in numbers, who meticulously looked into the statistical aspects of this study. My deepest and sincere gratitude to you.

To the members of the panel of examiners: **Dr. Jose S. Labro, Prof. Rizalina F. Vista,** and **Prof. Janette A. Manatad** for their scholarly criticisms and intelligent comments, suggestions, and recommendations during the oral deliberation.

To **Dr. Esteban A. Malindog, Jr.**, for his assistance in the conceptualization of the research problem and putting the paper into order. He

was like a father guiding a daughter-researcher while the paper was still in progress.

To **Prof. Lydia P. Babalcon**, the professor in the major subjects, for her motherly advises, encouragement and support.

To **Dr. Marina Muriel Y. Labid**, Principal of Motiong National High School and her T.L.E teachers, for granting the request to conduct a dry-run of the questionnaire.

To the secondary school administrators of Paranas: **Mrs. Filicidad C. Ramasasa, Mrs. Rowena E. Cabangunay, Ms. Jeanne C. Villanobos** and **Mrs. Marites B. Dacles**, and their **TLE teacher**, for granting the request to administer the questionnaire to the respondents.

To **Dr. Rebecca A. Sabarre**, SSU College Librarian, for giving the researcher an access to reference materials in the library.

To **Mr. Romulo R. Gabumpa**, OIC of the Planning Unit and **Ms. Rochelle M. Topacio**, data-encoder of DepEd, Samar Division, for their unselfish action in sharing the NCAE data.

To her friends and colleagues: **Mimay, Riza, Conrad, Mana Cynthia, Alida, Melanie, Aileen, Nening, Mana Nelia, Mana Terry, Hegina, Ceo, Raquel, Artem, Danny**, and **others** who have extended varied assistance during the conduct of this study.

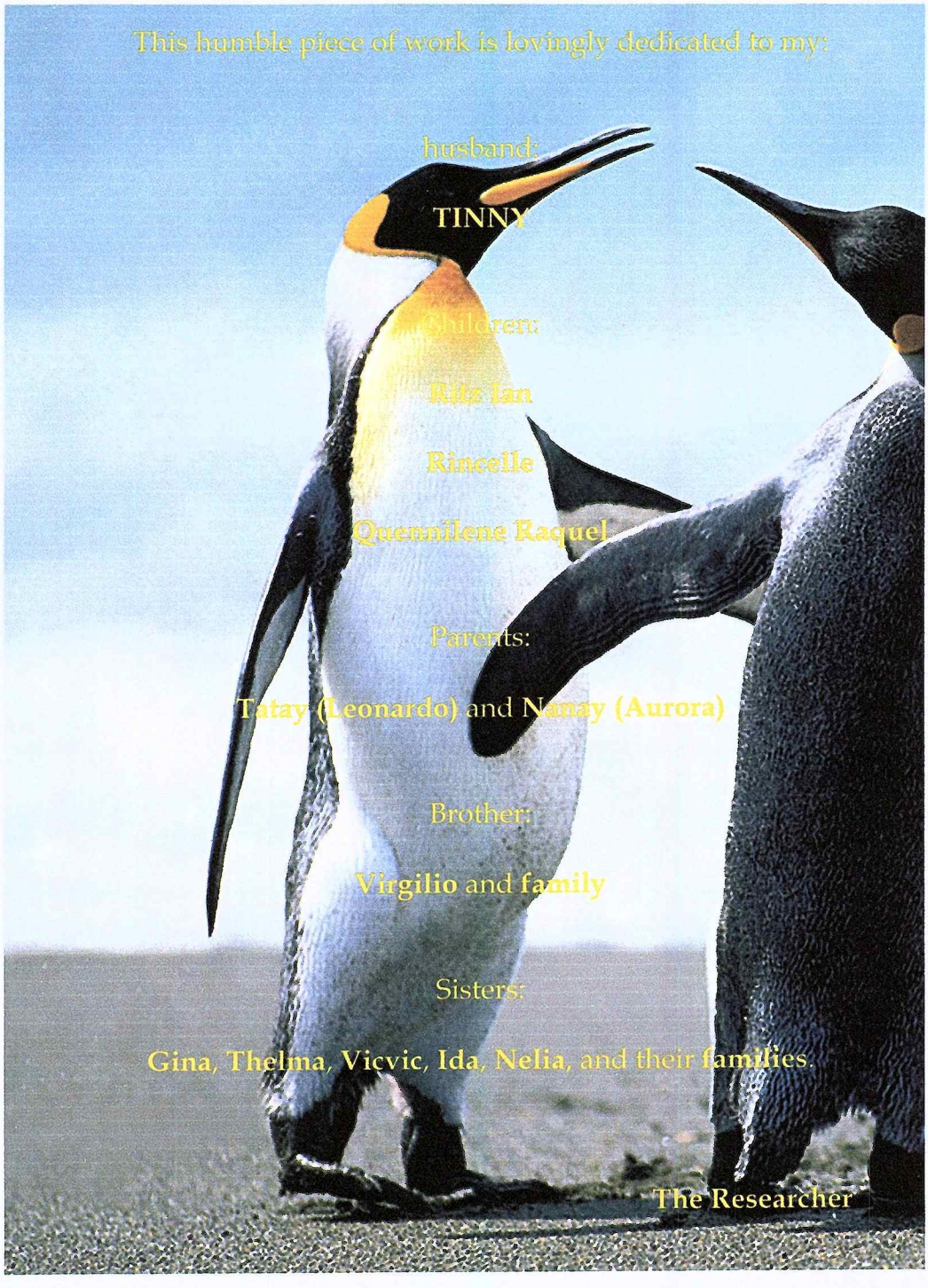
To my **Tatay** and **Nanay**, for without them, I would not be here. With them I sincerely share this one glorious moment of ecstasy when a dream comes true by sheer grit and determination.

To my brother **Vergilio** and **family**; my sisters **Gina, Thelma, Vicvic, Ida,** Nelia and **families** for their moral and spiritual supports.

Lastly to her ever-loving husband **Tinny** (tintin) and children **Ritz Ian** (Yanyan), **Reincelle** and **Quennilene Raquel** (Quenny) for all the inspirations, prayers, encouragement moral support and sacrifices that made this modest piece of work a reality.

The Researcher

DEDICATION


This humble piece of work is lovingly dedicated to my:
husband:
TINNY
Children:
Ritz Ian
Rincelle
Quennilene Raquel
Parents:
Tatay (Leonardo) and Nanay (Aurora)
Brother:
Virgilio and family
Sisters:
Gina, Thelma, Vicvic, Ida, Nelia, and their families.
The Researcher

ABSTRACT

This study attempted to find out teaching beliefs and technological literacy of TLE teachers and their relationship to the performance of the different secondary high schools of Paranas, Samar during the school year 2008-2009. This study employed descriptive-correlational research design which examined the relationship between teaching belief and technological literacy of TLE teachers. Technological literacy among teacher-respondents along teaching, learning and the curriculum yielded a correlation coefficient of 0.223 with students' entrepreneurial skills. This correlational value was not significant since Fisher's t-value posted at 0.5603 was lower compared to the critical t-value of 2.447 at 0.05 significance level. Productivity and Professional Practice Technology Literacy or teacher-respondents posted a correlation coefficient r of 0.722 with students' entrepreneurial skills. The computed Fisher's t-value of 2.5561 was greater than the critical t-value of 2.447 at 0.05 significance level, hence, the two variables were significantly correlated. Students' manipulative skills were not significantly related to TLE teacher-respondents' technological literacy along technology operations and concepts; planning and designing learning environments; teaching, learning and the curriculum; assessment and evaluation; productivity and professional practice; and social,ethical, legal and human issues. Student-respondents' entrepreneurial skills was significantly related to TLE teacher-respondents' technological literacy along productivity and professional practice but not with technology operations and concepts; planning and designing learning environments and experiences; teaching, learning and the curriculum; assessment and evaluation; and social, ethical, legal and human issues.

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Chapter 1

THE PROBLEM AND ITS SETTING

Introduction

The progress of any country depends on technology and the livelihood of its citizenry (Mason, 1999: 3). When a country does not subscribe to the right technology, its income in agriculture and industry will not grow and the livelihood of its citizen in general will be affected.

Because of this idea, every country including the Philippines put so much emphasis on technology and livelihood education. Technology and livelihood education is an essential part of education that is taken by every student. In fact it is part of the high school curriculum. Different kinds of technology and livelihood education are taught to students in preparation to the kind of interest of manual skills that everybody wants to see and developed among the youths.

Technology and Livelihood Education (TLE) is intended to develop knowledge and skills, values and attitudes that will prepare the youth for entry to the world of work (Todd, 2001: 245). Thus, classroom and practical work experience are provided in schools that will enable the learners gain understanding and acquire competency in various economic activities.

Results of the National Career Assessment Examination (NCAE) for school year 2006-2007 revealed that secondary schools in Paranas, Samar obtained Mean Percentage Score (MPS) in Technical-Vocational Aptitude way

below the acceptable level which is 75.00 percent (DepEd, 2008). In the case of Wright National High School, its MPS is 68.96 percent. The same observation with Casandig National High School with an MPS of 70.42 percent. These findings suggest that the Technical-Vocational Aptitude in some secondary schools in Paranas, Samar are below the acceptable level.

Teaching is a complex act that requires the cognitive, affective, and psychomotor abilities of the teacher. The cognitive aspect pertains to the teacher's mastery of the subject matter while affective aspect pertains to the attitudes and beliefs of the teacher towards teaching. This idea is supported by Bernat and Gvozdenko (2005: 20) when they said that attitudes and beliefs towards teaching has an effect of a teacher's actions inside the classroom.

Nevertheless, teachers have strong beliefs about the role that education can play, about explanations for individual variation in academic performance, about right and wrong in a classroom, and many other areas. Beliefs are used to evaluate the new ideas about teaching that teachers confront in their methods classes during their schooling (Pajares, 1992: 310). Those teachings that square with their beliefs are recognized and characterized as what's new. Teachings that challenge their beliefs are dismissed as theoretical, unworkable, or even simply wrong.

Moreover, it is often stated that technology affects every person on this planet, is growing exponentially, and is becoming increasingly complicated (Pearson, 2002: 29). With technology being such a force in the lives of people, it

seems logical that everybody including the teachers should be knowledgeable about it. This knowledge of technology has been labeled technological literacy (TL).

To understand TLE teachers' pedagogy, it is important to understand their beliefs about what constitutes good instructional practice and their technological literacy (Roberts, 2001: 248). Presumably, TLE teachers' instructional practice reflect, to a large extent, what they believe to be good teaching, and their beliefs about good teaching reflect their understandings about how students learn.

One way to know to what extent teaching beliefs and technological literacy on instructional practice was to conduct this study.

Statement of the Problem

This study attempted to find out teaching beliefs and technological literacy of TLE teachers and their relationship to the performance of the different secondary high schools of Paranas, Samar during school year 2008-2009.

Specifically, the study sought answers to the following questions.

1. What is the profile of teacher-respondents in terms of:
    - 1.1 age;
    - 1.2 sex;
    - 1.3 civil status;
    - 1.4 religion;
    - 1.5 average monthly income;

1.6 membership in organizations;

1.7 educational background;

1.8 teaching position;

1.9 teaching experience as TLE teacher;

1.10 length of service;

1.11 performance rating, and

1.12 relevant trainings/seminars attended?

2. What are the teaching beliefs of the teacher-respondents?

3. Is there a significant relationship between the teacher-respondents' teaching beliefs and their:

3.1 age;

3.2 sex;

3.3 civil status;

3.4 religion;

3.5 average monthly income;

3.6 membership in organizations;

3.7 educational background;

3.8 teaching position;

3.9 teaching experience as TLE teacher;

3.10 length of service;

3.11 performance rating, and

3.12 relevant trainings/seminars attended?

4. As perceived by the teacher-respondents, students and their supervisors, what is the level of technological literacy of the teacher-respondents in terms of:

4.1 technology operations and concepts;

4.2 planning and designing learning environments and experiences;

4.3 teaching, learning, and the curriculum;

4.4 assessment and evaluation;

4.5 productivity and professional practice, and

4.6 social, ethical, legal, and human issues?

5. Is there a significant difference in the perceptions of the three groups of respondents on the level of technological literacy of the TLE teacher-respondents along the following:

5.1 technology operations and concepts;

5.2 planning and designing learning environments and experiences;

5.3 teaching, learning, and the curriculum;

5.4 assessment and evaluation;

5.5 productivity and professional practice, and

5.6 social, ethical, legal, and human issues?

6. Is there a significant relationship between the teacher-respondents' level of technological literacy and their:

6.1 age;

6.2 sex;

6.3 civil status;

6.4 religion;

6.5 average monthly income;

6.6 membership in organizations;

6.7 educational background;

6.8 teaching position;

6.9 teaching experience as TLE teacher;

6.10 length of service;

6.11 performance rating, and

6.12 relevant trainings/seminars attended?

7. Is there a significant relationship between the teacher-respondents' teaching beliefs and their technological literacy?

8. What is the level of students' performance in the National Career Assessment Examination (NCAE) along the following areas:

8.1 manipulative skills, and

8.2 entrepreneurship?

9. Is there a significant relationship between the teacher-respondents' teaching beliefs and students' performance along:

9.1 manipulative skills, and

9.2 entrepreneurship?

10. Is there a significant relationship between teacher-respondents' level of technological literacy and students' performance along:

10.1 manipulative skills, and

10.2 entrepreneurship?

11. What implications could be derived from the findings of the study?

Hypotheses

Based on the foregoing questions, the following hypotheses were tested:

1. There is no significant relationship between the teacher-respondents' teaching beliefs and their:

1.1 age;

1.2 sex;

1.3 civil status;

1.4 religion;

1.5 average monthly income;

1.6 membership in organizations;

1.7 educational background;

1.8 teaching position;

1.9 teaching experience as TLE teacher;

1.10 length of service;

1.11 performance rating, and

1.12 relevant trainings/seminars attended.

2. There is no significant difference in the perceptions of the three groups of respondents on the level of technological literacy of the TLE teacher-respondents along the following:

2.1 technology operations and concepts;

2.2 planning and designing learning environments and experiences;

2.3 teaching, learning, and the curriculum;

2.4 assessment and evaluation;

2.5 productivity and professional practice, and

2.6 social, ethical, legal, and human issues.

3. There is no significant relationship between the teacher-respondents' level of technological literacy and their:

3.1 age;

3.2 sex;

3.3 civil status;

3.4 religion;

3.5 average monthly income;

3.6 membership in organizations;

3.7 educational background;

3.8 teaching position;

3.9 teaching experience as TLE teacher;

3.10 length of service;

3.11 performance rating, and

3.12 relevant trainings/seminars attended.

4. There is no significant relationship between the teacher-respondents' teaching beliefs and their technological literacy.

5. There is no significant relationship between the teacher-respondents' teaching beliefs and students' performance along:

5.1 manipulative skills, and

5.2 entrepreneurship.

6. There is no significant relationship between teacher-respondents' level of technological literacy and students' performance along:

6.1 manipulative skills, and

6.2 entrepreneurship.

Theoretical Framework

This study is anchored on the theory of Bent (1968: 12) which states "quality teachers help students think, solve problems, exercise and develop creative ability and imagination."

Quality teachers have vitality in the classroom. Teachers employ expressive as well as linguistic activities in instruction, keep "the personality turned on", make use of instructional materials, dramatize and demonstrate, for learning activities can be interesting and exciting if presented by teachers who have developed desirable teaching personalities. The inspiration of and the

attitudes created by great teacher are the most permanent and lasting of all educational outcomes. These are retained long after facts are forgotten.

It must be remembered that by having quality teachers, surely quality graduates will be produced and in turn improve the quality of life (Yarcia, 1995: 51).

The teacher is the single most important factor in education. Her or his far-reaching influence as an agent of constructive change in society is beyond question. Through the years, however, the status, training, pay and welfare of teachers should decline with serious consequences on the quality of education. Public dissatisfaction with education has become chronic and teachers have been at the center of the debates. Yet while teachers are always the object of criticism, they are looked at as the best hope for reform.

Another theory is Hollingsworth's (1999: 169-189) "constructivist theory of teaching" which states that teachers' classroom behavior is influenced by teachers norms, attitudes, values and beliefs.

Hollingsworth further said that teacher beliefs system have an important role in the process of and teaching. Teacher must reflect and recognize own beliefs and attitudes because this affective attributes of personality becomes a self-fulfilling prophecy.

Bandura (1997: 46) also made a similar and related point. He argued that most people have acquired what he calls a folk pedagogy that reflects certain wired-in human tendencies and some deeply ingrained beliefs. This view leads

to what Bruner called a new and even revolutionary insight in theorizing about the practice of education in the classroom, had better take into account the folk theories that those engaged in teaching and learning already have.

Personal beliefs about teaching and learning have an important role to play in educating students. If teachers do not believe in some good practices in teaching and learning then they will not develop and implement new classroom practice. The beliefs act as filters to the knowledge acquired in teaching practice.

Conceptual Framework

The conceptual framework illustrated in Figure 1 guided the researcher in conducting the study.

At the base of the schema is the research environment which involved TLE teachers, students and TLE supervisors of high schools in Paranas, Samar during school year 2008-2009.

This lower box is connected to a larger frame representing the analyses conducted to the research variables which are represented also by five boxes. The bigger box at the left represents the TLE teachers' profile such as age, sex, civil status, religion, average monthly income, membership in organizations, educational background, teaching position, teaching experience as TLE teacher, length of service, performance rating and relevant trainings/seminars attended.

The same box is connected by double headed arrows to two separate boxes representing TLE teachers' teaching beliefs and technological literacy about technology operations and concepts; planning and designing learning environments and experiences; teaching, learning, and the curriculum; assessment and evaluation; productivity and professional practice; and social, ethical, legal, and human issues. Further, the two boxes representing TLE teachers' teaching beliefs and TLE teachers' technological literacy are also connected by double headed arrows. The use of double headed arrows implies correlational analysis.

In between the two boxes representing TLE teachers' teaching beliefs and TLE teachers' technological literacy is another smaller box representing students' NCAE Performance in manipulative skills and entrepreneurship. The three boxes are again connected by two double headed arrows which imply correlational analysis of the mentioned variables.

Just below the box representing TLE teachers' profile is another smaller box which represents the respondents - TLE teachers, students and TLE supervisors. This box is connected by an arrow to the box representing TLE teachers' teachers' technological literacy implying statistical difference in perceptions of the three groups of respondents as regard to TLE teachers' technological literacy.

Finally, the large frame is connected to an upper box representing the findings and recommendations of the study. This box is also connected to the

bottom box by a broken arrow implying a feedback mechanism. Moreover, the same box is again connected to the upper last box which is the attainment of the ultimate goal of the study, which is, improved students' performance in TLE.

Significance of the Study

This study would be significant to all stakeholders in the technological education of the youths such as the students, teachers, parents, school administrators and future researchers.

To the TLE teachers. The effect of personal beliefs about teaching and learning on the transfer of knowledge into practice for individuals teachers has not been explained adequately by the advance in cognitive science hence the result of the study would inform teachers that their teaching beliefs do affect their actions inside the classroom.

To the students. The students who are the center in the teaching-learning process would be benefited in terms of better and improved teaching methods by TLE teachers since TLE teachers would be informed by the result of the study.

To the parents. The result of this study would likewise benefit the parents since their children's education will be at the hands of better TLE teachers.

To the school administrators. This result of the study would serve as inputs in formulating strategies in improving TLE literacy of students such as

teachers to attend trainings and seminars that pertains to new trends in teaching methodologies.

To the TLE teacher-education institutions. The findings of the study would serve as basis for some curricular revisions which focus on improving the technological literacy of future TLE teachers.

To the future researchers. The findings of the study could be useful also to other researchers whose study is similar to the present study.

Scope and Delimitation

The study was limited to the teaching beliefs and technological literacy (technology operations and concepts; planning and designing learning environments and experiences; teaching, learning, and the curriculum; assessment and evaluation; productivity and professional practice; and social, ethical, legal, and human issues) of nine TLE teachers of Paranas, Samar in relation to the performance of 157 students in the National Career Assessment Examination (NCAE) along the areas on manipulative skills and entrepreneurship.

Other teachers' variables such as age, sex, average monthly income, membership in organizations, educational background, teaching position, teaching experience as TLE teacher, length of service, performance rating and relevant trainings/seminars attended were also considered.

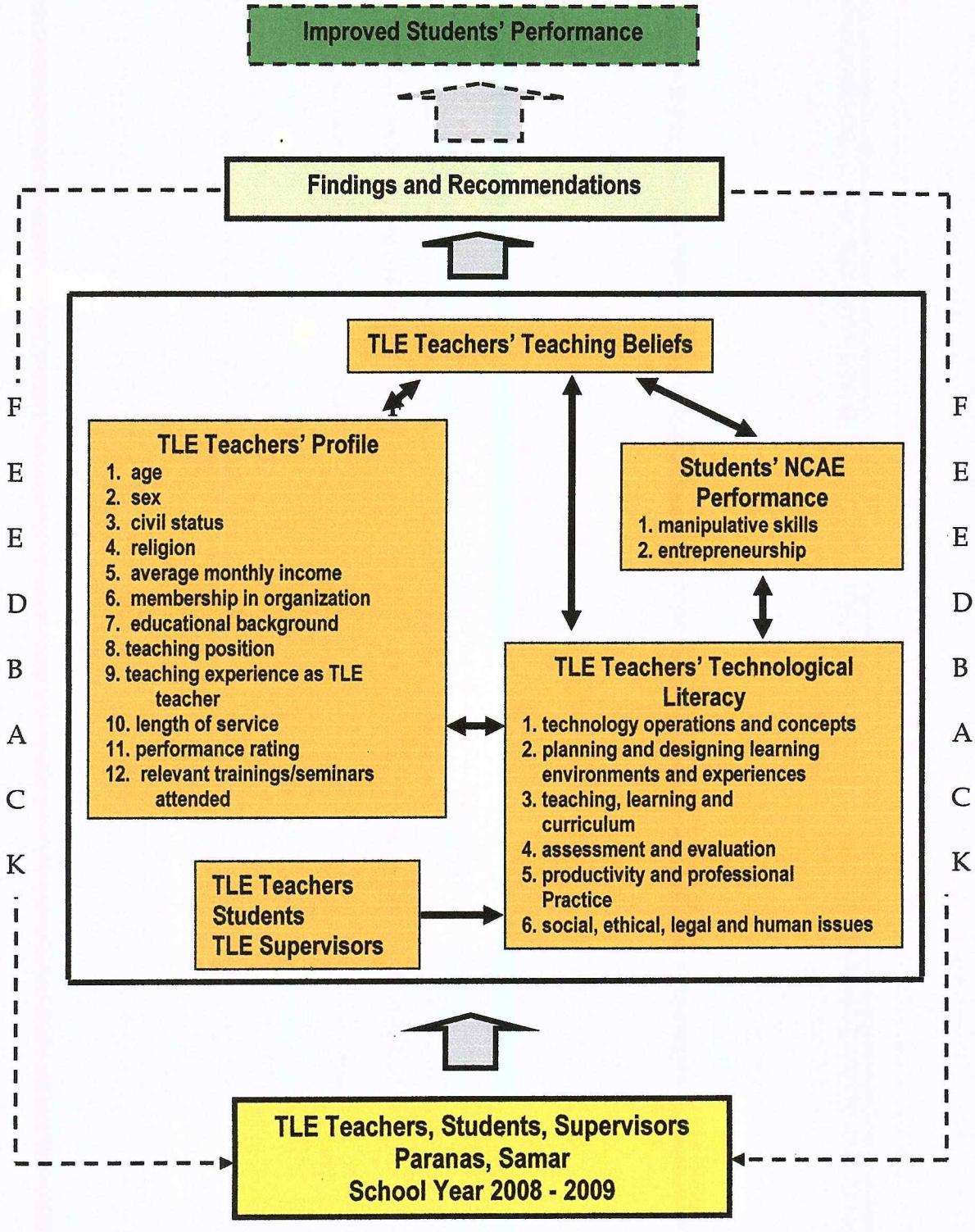

Figure 1. Conceptual Framework of the Study

The study involved four secondary schools of Paranas, Samar, namely: Wright National High School (four teachers, two administrators and 111 students), Lawaan National High School (one teacher, one administrator and nine students), Casandig National High Schools (two teachers, one administrator and 37 students) and Tenani Integrated School (two teachers and one administrators). Figure 2 shows the research environment.

The study was conducted during school year 2008-2009.

Definition of Terms

Some specific terms used in this study are defined conceptually and operationally as indicated below:

Assessment and evaluation. This phrase refers to the TLE teachers' ability to apply technology to facilitate a variety of effective assessment and evaluation strategies (ITSE, 2000: 1). The same definition was adapted as measured by the research instrument.

Belief. This term refers to psychologically held understandings, premises, or propositions about the world that are felt to be true (Richardson, 2000: 231). The same definition was adopted in the present study as measured by the research instrument.

Entrepreneurship. This term refers to the process of discovering new ways of combining resources (Kirzner, 1999: 10). In this study, it refers to one of

the component of the Makabayan subject of the Basic Education Curriculum as measured by the NCAE.

Literacy. This refers to the ability to read and write, or the ability to use language to read, write, listen, and speak (Kress, 2003: 26). Operationally, it refers to reading and writing at a level adequate for communication or at a level that lets one understand and communicate ideas in a literate society, so as to take part in that society.

Manipulative skills. This term refers to the use of objects to improve hand-eye coordination and strengthen muscles (Burns, 2000: 2). In this study, it refers to one of the component of the Makabayan subject of the Basic Education Curriculum as measured by the NCAE.

Planning, designing learning environments and experiences. This phrase refers to the ability of TLE teachers' ability to plan and design effective learning environments and experiences supported by technology (ITSE, 2000: 1).The same definition was adapted as measured by the research instrument.

Productivity and professional practice. This phrase refers to the TLE teachers' use of technology to enhance their productivity and professional practice (ITSE, 2000: 1). The same definition was adapted as measured by the research instrument.

Social, ethical, legal, and human issues. This phrase refers to TLE teachers' knowledge on social, ethical, legal and human issues surrounding the use of technology in secondary schools and applies those principles in practice

(ITSE, 2000:1). The same definition was adapted as measured by the research instrument.

Students' performance. This term refers to the accomplishment of students in the actual accomplishment on learning subjects designated by test scores or by marks assigned by teachers (Borich, 1998: 7). The same definition was adapted in this study.

Teaching belief. In this study, this term is understood as the knowledge, conceptions, perspectives, images, theories, and ideas that TLE teachers hold about teaching (Richardson, 2000: 231). The same definition was adapted as measured by the research instrument.

Teaching, learning, and the curriculum. This phrase refers to the TLE teachers' skills in implementing curriculum plans that include methods and strategies for applying technology to maximize student learning (ITSE, 2000: 1). The same definition was adapted as measured by the research instrument.

Technology. This term refers to the application of knowledge to develop the tools of society which is a combination of science, art, engineering, economics, and social studies that is brought together with creativity and ingenuity to improve the quality of people's lives (Azunar, 2005: 5). In this study, it means the tools that assist a TLE teacher in performing teaching-learning tasks more efficiently or with higher quality, including computer-related hardware, software and peripherals.

Technology and livelihood education (TLE). This term refers to one of the component of the Makabayan subject of the Basic Education Curriculum of the Philippines consists of four learning areas to wit: Home and Family Living, Agricultural Arts, Industrial Arts and Entrepreneurship (BEC, 2002: 34). The same definition is adopted in this study.

Technological literacy. This term refers to the know-ledge and abilities to select and apply appropriate technologies in a given context (Hayden, 2001: 225). In this study, it refers to the TLE teachers' general knowledge, abilities and behaviors concerning technology such as the use of computers and the Internet in the teaching-learning process as measured by an instrument.

Technology operations and concepts. This refers to the teachers' knowledge on how to use computer systems to run software; to access, generate, and manipulate data; and to publish results (ITSE, 2000: 1). The same definition was adapted in this study as measured by the research instrument.

Chapter 2

REVIEW OF RELATED LITERATURE AND STUDIES

The review of related literature and studies was conducted through readings from different articles, periodicals, journals, and theses which give ideas and directions on insights to this study.

Related Literature

In assessing students' performance in any subject, several factors that contribute to the learning process must be considered (Salandanan, 2006: 2). The teachers, the learners themselves, the school environment, the parents and home-related are just some factors that affect students academic performance.

With regards to teacher factor, Narsh (2003: 571) believed that teachers' attitudes and beliefs have something to do with students' achievement in schools. This assertion is also in support to the previous idea of Ornstein (1992: 39) that ccompetency, skills, techniques and teaching beliefs in teaching any subject are must for an effective TLE teacher.

On the other hand, Riggs (2000: 626) explained the role of beliefs in teaching by saying that the thousands of hours that prospective teachers spend as pupils in the classroom shape their beliefs. These conservative beliefs remain latent during formal training in pedagogy at the university and become a major force once the teacher is in his or her own classroom.

Cotterall (2005: 200) went on to say that one belief that teacher candidates bring to their professional schooling is that they already have what it takes to be a good teacher, and that therefore they have little to learn from the formal study of teaching.

Kennedy (1997: 2) attributed this state of affairs in part to the beliefs that teacher candidates bring to teacher education. It is not clear what the source of those beliefs might be a product of their upbringing, a reflection of their life experiences, or a result of socialization processes in schools.

Several reports on education have addressed the TL issue and have all called for an increase in the level of TL exhibited by students. Maley (2005: 16) noted that in 2004 alone, ten major studies of education were reported calling for changes in school to prepare our students to live in a technology society.

A large number of educators and specialists in several disciplines are concerned about the level of TL displayed by the public and that the level of technological literacy to which educators and others are able to bring the general population will determine the future world in which humankind will exist (Ley, 2001: 7).

Technology is the application of knowledge to develop the tools for a society to run. It is a combination of science, art, engineering, economics, and social studies that is brought together with creativity and ingenuity to improve the quality of our lives (Azunar, 2005: 5).

It is about making it better, faster, easier, more economical, or more efficient. It is about making the world a better place to live.

Technology is more than the computer in any office or the satellite dish in the backyard. Technology is any invention or innovation that affects the way we live, like CD players, microwave ovens, cars, calculators, magnetic resonance imaging machines, and forks. These examples of technology are the results of human technological activity. Technology is innovation in action.

Technology education is concerned with more than the gadgetry humans use to improve their lives. Technology education develops within students the knowledge and skills required to participate in technological activity, to be innovative.

Technology education allows students to investigate and experience the means by which humans meet their needs and wants, solve problems, and extend their capabilities. It is concerned with the essential knowledge and skills needed to develop, produce and use products and services, and how to assess the impacts these activities have on humans and the world.

In technology and livelihood education courses, students gain knowledge and skills in the design, production, application, and assessment of products, services, and systems. The study of technology allows students to reinforce, apply, and transfer their academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings. In addition, students gain an understanding of the exciting career opportunities available in

technology and what employers require to gain and maintain employment in the 21st century. In short, students are prepared for succeeding in a world influenced by technology.

For any society to enjoy the product of technology, everybody must be technology literate. However, technological literacy is a much richer concept than computer literacy, although the two are often confused.

Technological literacy can be thought of a comprising three interrelated dimensions that help describe the characteristics of a technologically literate person – knowledge, ways of thinking and acting, and capacities.

A technologically literate person has knowledge of technology and is capable of using it effectively to accomplish various tasks that is; he or she can think critically about technological issues and acts accordingly; and has a range of hands on skills, such as using a computer for word processing and surfing the Internet and operating a variety of home and office appliances.

Technological literacy, a broad understanding of the human designed world and everybody's place in it, is an essential quality for all people who live in the increasingly technology driven 21st century.

To achieve this goal, technology education must prepare students to understand, control, and use technology. Students need to learn how to adapt to technological change and how to deal with forces that influence their lives and potentially control their future.

It along this line where the role of the technology and livelihood and education (TLE) teachers comes in. In one way or another, TLE teachers are responsible for developing technology literacy among the youths.

The paradigms for teaching technology education are changing (Delany, et al., 2003: 316). Curriculum experts recommend a variety of differing instructional approaches such as self-paced modules, interdisciplinary methodology, and problem solving to inform students about technology and its affects on society. These instructional approaches all have their advantages and disadvantages.

However, even with the same training, no two teachers are perfectly alike in how they practice their craft. This is because of their differing values, attitudes, or belief about teaching and learning that underlie those practices.

Most teachers are eclectic, choosing from a large repertoire of teaching strategies as the particular situation warrants (Means and Blando, 2002: 1). Technology adoption in classrooms around the nation is like a glass of water that is half filled. Some say it is half full; others, half empty. Those who take the optimistic viewpoint cite the dramatic jump in technology in schools.

To understand TLE teachers' pedagogy, it is important to understand their beliefs about what constitutes good instructional practice. Presumably, their own instructional practices reflect, to a large extent, what they believe to be good teaching, and their beliefs about good teaching reflect their understandings about how students learn.

Of course, many other factors affect teachers' individual practices besides their philosophies of teaching — for example, class sizes that are larger or more heterogeneous than they expected, the content of the specific textbook provided to them, resources which they expected but which were not provided, explicit directives from administrators, influences of their peers, etc.

Beliefs are propositions and network of ideas that a teacher holds to be reasonable, whether those propositions are expressed overtly by the teacher or held implicitly and inferred from statements and actions. Elements of beliefs include conceptual categories that define what is reasonable or important to notice, empirical claims, prescriptive guidelines, and educational values (Taylor, 2001: 397).

As such, beliefs have much in common with concepts such as "attitudes, values, judgments, opinions, dispositions, implicit theories, preconceptions and perspectives" (Pajares, 1999: 308) and often are used interchangeably with these terms.

Newby (2004: 321) suggested that beliefs are organized in ways that are not logical but psychological, with some beliefs being more connected to other beliefs, and thus more difficult to change. Thus, these beliefs are carried by a teacher from the time of his/her teacher education schooling.

Few studies have dealt with the underlying beliefs of teachers that might advance or thwart adoption of technology to serve school reform goals (Herman, 2006: 124). For example, did the use of technology change the teachers' beliefs

and practices, or were these special teachers, with a predisposition to teach in this way because it matches their beliefs? This topic has not been given much attention in the research literature until recently.

Dexter (2002: 16) conducted a study of teacher use of computers and their perceptions of the impact the technology made on changes in their teaching practice. Studying 47 teachers from 20 schools in three states, Dexter, et al. found that, although most teachers reported changes in their teaching practice, they did not cite the technology use as the primary catalyst for change. Rather, they reported that insights about the effectiveness of their teaching (e.g., reflection upon their teaching), school climate and expectations, and, to a lesser degree, formal professional development were greater catalysts for change to more progressive or constructivist practices.

The most comprehensive review of teacher use of technology comes from the case studies and research reports resulting from the Apple Classrooms of Tomorrow (ACOT) project. The ACOT research project included ten years of longitudinal research, starting with in-depth case studies of teachers in five ACOT classrooms and expanding to short-term research sites in dozens of other ACOT supported classrooms nationwide. In the course of ACOT funded research, hundreds of researchers from around the country were involved in a range of research and development projects, resulting in a rich collection of research portfolios.

Related Studies

The researcher also went trough some current studies related to teaching beliefs and technology literacy to get ideas and to avoid duplication of work and guided the researcher.

Bell (2005) conducted a study entitled "Reflective Journal Writing Paired with Inquiry-Based Science Instruction: Effects on Elementary Pre-Service Teachers' Science and Science Teaching Belief." The study investigated the influence of reflective journal writing paired with inquiry-based science instruction on pre-service teachers' beliefs about science and science teaching. Students who enrolled in the integrated science course participated in journal writing and surveys. The journal responses from participants in the study indicate that the differences between elementary science learning experiences of the youngest students and the oldest students had no significant difference. The students' reflection showed that their personal experiences in the elementary science are fairly typical of what is known about elementary science teaching.

The present study bears similarity to the study of Bell in terms of teaching belief. However, the two studies differ in terms of the subject area. The present study will involve TLE teachers while the study of Bell involved pre-service science students. The two studies also differ in terms of research setting. The former study is a local one while the later is a foreign study.

The study of Manatad (2005) entitled "Work Values of Teachers and Academic Performance of Students in Technology and Livelihood Education

(TLE) of Public Secondary Schools in Catbalogan" revealed the following results: 1) the student-respondents performance in TLE was not influenced by the extent by which their teachers in the said subject practiced work values, but teacher in TLE who are responsible have students with good performance in TLE, and 2) there is need for the TLE teachers to inculcate in the minds of the young the necessity of learning TLE by improving their level of performance as worthy preparation for their future.

The above-cited study was similar to their present research because both studies focused on the effect of teachers' affective disposition on the academic performance of students. The studies are different in terms of locale or research environment.

Baquila (2004) investigated the influences on self-efficacy beliefs toward technology integration among pre-service teachers at two mid-sized public institutions in the Quezon City. Using pre and post measurements of perceived comfort with using computer technology, perceived usefulness of computer technology, and ratings of self-efficacy beliefs toward technology integration, the study identified possible influences on self-efficacy beliefs. Specifically, the study found that perceived comfort with computer technology was found to be a significant predictor of self-efficacy beliefs towards technology integration, while perceived usefulness was not found to have a significant predictive relationship. The study also found that all of the groups demonstrated a significant increase in self-efficacy beliefs while enrolled in a course focusing on technology integration

even though the courses varied in course design and weekly instructional time. The results suggest that a course design that focused more broadly on issues relating to the integration of technology into teaching was likely to have a larger positive impact on self-efficacy beliefs than a course focused primarily on developing proficiency skills with specific computer technology.

The present study is similar to the study of Baquila in the sense that both studies pertain to beliefs about integration of technology inside the classroom. Basically, the two studies are different in terms of the respondents. The present will involve in-service TLE teachers while the study of Baquila involved student-teachers.

Using questionnaire, Hwang (2003) conducted a study aimed at understanding current novice elementary teachers' beliefs about teaching and their performances in effective teaching, and to investigate the relations among novice teachers' teaching beliefs and their performances in effective teaching. Novice elementary teachers in Hongkong were administered questionnaires in the study. Four hundred and ten questionnaires were returned. The study found some important conclusions. First, some differences in beliefs about teaching had been found between novice male teachers and novice female teachers, and novice female teachers' performance in effective teaching is better. Second, beliefs about teaching were positively correlated to performances in effective teaching. The dimension of effectiveness belief about teaching was more closely related to performance in effective teaching. Third, the dimension of beliefs about teaching

can predict 13 percent to 19 percent of the variation in performances in effective teaching.

Again, the present study is similar to the study Hwang because the two studies pertain to beliefs about teaching. The two studies differ in terms of respondents, research setting, and research design.

A study entitled "A Study of Designer-Instructors Beliefs and Actions in Internet-Based Courses" was conducted by Mahinay (2002). Fourteen University instructors of Internet-based courses were interviewed and their course syllabi examined to produce instructor profiles of philosophical orientations and instructional strategies. How the instructors' belief systems regarding the effective teaching of adults changed as a result of teaching online was examined. The study was primarily aimed in determining the philosophical orientations that guides course design and delivery held by faculty. Results showed that participants had no awareness of a cohesive set of guiding principles and beliefs as they learned to teach online and participants believed their online students acquired learning to learn skills applicable to face-to-face classroom situations.

The present study is deemed similar to the study of Mahinay for the simple reason that both studies were concerned about teaching values and beliefs of teachers in order to cause teachers to alter habitual instructional practices. Basically, the two studies differ terms of the respondents. The present study involved secondary teachers while the later involved university instructors.

Moreover, the present study was quantitative one while the work of Mahinay was qualitative in nature.

Hayes (2001) conducted a study in which 6 teacher educators were interviewed about desirable beliefs about teaching. The study was conducted on the premise that teacher education programs, with their emphasis on methods, are largely ineffective in improving teaching practice. One central question was addressed in the study - what ethics come into play concerning changing the beliefs of teacher candidates. The study came up with the concept on 'dispositions' suggesting that if teacher educators could conceptualize the problem as one of "weak dispositions" rather than one of "beliefs," many of the issues about teaching beliefs would disappear. The three possible dispositions a teacher education program are knowledge, colleagueship and advocacy.

The present study is similar to the study of Hayes since both studies pertained to teaching beliefs. However, the two studies were different in terms or respondents, research design and locale of the study. The present study involved TLE teachers while the previous study involved teacher educators. Further, the present study is descriptive and correlational in nature while the previous study is ethnographic in nature. Moreover, the present study was conducted in the local scene while the previous study is foreign one.

Tatet (2000) conducted a study entitled "Examining Values and Beliefs about Teaching Diverse Students: Understanding the Challenges for Teacher Education". Evidence gathered from the study involving nine teacher education

programs shows that lay culture norms among education students are strongly ingrained. Teacher education as it is currently structured is a weak intervention to alter views regarding the teaching and management of diverse learners.

The present study is related to the study of Tatet since the two studies focused to the variable teaching beliefs. However, the present study is different from study the study of Tatet involved student teachers while the present study involved TLE teachers. Further, the present study is local one while that of Tatet is a foreign one.

Baras (2005) conducted a study which described how select Technology Student Association (TSA) activities affect technological literacy. Variables derived from a panel of experts and literature review was used to construct the survey. Skill development, motivation, effect on academic areas, and future career implications were also assessed through this survey. The study was participated by 1138 TSA members, 588 middle school technology education students and 418 high school technology education students. The findings suggest that the selected TSA activities do affect technological literacy in regards to what technology is, how technology works, the effects of technology on society, how to solve a technology-related problem, how to use the design process, and the technological subsystems related to the individual TSA activity.

The present study is similar to the study Baras in terms of the main research variable which is technological literacy. The two studies differ in terms

of research locale, respondents and design. The present study will involve in-service teachers while the study of Baras involved student teachers.

Another study was conducted by Bessac (2002) entitled "Perceived Importance Students Have of Technological Literacy, Technical Skills and the Areas of Instruction that Best Provide the Information and Skills Needed to Live in the Twenty-first Century". Results showed that the majority of students believe they have the technological literacy and skills that will be needed for the twenty first century, students with technological literacy will be better prepared to use and understand twenty-first century technology, they need to know more about technological literacy and skills, more training and technical experiences are needed to better understand twenty-first century technology, considered the ability to operate computers and their programs as the most important technological literacy and skill needed, and the three most important programs that best deliver the technological literacy and skills to be Math, Science, and Technology Education.

The present study is related to the work of Bessac primary because both studies delved on technological literacy. However, the former study involved students while the latter involved TLE teachers. Also, the present study was conducted in the local setting while the study of Bessac was conducted abroad.

Desiderio (2006) conducted a study "Teacher Educators' Computer Technology Integration at Bicol University." The purpose of the study was to develop a deep understanding of teacher educators' perceptions and lived

experience with computer technology integration. Ten methods course instructors in secondary education participated. Data were collected using the phenomenological research method: (1) conducting one-on-one in-depth interviews, (2) classroom observations of the four participants, and (3) examining artifacts, such as syllabi and presentation evaluation forms used by the participants.

The findings of the study showed that the subjects regard computer technology as a powerful instructional tool. They also realize it is important to prepare pre-service teachers with computer technology for their future careers. The study analyzes the positive and negative aspects of using computer technology in teaching and personal experiences, and how these influence the participants' computer technology integration.

The Desiderio was similar to the present study since both study focused on the use of technology in teaching. The two studies differed since the former study did not include teaching belief as another main variable of the present study.

The above studies influenced and guided the researcher in the formulation of this study.

Chapter 3

METHODOLOGY

This chapter presents a comprehensive discussion of the methods and procedures used in the conduct of the study, including research design, instrumentation, validation of the instrument, data gathering procedure, and the treatment of data.

Research Design

This study employed descriptive-correlational research design which examined the relationship between teaching belief and technological literacy of TLE teachers. Teaching belief and technology literacy of respondents were measured using a questionnaire.

This study used both descriptive and inferential statistical tools as follows: frequency, percentage, arithmetic mean, weighted mean, Pearson Product Moment Correlation and Fisher's t-test, all described under the statistical treatment of data section.

Instrumentation

Teachers' beliefs about teaching and technological literacy were measured using researcher-made questionnaires.

Questionnaire. The whole research questionnaire consisted of three parts. Part I solicited the needed personal profile of the respondents such age, sex, civil

status, religion, average monthly income, membership in organizations, educational background, teaching position, teaching experience as TLE teacher, length of service, performance rating and relevant trainings/seminars attended.

Part II of the questionnaire was composed of item statements that measured the teaching belief of the teacher-respondents. Each item statement was responded using a five-point Likert-type scale shown below:

Scale	Description
5	Strongly Agree (SA)
4	Agree (A)
3	Uncertain (U)
2	Disagree (D)
1	Strongly Disagree (SD)

Part III of the questionnaire contained item statements that determined the technological literacy of the teacher-respondents. It was responded using a five-point Likert-type scale shown below:

Scale	Description
5	Expert – able to instruct others
4	Skilled at this item
3	Can accomplish this item
2	Can do this but occasionally need help
1	No knowledge of this item

Validation of Instrument

The questionnaire that measured the teaching belief and technological literacy of the teacher-respondents were adopted from the literature. The questionnaire for teaching beliefs was borrowed from the work of Richardson

(2005: 38). On the other hand, the questionnaire for technological literacy was adopted from the International Society for Technology in Education (2000: 1).

Both instruments have undergone students, teachers and administrators validation. The instrument was first administered to two teachers, one administrator and 34 students at Motiong National High School last December 17, 2008. Second administration was conducted January 5, 2009 due to the holiday break. Analyses revealed the following reliability coefficients: 0.92 for the administrators, 0.98 for teachers and 0.85 for the students.

Sampling Procedure

Total enumeration was employed by the researcher for the TLE teachers and administrators which yielded nine teachers and 5 administrators.

In determining the student samples, the researcher used Sloven's formula that yielded 157 samples. These 157 students were randomly selected from the three secondary schools using stratified random sampling which resulted to 111 students from Wright National School, 37 students from Casandig National High School and nine students from Lawaan National High School.

Data Gathering Procedure

The researcher sought permission from the office of the Superintendent of DepEd Catbalogan, Samar permission to conduct the study. The researcher also sought permission from the principals of the identified secondary schools to allow her to field and administer the research instrument.

With the assistance of her husband, the researcher administered the questionnaire to the respondents (students, teachers and administrators) of Wright National High School in the morning of January 12, 2009. After retrieving the accomplished questionnaire, the researcher rode in a motorcycle with her husband in the afternoon to Casandig National High School to administer the questionnaire. The following morning of January 13, 2009, the questionnaire was administered to the respondents of Lawaan National High School.

During the administration of the research instrument, each respondent was being given enough time to accomplish the questionnaire.

Statistical Treatment of Data

The data gathered through the questionnaire was tabulated, analyzed and interpreted using the appropriate statistical measures and procedures. Additionally, in testing the null hypotheses, non-directional test (two-tailed) of significance level at 0.05 was used by the researcher. Computations were facilitated by SPSS version 16.

Frequency counts. This statistical tool was employed in reporting the profile of the respondents such as the number of respondents having the same age, sex, highest educational attainment, highest educational attainment, length of service, and type of school graduated from.

This was also used in tallying the number of respondents who answered a particular statement in Part II and Part III of the research instrument.

Percentage. This statistical tool was used in presenting the profile of the respondents in the analysis of the data on age, sex, civil status, religion, average monthly income, membership in organizations, educational background, teaching position, teaching experience as TLE teacher, length of service, performance rating and relevant trainings/seminars attended.

Arithmetic mean. This statistical measure was used to determine the quantitative characteristics or profile of the respondents like age and responses to the teaching belief and technology literacy statements.

Weighted mean. This was employed to determine the overall teaching belief and technology literacy of the teacher-respondents.

The overall interpretations of the weighted means for the two research variables are shown below.

Teaching Belief:

Range	Interpretation	
4.51 – 5.00	Strongly Agree	(SA)
3.51 – 4.50	Agree	(A)
2.51 – 3.50	Undecided	(U)
1.51 – 2.50	Disagree	(D)
1.00 – 1.50	Strongly Disagree	(SD)

Technology Literacy:

Range	Interpretation	
4.51 – 5.00	Expert, able to instruct others	(E)
3.51 – 4.50	Skilled at this item	(S)
2.51 – 3.50	Can accomplish this item	(CA)
1.51 – 2.50	Can do this but occasionally need help	(NH)
1.01 – 1.50	No knowledge of this item	(NK)

Pearson Product Moment Correlation Coefficient (r). This statistics was employed to answer the null hypotheses that pertained to relationship of variables. The formula is shown below:

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{N\sum X^2 - (\sum X)^2}\sqrt{N\sum Y^2 - (\sum Y)^2}}$$

where: X = the first variable

Y = the second variable

N = total number of respondents

The degree of correlation was interpreted using the scale indicated below:

Coefficient r	Degree of Correlation
±0.00 to ± 0.20	Negligible correlation
±0.21 to ± 0.40	Low correlation
±0.41 to ± 0.50	Moderate correlation
±0.51 to ± 1.00	High correlation

Fisher's t-test. This test statistic was used to test the significance of the Pearson's r.

$$t = r\sqrt{\frac{n-2}{1-r^2}}$$

where: t = value of the computed Fisher's t-test

r = value of computed Pearson's r.

n – 2 = degrees of freedom

Analysis of variance (ANOVA). This statistical tool was employed to determine if there is any significant difference in perceptions of the three groups of respondents as to technological literacy.

ANOVA Table				
Source of Variation	Sum of Squares (SS)	df	Mean of Squares (MS)	F ratio
Between Groups	SS_B	$df_B = k-1$	MS_B	MS_B/MS_W
Within Groups	SS_W	$df_W = n-K$	MS_W	
Total	$SS_T = SS_B-SS_W$	$df = df_B-df_W$		

where:

$$SS_B = \frac{(\sum X_1)^2}{n_1} + \frac{(\sum X_2)^2}{n_2} + \frac{(\sum X_3)^2}{n_3} - \frac{(\sum X_T)^2}{n_T}$$

$$SS_W = \left(\sum X_1^2 - \frac{(\sum X_1)^2}{n_1}\right) + \left(\sum X_2^2 - \frac{(\sum X_2)^2}{n_2}\right) + \left(\sum X_3^2 - \frac{(\sum X_3)^2}{n_3}\right)$$

$$SS_T = \sum X_T^2 - \frac{(\sum X_T)^2}{N_T}$$

$$MS_B = \frac{SS_B}{df_B}$$

$$MS_W = \frac{SS_W}{df_W}$$

$$F = \frac{MS_B}{MS_W}$$

Scheffe's test. This was used to determine in which pair of groups did difference exist. The formula is shown below:

$$F_{12} = \frac{(\bar{X}_1 - \bar{X}_2)^2}{MS_W\left(\frac{1}{n_1} + \frac{1}{n_2}\right)(K-1)}$$

Chapter 4

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This chapter presents the analysis conducted and the interpretation of results obtained.

Profile of Respondents

This section discusses the profile of the respondents such as age, sex, civil status, religion, average monthly income, membership in organizations, educational background, teaching position, teaching experience as TLE teacher, length of service, performance rating and relevant trainings and seminars attended.

Age and sex. Table 1 presents the age and sex distribution of the teacher-respondents.

Table 1

Age and Sex Distribution of the Teacher-Respondents

Age (in years)	Sex		Total	Percent
	Male	Female		
56	1	0	1	11.11
52	0	1	1	11.11
46	1	0	1	11.11
44	0	1	1	11.11
43	1	0	1	11.11
41	1	1	2	22.22
37	0	1	1	11.11
25	0	1	1	11.11
Total	**4**	**5**	**9**	**22.22**
Mean	**46.50 yrs**	**39.80 yrs**	**42.78 yrs**	-
SD	**6.66 yrs**	**9.93 yrs**	**8.86 yrs**	-

The entries of the table show that there are four male respondents with ages 56 years old, 46 years old, 43 years old and 41 years old. The mean age is 46.50 years old with a standard deviation of 6.66 years.

The entries further reveal that there are five female respondents whose age in years are distributed as 52, 44, 41, 37 and 25.

Average monthly income. Table 2 presents the distribution of the respondents' average monthly income.

Table 2

Teacher-Respondents' Average Monthly Income

Income (Php)	Frequency	Percent
15,512.00	1	11.11
15,000.00	2	22.22
14,956.00	1	11.11
14,500.00	1	11.11
13,000.00	1	11.11
12,000.00	2	22.22
Not Specified	1	11.11
Total	**9**	**100**
Mean	**Php 13,996.00**	-
SD	**Php 1,436.76**	-

As can be gleaned from the table, two or 22.22 percent of the respondents have average monthly income of PhP15,000.00 and another two or 22.22 percent of the respondents have average monthly income of PhP12,000.00. The remaining four respondents have the following average monthly income of PhP15,512.00, PhP14,956.00, PhP14,500.00, PhP13,000.00 and one respondent did not indicate his or her average monthly income. As a whole, the average monthly income is PhP13,996.00.

Membership in organizations. Table 3 presents the organizations where the respondents are members.

Table 3

Teacher-Respondents' Membership in Organizations

Name of Organization	Frequency	Percent
Fraternity/Sorority	1	11.11
STEP	2	22.22
Phil Home Economics Association	1	11.11
PAGE	1	11.11
WPPSTA	1	11.11
No organization affiliation	5	55.56

Five or 55.56 percent of the respondents are not members in any organization. Two or 22.22 percent are members of the STEP. One or 11.11 percent of the respondents are distributed in the following organizations: fraternity/ sorority, Philippine Home Economic Association, Page and WPPSTA.

Educational background. The educational attainment of the respondents is presented in Table 4.

Table 4

Teacher-Respondents' Profile in Terms of Educational Background

Education	Frequency	Percentage
Baccalaureate - Non Technology Major	1	11.11
Baccalaureate - Technology Major	5	55.56
with Master's units - Non Technology	2	22.22
with Master's units - Technology Related	1	11.11
Total	**9**	**100**

Of the nine respondents, five or 55.56 percent are college graduates with majors in technology. This is followed by two or 22.22 percent of the respondents have earned master's units in non-technology specialization. One or

11.11 percent of respondent is a non-technology college graduate and another one or 11.11 percent earned units of a technology related graduate course.

Teaching Position. Table 5 shows the teaching positions held by the respondents.

Table 5

Teacher-Respondents' Profile in Terms of Teaching Position

Education	Frequency	Percentage
SST-I	6	66.67
SST-II	1	11.11
SST-III	2	22.22
TOTAL	**9**	**100**

Of the nine respondents, six or 66.67 percent are Secondary School Teacher I. This is seconded by two or 22.22 percent holding a Secondary School Teacher III position. Next is one or 11.11 percent with a Secondary School Teacher II position.

Teaching experience and length of service. Table 6 presents the teaching experience as TLE teachers and length of service.

One or 11.11 percent of the respondents had been in the service for 29 years with no experience in teaching TLE. This is followed by another one or 11.11 percent who had been in the service for 28 years and also one or 11.11

percent who had been in the service for 15 years with no experience in handling TLE subject.

Table 6

Teacher-Respondents' Profile in Terms of Teaching Experience as TLE Teacher and Length of Service

Year of Experience	As TLE Teacher		Length of Service	
	Frequency	Percent	Frequency	Percent
29	0	0.00	1	11.11
28	0	0.00	1	11.11
22	1	11.11	0	0.00
20	1	11.11	1	11.11
16	1	11.11	1	11.11
15	0	0.00	1	11.11
10	1	11.11	0	0.00
9.5	1	11.11	1	11.11
7	2	22.22	1	11.11
4	1	11.11	1	11.11
Not Specified	1	11.11	1	11.11
Total	**9**	**100.00**	**9**	**100.00**
Mean	**11.94 yrs**	-	**16.06 yrs**	-
SD	**6.59 yrs**	-	**9.24 yrs**	-

One or 11.11 percent of the respondents had been a TLE teacher for almost 22 years. This is seconded with one or 11.11 percent of the respondents had been teaching TLE for 10 years.

Another one or 11.11 percent hade been in the service for 20 and been teaching TLE same number of years. This is seconded by one or 11.11 percent of the respondents who had been in the service for 16 years and had been teaching TLE same number of years.

Relevant trainings/seminars attended. Presented in Table 7 are the respondents' profile in terms of relevant trainings and seminars attended.

Table 7

Teacher-Respondents' Relevant Trainings/Seminars Attended

No. of Hrs of Trainings/Seminars	Frequency	Percent
296.00	1	11.11
80.00	1	11.11
40.00	1	11.11
Not Specified	6	66.67
Total	**9**	**100.00**
Mean	**138.67 hrs**	-
SD	**137.72 hrs**	-

A total of six or 66.67 of the respondents did not indicate the number of hours training or seminars attended.

However, three respondents reported attending trainings and seminars – one or 11.11 percent for 296 hours, one or 11.11 percent for 80 hours and another one or 11.11 percent for 40 hours.

Teacher-Respondents' Teaching Beliefs

Table 8 reflects the weighted means including the interpretations of the statements used to measure teacher-respondents' teaching beliefs. The weights under each scale are given in the Appendix.

Of the 17 statements intended to measure the teaching beliefs of respondents, two statements obtained a rating of 4.56 which is interpreted as 'strongly agree'. These are statements #2 (I believe that my most important role as a classroom teacher is to assess students' knowledge.) and #9 (I believe that one of the most important roles as a classroom teacher is to foster students' moral growth.).

Two statements were rated by respondents as 'uncertain'. These are statement #6 which state "I feel anxious about meeting my first students as a classroom teacher." with a mean rating or 3.22 and statement 13 which says "I believe that punishment is necessary to maintain order in schools." with the same weighted mean.

The rest of the statements obtained ratings with the interpretation range of 3.51 to 4.45 all interpreted as 'agree'. Ranking the statements revealed statement 3 which says "I believe that teaching is a lifelong career." as number one. Lowest ranked is statement 17 which says "I believe that teaching is a very difficult job to do well."

Table 8

Teacher-Respondents' Teaching Beliefs

Statements	Total	Mean/ Interpretation	
1. If I had to start all over I would choose teaching again without any hesitation	9	4.22	A
2. I believe that my most important role as a classroom teacher is to assess students' knowledge	9	4.56	SA
3. I believe that teaching is a lifelong career	9	4.44	A
4. I believe that my most important role as a classroom teacher is to dispense knowledge	9	4.22	A
5. I look forward to meeting my first students as a classroom teacher	9	4.11	A
6. I feel anxious about meeting my first students as a classroom teacher	9	3.22	U
7. I believe that one of the most important roles as a classroom teacher is to facilitate learning	9	4.33	A
8. I believe that one of the most important roles as a classroom teacher is to foster students' social growth	9	4.33	A
9. I believe that one of the most important roles as a classroom teacher is to foster students' moral growth	9	4.56	SA
10. I believe students learn best through direct instruction	9	4.11	A
11. I believe that students learn more from asking questions than from listening to the teacher	9	4.11	A
12. I believe that students learn best through active participation in cooperative learning activities	9	4.44	A
13. I believe that punishment is necessary to maintain order in schools	9	3.22	U
14. I believe that my most important role as a classroom teacher is to discipline students in class	9	3.89	A
15. I believe that one of the most important roles as a classroom teacher is to foster students' emotional growth	9	4.00	A
16. I believe that teachers are born, not made	9	3.56	A
17. I believe that teaching is a very difficult job to do well	9	3.44	A
Grand Total	-	**68.78**	-
Grand Mean	-	**4.05**	**A**

Legend:		
	4.51 – 5.00	Strongly Agree (SA)
	3.51 – 4.50	Agree (A)
	2.51 – 3.50	Uncertain
	1.51 - 2.50	Disagree
	1.00 - 1.50	Strongly Disagree (SD)

The overall perception of the respondents is 'agree' with a grand mean of 4.05.

Relationship Between Respondents' Teaching Beliefs and Profile

Table 9 shows the correlation conducted between teacher-respondents' teaching beliefs and their profile.

Table 9

Correlation Between Teacher-Respondents Teaching Beliefs and Their Profile

Variates	r_{xy}	Fisher's t	Evaluation/Decision
Age	-0.853	4.003	S/Reject Ho
Sex	-0.352	0.921	NS/Accept Ho
Average Monthly Income	-0.310	0.799	NS/Accept Ho
Membership in Organizations:			
Number of Organizations	0.043	0.105	NS/Accept Ho
Number of Years of Membership	-0.090	0.221	NS/Accept Ho
Educational Background	-0.160	0.397	NS/Accept Ho
Teaching Position	-0.250	0.632	NS/Accept Ho
Experience:			
as TLE Teacher	-0.650	2.095	NS/Accept Ho
Length of Service	-0.760	2.864	S/Reject Ho
Performance Rating	-0.540	1.572	NS/Accept Ho
Relevant trainings/seminars attended	0.230	0.579	NS/Accept Ho

*significance level = 0.05; two-tailed; df = 7; critical t = 2.447

Age. As reflected in the table, the computed r-value of -0.853 between teaching beliefs and age is negative and quite high. The negative value implies an inverse and high correlation between the two variables. This correlation is found out to be significant since the calculated Fisher's t-value of 4.003 is greater than the critical t-value of 2.447 at 0.05 significance level. So, the null hypothesis which states "there is no significant relationship between teaching beliefs and age" is rejected.

Sex. A low and negative correlation exists between respondents' teaching beliefs and sex as evidenced by a computed r-value of -0.352. The corresponding computed t- value is 0.921 which imply insignificant relationship since it is lower than the critical t-value of 2.447 at 0.05 significance level. This observation led to the acceptance of the null hypothesis that says "there is no significant relationship between teaching beliefs and sex of respondents".

Average monthly income. A low and negative and correlation (r = -0.310) exists between teaching beliefs and average monthly income. This relationship is not significant since the computed Fisher's t is lower than the critical t-value of 2.447 at 0.05 significance level. Hence, the hypothesis which states "there is no significant relationship between teaching beliefs and average monthly income" is accepted.

Membership in organizations. A negligible correlation, r = 0.043, is observed between teaching beliefs and number of organizations the respondents are members. This correlation coefficient is not significant simply because the

Fisher's t-value of 0.105 is lower than the critical t- value of 2.447 at 0.05 significance level. The hypothesis "there is no significant relationship between teaching beliefs and number of organization" is accepted.

As regards to the number of years the respondents are members of an organization, the correlation with teaching beliefs is -0.090. This value imply a negligible correlation and at the same time not significant. It is not significant since the computed Fisher's t has a value of 0.221 which is lower than the critical t-value of 2.447 at 0.05 significance level. This led to the acceptance of the null hypothesis which states "there is no significant relationship between teaching beliefs and duration of membership".

Educational background. The computed r value of 0.107 between teaching beliefs and educational background is negligible and negative correlation. This correlational value is not significant since the corresponding Fisher's t of 0.397 is lower than the critical t-value of 2.447 at 0.05 significance level. So, the null hypothesis that "there is no significant relationship between respondents' teaching beliefs and educational background" is accepted.

Teaching position. Teaching beliefs of respondents and teaching position has a computed correlation coefficient of -0.250. This value is not significant since the calculated Fisher's t of 0.632 is lower than the critical t-value of 2.447 at 0.05 significance level. The null hypothesis which states "there is no significant relationship between teaching beliefs and teaching position" is accepted.

Years in service and teaching TLE. As to number of years of being a TLE teacher, the calculated correlation coefficient with teaching beliefs is -0.650. This correlation is not significant since the Fisher's t-value of 2.095 is lower than the critical t-value of 2.447 at 0.05 significance level. Hence, the null hypothesis saying "there is no significant relationship between teaching beliefs and years of being a TLE teacher" is accepted.

The computed correlation coefficient r has a value of -0.760 between teaching beliefs and number of years in the teaching profession. This correlational value is significant since the corresponding Fisher's t of 2.864 is higher than the critical t-value of 2.447 at 0.05 significance level. So, the null hypothesis the "there is no significant relationship between respondents' teaching beliefs and years in the service" is rejected.

Performance rating. There is a negative and moderate correlation at -0.540 between respondents' teaching beliefs and performance rating. This correlation is not significant at 0.05 significance level since the computed fisher t which has a value of 1.572 is lower than the critical t-value of 2.447 at 0.05 significance level. This finding led to the acceptance of the hypothesis that "there is no significant relationship between teaching beliefs and performance rating of the respondents".

Trainings/seminars attended. For teaching beliefs and relevant trainings/seminars attended, the correlation coefficient is 0.230. This value is not significant for the simple reason that the computed Fisher's t-value of 0.579 is

lower than the critical t-value of 2.447 at 0.05 significance level. The hypothesis that "there is no significant relationship between teaching beliefs and trainings/seminars attended by respondents" is accepted.

Technological Literacy of Teacher-Respondents as Perceived by Them, Their Supervisor and Students

This part of the manuscript discusses the technological literacy of teacher-respondents as perceived by them, their supervisors and their students along technology operations and concepts, planning and designing learning environments and experiences, teaching, learning, and the curriculum, assessment and evaluation, productivity and professional practice and social, ethical, legal, and human issues.

Technology operations and concepts. Table 10 presents the level of technological literacy along 'technology operations and concepts' as perceived by teacher-respondents, their supervisors and students.

It is very evident in the table that the two statements measuring the level of technological literacy of TLE teachers were by the three groups of respondents which fall under the range 3.51 to 4.50 interpreted as 'skilled at this item.

The overall perceptions of the three groups of respondents is 'skilled at this item' as supported by a grand weighted mean of 3.87 from an individual group grand mean of 3.95 for teacher-respondents, 3.90 for supervisors and 3.77 for students.

Table 10

Teacher-Respondents' Level of Technological Literacy Along Technology Operations and Concepts as Perceived by the Teachers, Their Supervisors and Students

Statements	Respondents' Category						Combined Mean/Inter-pretation	
	TeaG		SupvG		StuG			
	Mean/Inter-pretation		Mean/Inter-pretation		Mean/Inter-pretation			
1. Demonstrate introductory knowledge, skills, and understanding of concepts related to technology.	4.00	S	4.00	S	3.94	S	3.98	S
2. Demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.	3.89	S	3.80	S	3.59	S	3.76	S
Grand Total	**7.89**	**-**	**7.80**	**-**	**7.53**	**-**	**7.74**	**-**
Grand Mean	**3.95**	**S**	**3.90**	**S**	**3.77**	**S**	**3.87**	**S**

Legend: TeaG - Teachers' Group
SupvG - Supervisors' Group
StudG - Students' Group
4.51 - 5.00 - Expert; able to instruct others (E)
3.51 - 4.50 - Skilled at this item (S)
2.51 - 3.50 - Can accomplish this item (CA)
1.51 - 2.50 - Can do this but occasionally need help (NH)
1.00 - 1.50 - No knowledge of this item (NK)

Planning and designing learning environments and experiences. Table 11 shows the level of technological literacy along 'planning and designing learning environments and experiences' as perceived by teacher-respondents, their supervisors and students.

Looking at the entries of the table, it is in statement 3 which says "Identify and locate technology resources and evaluate them for accuracy and suitability."

Table 11

Teacher-Respondents' Level of Technological Literacy Along Planning and Designing Learning Environments and Experiences as Perceived by the Teachers, Their Supervisors and Students

Statements	Respondents' Category						Combined Mean/Inter - pretation	
	TeaG		SupvG		StuG			
	Mean/Inter-pretation		Mean/Inter-pretation		Mean/Inter -pretation			
1. Design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners	4.00	S	3.60	S	3.90	S	3.83	S
2. Apply current research on teaching and learning with technology when planning learning environments and experiences	3.89	S	3.80	S	3.80	S	3.83	S
3. Identify and locate technology resources and evaluate them for accuracy and suitability	3.44	CA	4.00	S	3.45	CA	3.63	S
4. Plan for the management of technology resources within the context of learning activities	3.67	S	4.00	S	3.73	S	3.80	S
5. Plan strategies to manage student learning in a technology-enhanced environment	4.00	S	4.00	S	3.98	S	3.99	S
Grand Total	**19.00**	-	**19.40**	-	**18.86**	-	**19.09**	-
Grand Mean	**3.80**	-	**3.88**	-	**3.77**	-	**3.82**	**S**

Legend: TeaG - Teachers' Group
SupvG - Supervisors' Group
StudG - Students' Group
4.51 - 5.00 - Expert; able to instruct others (E)
3.51 - 4.50 - Skilled at this item (S)
2.51 - 3.50 - Can accomplish this item (CA)
1.51 - 2.50 - Can do this but occasionally need help (NH)
1.00 - 1.50 - No knowledge of this item (NK)

where the ratings of the three groups of respondents differed. The statement obtained a rating of 3.44 from the teacher-respondents group interpreted as 'can accomplish this item' similar to that of the student group with a weighted rating of 3.45. The supervisors group rated this statement at 4.00 interpreted as 'skilled in this item'.

The rest of the items measuring teacher-respondents' ability to plan and design learning environments and experiences were rated within the interpretation range of 'skilled in this item.'

Overall, the ability of the teacher-respondents to plan and design learning environments and experiences is 'skilled in this item.' as supported by a combined grand mean of 3.82.

Teaching, learning and the curriculum. Presented in Table 12 are the ratings obtained on the statements that measured the level of technological literacy of TLE teachers along 'teaching, learning and the curriculum' as perceived by them, their supervisors and students.

Going through the entries of the table will reveal that all statements measuring the level of technological literacy of teacher-respondents along teaching, learning and the curriculum as perceived by the three groups of respondents fell under the range of 3.51 to 4.50 interpreted as 'skilled at this items'.

Table 12

Teacher-Respondents' Level of Technological Literacy Along Teaching, Learning and the Curriculum as Perceived by the Teachers, Their Supervisors and Students

Statements	Respondents' Category						Combined Mean/Inter-pretation	
	TeaG		SupvG		StuG			
	Mean/Inter-pretation		Mean/Inter-pretation		Mean/Inter-pretation			
1. Facilitate technology-enhanced experiences that address content standards and student technology standards.	3.78	S	3.80	S	3.76	S	3.78	S
2. Use technology to support learner-centered strategies that address the diverse needs of students.	3.78	S	4.00	S	3.54	S	3.77	S
3. Apply technology to develop students' higher order skills and creativity.	3.78	S	3.80	S	3.82	S	3.80	S
4. Manage student learning activities in a technology-enhanced environment	3.89	S	4.00	S	3.78	S	3.89	S
Grand Total	**15.23**	**-**	**15.60**	**-**	**14.90**	**-**	**15.24**	**-**
Grand Mean	**3.81**	**S**	**3.90**	**S**	**3.73**	**S**	**3.81**	**S**

Legend: TeaG - Teachers' Group
SupvG - Supervisors' Group
StudG - Students' Group
4.51 - 5.00 - Expert; able to instruct others (E)
3.51 - 4.50 - Skilled at this item (S)
2.51 - 3.50 - Can accomplish this item (CA)
1.51 - 2.50 - Can do this but occasionally need help (NH)
1.00 - 1.50 - No knowledge of this item (NK)

The same is true for the overall perceptions of the three groups of respondents that the teacher-respondents are literate in performing the four

requirement as regards to using technology in teaching, learning and the curriculum.

Assessment and evaluation. Given in Table 15 is the teacher-respondents' level of technological literacy along assessment and evaluation as perceived by the teachers themselves, their supervisors and students.

Table 13

Teacher-Respondents' Level of Technological Literacy Along Assessment and Evaluation as Perceived by the Teachers, Their Supervisors and Students

Statements	Respondents' Category						Combined Mean/Inter - pretation	
	TeaG		SupvG		StuG			
	Mean/Inter-pretation		Mean/Inter-pretation		Mean/Inter -pretation			
1. Apply technology in assessing student learning of subject matter using a variety of assessment techniques.	3.78	S	3.56	S	3.74	S	3.69	S
2. Use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.	3.78	S	3.56	S	3.83	S	3.72	S
3. Apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity.	3.78	S	3.89	S	3.82	S	3.83	S
Grand Total	**11.34**	-	**11.01**	-	**11.39**	-	**11.25**	-
Grand Mean	**3.78**	-	**3.67**	-	**3.80**	-	**3.75**	**S**

Legend: TeaG - Teachers' Group, SupvG - Supervisors' Group, StudG - Students' Group
4.51 - 5.00 - Expert; able to instruct others (E)
3.51 - 4.50 - Skilled at this item (S)
2.51 - 3.50 - Can accomplish this item (CA)
1.51 - 2.50 - Can do this but occasionally need help (NH)
1.00 - 1.50 - No knowledge of this item (NK)

Very noticeable of the entries of the table is that all items purported to measure the level of technological literacy of teacher-respondents as perceived by themselves, by their supervisors and students along assessment and evaluation all obtained a weighted ratings within the 3.51 to 4.50 ranged interpreted as 'skilled at these items'.

The teacher-respondents are technologically literate in using technology in assessment and evaluation of students' performance.

Productivity and professional practice. Table 14 shows the level of technological literacy of teacher-respondents as perceived by themselves, by their supervisors and by their students along productivity and professional practice.

All four statements intended to measure teacher-respondents' technological literacy along productivity and professional practice obtained weighted ratings within the interpretation range of 'skilled at these items' that is, 3.51 to 4.50.

However, one statement got a weighted rating of 3.44 interpreted as 'can accomplish this item' from the teacher-respondents group. This is statement 4 which says 'Use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.

Table 14

Teacher-Respondents' Level of Technological Literacy Along Productivity and Professional Practice as Perceived by the Teachers, Their Supervisors and Students

Statements	Respondents' Category						Combined Mean/Inter - pretation	
	TeaG		SupvG		StuG			
	Mean/Inter-pretation		Mean/Inter-pretation		Mean/Inter -pretation			
1. Use technology resources to engage in ongoing professional development and lifelong learning.	3.67	S	4.00	S	3.78	S	3.82	S
2. Continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.	4.00	S	3.80	S	3.76	S	3.85	S
3. Apply technology to increase productivity	4.11	S	4.20	S	3.66	S	3.99	S
4. Use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.	3.44	CA	4.20	S	3.69	S	3.78	S
Grand Total	**15.22**	-	**16.20**	-	**14.89**	-	**15.44**	-
Grand Mean	**3.81**	-	**4.05**	-	**3.72**	-	**3.86**	**S**

Legend: TeaG - Teachers' Group
SupvG - Supervisors' Group
StudG - Students' Group
4.51 - 5.00 - Expert; able to instruct others (E)
3.51 - 4.50 - Skilled at this item (S)
2.51 - 3.50 - Can accomplish this item (CA)
1.51 - 2.50 - Can do this but occasionally need help (NH)
1.00 - 1.50 - No knowledge of this item (NK)

Social, ethical, legal and human issues. It can be gleaned from Table 15 above that the five statements intended to measure the level of technological

Table 15

Teacher-Respondents' Level of Technological Literacy Along Social, Ethical, Legal and Human Issues as Perceived by the Teachers, Their Supervisors and Students

Statements	Respondents' Category						Combined Mean/Inter - pretation	
	TeaG		SupvG		StuG			
	Mean/Inter-pretation		Mean/Inter-pretation		Mean/Inter -pretation			
1. Model and teach legal and ethical practice related to technology use.	4.11	S	3.80	S	3.71	S	3.87	S
2. Apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.	3.78	S	4.00	S	3.61	S	3.80	S
3. Identify and use technology resources that affirm diversity.	3.67	S	3.60	S	3.52	S	3.60	S
4. Promote safe and healthy use of technology resources.	4.00	S	3.60	S	3.85	S	3.82	S
5. Facilitate equitable access to technology resources for all students.	3.67	S	3.60	S	3.95	S	3.74	S
Grand Total	**19.23**	**-**	**18.60**	**-**	**18.64**	**-**	**18.82**	**-**
Grand Mean	**3.85**	**S**	**3.72**	**S**	**3.73**	**S**	**3.76**	**S**

Legend: TeaG - Teachers' Group
SupvG - Supervisors' Group
StudG - Students' Group
4.51 - 5.00 - Expert; able to instruct others (E)
3.51 - 4.50 - Skilled at this item (S)
2.51 - 3.50 - Can accomplish this item (CA)
1.51 - 2.50 - Can do this but occasionally need help (NH)
1.00 - 1.50 - No knowledge of this item (NK)

literacy of teacher-respondents along social, ethical, legal and human issues as perceived by the teachers themselves, their supervisors and students obtained weighted ratings within the interpretation range of 3.51 to 4.50 which means 'skilled at these items'.

As a result of this trend where all statements got a rating of 'skilled at these items', the overall or grand mean rating also felt within the same interpretation range with a particular value of 3.76.

Comparison in Perceptions Between Teacher-Respondents and Their Supervisors on Technological Literacy

The perceptions of the teacher-respondents, the supervisors and the students about teacher-respondents' technological literacy were compared as shown in Table 16.

Along the category 'Technology Operations and Concepts', the obtained F ratio is 0.0603 with a corresponding p-value of 0.602. Since this value is greater than the 0.05 significance level, it could be said that there is no significant difference in perceptions among the three groups of respondents. This led to the acceptance of the null hypothesis that "there is no significant difference in perceptions of the three groups of respondents on the level of technological literacy of the TLE teacher-respondents along technology operations and concepts."

Table 16

Comparison of the Perceptions of the Teachers, Their Supervisors and Students on the Teacher-Respondents' Level of Technological Literacy Using ANOVA

Area	F_{comp}	p-value	df_{bet}	df_{within}	F_{crit}	Evaluation
Technology Operations and Concepts	0.603	0.602	2	3	9.55	NS/Accept H_o
Planning and Designing Learning Environments and Experiences	0.357	0.707	2	12	3.89	NS/Accept H_o
Teaching, Learning and the Curriculum	2.857	0.109	2	9	4.26	NS/Accept H_o
Assessment and Evaluation	1.101	0.392	2	6	5.14	NS/Accept H_o
Productivity and Professional Practice	2.597	0.129	2	11	4.26	NS/Accept H_o
Social, Ethical, Legal and Human Issues	0.729	0.502	2	12	3.89	NS/Accept H_o

Revealed in the same Table 16 is the ANOVA for comparing the perceptions of the three groups of respondents on 'Planning and Designing Learning Environments and Experiences'. A level of significance of 0.05 with degree of freedom of 2 between groups, depicts that the computed F-ratio of 0.357 has a corresponding p-value of 0.707 which is greater than the 0.05 significance level. Thus, the hypothesis that "there is no significant difference in perceptions in the three groups of respondents on the level of technological

literacy of the TLE teacher-respondents along planning and designing learning environments and experiences" is accepted.

For technological literacy along "Teaching, Learning and the Curriculum", the critical F-ratio is 2.857 accompanied by a p-value of 0.109. Since this p-value is greater than the stipulated significance level of 0.05, it means no significant difference in perceptions among the three groups of respondents. Hence, the hypothesis that "there is no significant difference in perceptions among the three groups of respondents on the level of technological literacy of TLE teacher-respondents along teaching, learning and the curriculum" is accepted.

The calculated F-ratio value for technological literacy on 'Assessment and Evaluation" is 1.01. The accompanying p-value is 0.392 which is greater than the 0.05 significance level. It is concluded that the hypothesis "there is no significant difference in perceptions among the three groups of respondents on the level of technological literacy of TLE teacher-respondents along assessment and evaluation" is accepted.

On 'Productivity and Professional Practice', the computed F-ratio obtained in 2.597 supported by a p-value of 0.129. This p-value is greater than the stipulated 0.05 significance level. So, the hypothesis "there is no significant difference in perceptions among the three groups of respondents on the level of technological literacy of TLE teacher-respondents along productivity and professional practice" is accepted.

Technological literacy along "Social, Ethical, Legal and Human Issues" obtained a critical F-ratio of 0.729 accompanied by a p-value of 0.502. This p-value is greater than the stipulated significance level of 0.05 implying no significant difference in perceptions among the three groups of respondents. Hence, the hypothesis that "there is no significant difference in perceptions among the three groups of respondents on the level of technological literacy of TLE teacher-respondents along social, ethical, legal and human issues" is accepted.

Relationship Between Respondents' Technological Literacy and Profile

This portion presents and discusses the correlational analysis conducted between teacher-respondents techno-logical literacy and profile. The results of the analyses are presented in Table 17.

Age. As reflected in Table 17, the computed coefficient r value -0.130. The negative value implies an inverse and high correlation between the technological literacy and age.

The correlation is found out to be significant since the calculated t value of 4.003 is greater than the critical t value of 2.447 at 0.05 significance level. So, the null hypothesis which states 'there is no significant relationship between teaching beliefs and age' is rejected.

Table 17

Correlation Between Teacher-Respondents' Level of Technological Literacy and Their Profile

Variates	r_{xy}	Fischer's t	Evaluation/Decision
Age	-0.130	0.321	NS/Accept Ho
Sex	0.319	0.824	NS/Accept Ho
Average Monthly Income	0.698	2.388	NS/Accept Ho
Membership in Organizations:			
Number of Organizations	0.195	0.487	NS/Accept Ho
Number of Years of Membership	0.265	0.673	NS/Accept Ho
Educational Background	0.707	2.449	S/Reject Ho
Teaching Position	0.504	1.429	NS/Accept Ho
Experience:			
as TLE Teacher	0.524	1.507	NS/Accept Ho
Length of Service	-0.010	0.024	NS/Accept Ho
Performance Rating	-0.030	0.074	NS/Accept Ho
Relevant trainings/seminars attended	0.139	0.344	NS/Accept Ho

*significance level = 0.05; two-tailed; df = 7; critical t = 2.447

Sex. A low and negative correlation exists between respondents' technological literacy and sex as evidenced by a computed r-value of -0.352. The corresponding computed t- value of 0.921 implies insignificant relationship since the value is lower than the critical t value of 2.447 at 0.05 significance level. This observation led to the acceptance of the null hypothesis that says 'there is no significant relationship between technological literacy and sex of respondents'.

Average monthly income. A low and negative and correlation (r = -0.310) exists between technological literacy and average monthly income. This relationship is not significant since the computed Fisher's t of 2.388 is lower than

the critical t-value of 2.447 at 0.05 significance level. Hence, the hypothesis which states 'there is no significant relationship between teaching beliefs and average monthly income' is accepted.

Membership in organizations. A negligible correlation (r = 0.195) is observed between technological literacy beliefs and number of organizations the respondents are members. This correlation coefficient is not significant because the Fisher's t-value of 0.487 is lower than the critical t-value of 2.447 at 0.05 significance level. This led to the acceptance of the hypothesis which says "there is no significant relationship between technological literacy and number of organization".

The correlation coefficient obtained between technological literacy and years of membership is 0.265. This value imply a low correlation and at the same time not significant. It is not significant since the computed Fisher's t has a value of 0.673 is lower than the critical t-value of 2.447 at 0.05 significance level. This led to the acceptance of the null hypothesis which states "there is no significant relationship between technological literacy and duration of membership".

Educational background. The computed correlation coefficient r is 0.707 between technological literacy and educational background. This correlational value is significant since the corresponding Fisher's t of 2.449 is greater than the critical t-value of 2.447 at 0.05 significance level. So, the hypothesis that "there is

no significant relationship between respondents" technological literacy and educational background' is rejected.

Teaching position. Technological literacy of teacher-respondents and teaching position posted a computed correlation coefficient r of 0.504. This value is not significant since the calculated Fisher's t of 1.429 is lower than the critical t-value of 2.447 at 0.05 significance level. The null hypothesis which states "there is no significant relationship between technological literacy and teaching position" is accepted.

Years in service and teaching TLE. On the number of years of being a TLE teacher, the calculated correlation coefficient with technological literacy is 0.534. This correlational value is not significant since the Fisher's t-value of 1.507 is lower than the critical t-value of 2.447 at 0.05 significance level. Hence, the null hypothesis that states "there is no significant relationship between technological literacy and years of being a TLE teacher" is accepted.

The correlation coefficient r has a value of -0.010 between technological literacy and length of service in the teaching profession. This r-value is not significant since the accompanying Fisher's t of 0.024 is lower than the critical t-value of 2.447 at 0.05 significance level. So, the hypothesis that "there is no significant relationship between respondents' technological literacy and length of the service" is rejected.

Performance rating. A negative and negligible correlation at -0.030 resulted between respondents' technological literacy and performance rating.

This correlation is not significant at 0.05 significance level since the computed Fisher's t has a value of 0.074 is lower than the critical t-value of 2.447. This observation led to the conclusion that "there is no significant relationship between technological literacy and performance rating of the respondents".

Trainings/Seminars Attended. The correlation coef-ficient is 0.230 between technological literacy and relevant trainings/seminars attended. This value is not significant for the simple reason that the computed Fisher's t-value of 0.344 is lower than the critical value of 2.447 at 0.05 significance level.

Relationship Between Respondents' Teaching Beliefs and Technological Literacy

Discussed here is the correlation performed between teacher-respondents' teaching beliefs and technological literacy. The results are presented in Table 18.

Technology operations and concepts. Reflected in Table 18 is the correlation coefficient of -0.135 between teaching beliefs and technology operations and concepts. This value is not significant since the computed Fisher's t at 0.334 is lower than the critical t value of 2.447. This finding led to the acceptance of the hypothesis that "there is no significant relationship between teaching beliefs and technology operations and concepts".

Planning and designing learning environments and experiences. In the same Table 18 is posted the correlation value of -0.087 between teaching beliefs and planning and designing learning environments and experiences. This

posted value has a corresponding Fisher's t of 0.214 that is lower than the critical t-value of 2.447. The hypothesis "there is no significant relationship between teaching beliefs and ability to plan and design learning environments and experiences of teacher-respondents" is accepted.

Table 18

Correlation Between Teacher-Respondents' Teaching Beliefs and Their Technological Literacy

Areas of Technological Literacy	r_{xy}	Fischer's t	Evaluation/Decision
Technology Operations and Concepts	-0.135	0.334	NS/Accept Ho
Planning and Designing Learning Environments and Experiences	-0.087	0.214	NS/Accept Ho
Teaching, Learning and the Curriculum	-0.252	0.638	NS/Accept Ho
Assessment and Evaluation	-0.329	0.853	NS/Accept Ho
Productivity and Professional Practice	0.807	3.347	S/Reject Ho
Social, Ethical, Legal and Human Issues	-0.061	0.150	NS/Accept Ho

*significance level = 0.05; two-tailed; df = 7; critical t = 2.447

Teaching, learning and the curriculum. This element of technological literacy yielded a correlation coefficient of -0.252 with teacher-respondents' teaching beliefs as reflected in same Table 18. The corresponding Fisher's t-value is 0.638 and is lower compared to the critical t- value of 2.447 at 0.05 significance level. Hence, the null hypothesis which states "there is no

significant relationship between teaching beliefs and technological literacy along teaching, learning and the curriculum" is accepted.

Assessment and evaluation. The correlation between teacher-respondents' teaching beliefs and their technological literacy along assessment and evaluation resulted to a correlation coefficient r of -0.329 with a corresponding Fisher's t-value of 0.853. The critical t-value of 2.447 at significance level 0.05 is greater than the computed Fisher's t-value. This led to the acceptance of the hypothesis that "there is no significant relationship between teaching beliefs and technological literacy along assessment and evaluation".

Productivity and professional practice. The computed coefficient of correlation r of 0.807 between teaching beliefs and productivity and professional practice is accompanied by a Fisher's t- value of 3.347 is greater than the critical t-value of 2.447 at 0.05 significance level. Thus, the hypothesis that "there is no significant relationship between teaching beliefs and technological literacy along productivity and professional practice" is rejected.

Social, ethical, legal and human issues. For this technological literacy variable, the obtained coefficient of correlation r is -0.061 with teaching beliefs. The computed Fisher's t-value of 0.150 is lower than the critical t-value of 2.447 at 0.05 significance level. This indicated that the hypothesis "there is no significant relationship between teaching beliefs and technological literacy along social, ethical, legal and human issues" is accepted.

Level of Students' Performance in the National career Assessment Examination (NCAE)

This section discusses the level of performance of students in the NCAE along the areas of manipulative skills and entrepreneurial skills based on the entries of Table 19.

Table 19

Student-Respondents Performance in the National Career Examination (NCAE) Along Manipulative and Entrepreneurial Skills

NCAE Percentile Scores	Descriptive Rating	Manipulative Skills		Entrepreneurial Skills	
		f	Percent	f	Percent
99 +	Excellent (E)	1	0.64	0	0.00
98 - 99	Very High (VH)	2	1.27	0	0.00
86 - 97	Above Average (AA)	15	9.55	6	3.82
51 - 85	Average (A)	36	22.93	35	22.29
15 - 50	Low Average (LA)	67	42.68	72	45.86
3 - 14	Below Average (BA)	31	19.75	33	21.02
1 - 2	Poor (P)	4	2.55	10	6.37
below 1	Very Poor (VP)	1	0.64	1	0.64
Total	-	**157**	**100.00**	**157**	**100.00**
Mean	-	**42.24**	**LA**	**33.80**	**LA**
SD	-	**28.98**	-	**25.38**	-

Inspection of the entries will reveal that most of the student-respondents are 'low average' in manipulative skills (67 or 42.68 percent) and also true in terms of entrepreneurial skills (72 or 45.86 percent). This is seconded by 36 or 22.93 percent and 35 or 22.29 percent of the student-respondents being 'average'

in the two skills. It appears that students' manipulative skills are directly related to their entrepreneurial skills.

However, in the next lower and higher NCAE performance level categorized as 'below average' and 'above average', the trend was reversed. Thirty one or 19.75 percent of the students are 'below average' in manipulative skills and 33 or 21.02 percent in entrepreneurial skills. On the performance level of 'above average', the situation was reversed with 15 or 9.55 percent in the manipulative skills while in the entrepreneurial skills it is six or 3.82 percent.

Going through the organized data, it appears that most students were better in manipulative skills than in entrepreneurial skills. This observation is supported by the fact there are students who were excellent in manipulative skills (one or 0.64 percent) compared to zero in entrepreneurial skills; two or 1.27 percent 'very high' in manipulative skills compared to zero again in entrepreneurial skills; 15 or 9.55 percent 'above average' in manipulative skills compared to six or 3.82% in entrepreneurial skills.

Going through the level NCAE performance, about 31 or 19.75 are 'below average' in manipulative skills but quite higher (33 or 21.02 percent) in entrepreneurial skills.

This assertion is further supported by a higher mean percentile score of 42.24 in manipulative skills compared to entrepreneurial skills with a mean percentile score of 33.80.

Relationship Between Teacher-Respondents' Teaching Beliefs and NCAE Performance of Students

Table 20 presents the relationship between teacher-respondents' teaching beliefs and students' performance in the National Career Assessment Examination (NCAE).

Table 20

Correlation Between Teacher-Respondents' Teaching Beliefs and Students' Performance

Student' Performance in the NCAE	r_{xy}	Fisher's t	Evaluation/Decision
Manipulative Skills	0.485	1.358	NS/Accept Ho
Entrepreneurial Skills	0.743	2.719	S/Reject Ho

*significance level = 0.05; two-tailed; df = 7; critical t = 2.447

As reflected in the table, the correlation value between teacher-respondents' beliefs about teaching and students' manipulative skills is 0.485. This correlation value is moderate but not significant simply because the corresponding Fisher's t value of 1.358 is lower than that of the critical t-value of 2.447 at 0.05 significance level. Thus, the hypothesis "there is no significant relationship between teacher-respondents' teaching beliefs and students' manipulative skills based on NCAE result" is accepted.

On the other hand, the correlation between teacher-respondents' teaching beliefs and students' entrepreneurial skills is quite high and significant since the

computed Fisher's t-value of 2.719 is greater than the critical t-value of 2.447. Hence, "there is a significant relationship between teacher-respondents teaching beliefs and students' NCAE measured entrepreneurial skills".

Relationship Between Teacher-Respondents' Technological Literacy and Students' Manipulative Skills

Table 21 shows the results of the analysis conducted regarding the relationship between students' manipulative skills and teacher-respondents' technological literacy.

Table 21

Correlation Between Students' NCAE Performance in Manipulative Skills and Teacher-Respondents' Level of Technological Literacy

Areas of Technological Literacy	r_{xy}	Fisher's t	Evaluation/Decision
Technology Operations and Concepts	0.42	1.1271	NS/Accept Ho
Planning and Designing Learning Environments and Experiences	0.36	0.9362	NS/Accept Ho
Teaching, Learning and the Curriculum	0.12	0.2936	NS/Accept Ho
Assessment and Evaluation	0.30	0.7816	NS/Accept Ho
Productivity and Professional Practice	0.17	0.4302	NS/Accept Ho
Social, Ethical, Legal and Human Issues	0.16	0.4021	NS/Accept Ho

*significance level = 0.05; two-tailed; df = 7; critical t = 2.447

Technology operations and concepts. Reflected in Table 18 is the correlation coefficient of 0.42 between technological literacy of teacher-respondents along technology operations and concepts and students' NCAE results in manipulative skills. This correlation is high but it is not significant since the computed Fisher's t of 1.1271 is lower than the critical t-value of 2.447. This finding led to the acceptance of the hypothesis that "there is no significant relationship between technological literacy of teacher-respondents along technology operations and concepts and students' manipulative skills".

Planning and designing learning environments and experiences. The same Table 18 reflects a correlation value of 0.36 between technological literacy of teacher-respondents along planning and designing learning environments and students' manipulative skills. This correlation value has a corresponding Fisher's t-value of 0.9362 that is lower than the critical t-value at 2.447 at 0.05 significance. The hypothesis "there is no significant relationship between technological literacy along planning and designing learning environments and experiences with students' manipulative skills" is accepted.

Teaching, learning and the curriculum. This component of technological literacy among teacher-respondents yielded a correlation coefficient of 0.12 with students' manipulative skills. The corresponding Fisher's t-value is 0.2936 and is lower compared to the critical t value of 2.447 at 0.05 significance level. Hence, the null hypothesis which states "there is no significant relationship between

technological literacy along teaching, learning and the curriculum and manipulative skills of students" is accepted.

Assessment and evaluation. The correlation between teacher-respondents' ability to assess and evaluate using technology and students' manipulative skills resulted to a correlation coefficient r of 0.30 with a corresponding Fisher's t-value of 0.7816. The critical t-value of 2.447 at significance level 0.05 is greater than the computed Fisher's t-value. This led to the acceptance of the hypothesis that "there is no significant relationship between technological literacy along assessment and evaluation of teacher-respondents and manipulative skills of students".

Productivity and professional practice. The computed correlation coefficient r of 0.17 between technological literacy along productivity and professional practice and manipulative skills is accompanied by a Fisher's t value of 0.4302 that is lower than the critical t value of 2.447 at 0.05 significance level. Thus, the hypothesis that "there is no significant relationship between technological literacy of teacher-respondents along productivity and professional practice and students' manipulative skills" is accepted.

Social, ethical, legal and human issues. This technological literacy component posted a coefficient of correlation r of 0.16 with students' manipulative skills. The computed Fisher's t-value of 0.4021 is lower than the critical t-value of 2.447 at 0.05 significance level. This led to the acceptance of the hypothesis "there is no significant relationship between technological literacy of

teacher-respondents along social, ethical, legal and human issues and students' manipulative skills".

Relationship Between Teacher-Respondents' Technological Literacy and Students' Entrepreneurial Skills

The correlational analysis performed between student' NCAE performance in entrepreneurial skills and teacher-respondents' technological literacy are presented in Table 22.

Technology operations and concepts. Shown in Table 22 the relationship between teacher-respondents' technological literacy along technology operations and concepts and students' entrepreneurial skills.

Table 22

Correlation Between Students' NCAE Performance in Entrepreneurial Skills and Teacher-Respondents' Level of Technological Literacy

Areas of Technological Literacy	r_{xy}	Fisher's t	Evaluation/Decision
Technology Operations and Concepts	0.483	1.3512	NS/Accept Ho
Planning and Designing Learning Environments and Experiences	0.455	1.2516	NS/Accept Ho
Teaching, Learning and the Curriculum	0.223	0.5603	NS/Accept Ho
Assessment and Evaluation	0.302	0.776	NS/Accept Ho
Productivity and Professional Practice	0.722	2.5561	S/Reject Ho
Social, Ethical, Legal and Human Issues	0.311	0.8015	NS/Accept Ho

*significance level = 0.05; two-tailed; df = 7; critical t = 2.447

Calculation posted a correlation coefficient r of 0.483 with a corresponding Fisher's t-value of 1.3512. The critical t-value of 2.447 at significance level 0.05 is greater than the computed Fisher's t-value which led to the acceptance of the hypothesis that "there is no significant relationship between technological literacy of teacher-respondents along technology operations and concepts and students' entrepreneurial skills".

Planning and designing learning environments and experiences. Given in Table 22 a correlation coefficient value of 0.455 between technological literacy of teacher-respondents along planning and designing learning environments and experiences and entrepreneurial skills of students. This correlation value gave a Fisher's t-value of 1.2516 that is lower than the critical t-value at 2.447 at 0.05 significance. The hypothesis "there is no significant relationship between technological literacy along planning and designing learning environments and experiences and students' entrepreneurial skills" is accepted.

Teaching, learning and the curriculum. This component of technological literacy among teacher-respondents yielded a correlation coefficient of 0.223 with students' entrepreneurial skills. The corresponding Fisher's t-value is posted at 0.5603 that is lower compared to the critical t-value of 2.447 at 0.05 significance level. Hence, the null hypothesis which states "there is no significant relationship between technological literacy of teacher-respondents along teaching, learning and the curriculum and entrepreneurial skills of students" is accepted.

Assessment and evaluation. Reflected in Table 22 is the correlation coefficient of 0.302 between technological literacy of teacher-respondents along assessment and evaluation and students' NCAE performances in entrepreneurial skills. This correlation is not significant since the computed Fisher's t of 0.776 is lower compared to the critical t-value of 2.447 at 0.05 significance level. This finding led to the acceptance of the hypothesis that "there is no significant relationship between technological literacy of teacher-respondents along assessment and evaluation and entrepreneurial skills of students".

Productivity and professional practice. This technological literacy component resulted to a coefficient of correlation r of 0.722 with students' entrepreneurial skills. The computed Fisher's t-value of 2.5561 is greater than the critical t-value of 2.447 at 0.05 significance level. This led to the rejection of the hypothesis "there is no significant relationship between technological literacy of teacher-respondents along productivity and professional practice and students' entrepreneurial skills".

Social, ethical, legal and human issues. The computed correlation coefficient r of 0.311 between technological literacy along social, ethical, legal and human issues and entrepreneurial skills of students is accompanied by a Fisher's t-value of 0.8015 that is lower than the critical t-value of 2.447 at 0.05 significance level. Thus, the hypothesis that "there is no significant relationship between technological literacy of teacher-respondents along social, ethical, legal and human issues and students' entrepreneurial skills" is accepted.

Implications

The constructivist reform of teaching recognizes that teachers' classroom behavior is influenced by teachers' norms, attitudes, values and beliefs. This approach is supported by the results of the present where TLE teacher-respondents' teaching beliefs was significantly related to their age (-0.853), number of years in the teaching service (-0.60), and technology literacy along productivity and professional practice (0.807).

This information has important implication on the way teachers teach a particular subject. The teaching method used by a teacher depends so much on one's teaching beliefs. For example, in constructivist teaching, the teacher acts facilitator of learning. The teacher provides opportunities and resources for his or her students to discover or construct concepts for themselves. If the teacher possess a different beliefs of teaching and he or she may not adopt constructivist teaching and cling to his traditional beliefs in the transmission perspective of teaching where it is the primary job of the teacher to explain, show how to do the work and assign specific practice.

Chapter 5

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary of findings, the conclusions drawn and the recommendations that were formulated based on the results of the study.

Summary of Findings

The following are the major findings of the study:

1. There were three male- and five female-respondents with mean age of 42.78 years.

2. The respondents had average monthly income of PhP13,996.00.

3. Five of the respondents were not members in any organization while four were members of some organizations.

4. Five of the respondents were college graduates with majors in technology and the remaining four were non-technology majors.

5. Six of the respondents were Secondary School Teacher I while two were holding Secondary School Teacher III position and the last one was holding a Secondary School Teacher II position.

6. The average years in the teaching service was 11.94 years while the average years teaching TLE was 22 years.

7. The relevant training and/or seminars attended by respondents posted an average of 130.67 hours.

8. Majority of the respondents 'agree' on the statements measuring their teaching beliefs with a grand mean of 4.05.

9. The correlation between respondents' teaching beliefs and age was significant since the calculated Fisher's t-value of 4.003 is greater than the critical t-value of 2.447 at 0.05 significance level. So, the null hypothesis which states "there is no significant relationship between teaching beliefs and age" was rejected.

10. The correlation between respondents' teaching beliefs and sex was not significant because computed Fisher's t-value was 0.921 which was lower than the critical t-value of 2.447 at 0.05 significance level. This led to the acceptance of the null hypothesis that says "there is no significant relationship between teaching beliefs and sex of respondents".

11. The relationship between respondents' teaching beliefs and average monthly income was not significant since the computed Fisher's t of 0.397 was lower than the critical t-value of 2.447 at 0.05 significance level. Hence, the hypothesis which states "there is no significant relationship between teaching beliefs and average monthly income" was accepted.

12. The relationship between respondents' teaching beliefs and number of organizations the respondents were members was not significant simply because the Fisher's t-value of 0.105 was lower than the critical t- value of 2.447 at 0.05 significance level. The hypothesis "there is no significant relationship between teaching beliefs and number of organization" is accepted.

13. As regards to the number of years the respondents are members of an organization, the correlation with teaching beliefs was not significant. Not significant since the computed Fisher's t had a value of 0.221 which was lower than the critical t-value of 2.447 at 0.05 significance level. This led to the acceptance of the null hypothesis which states "there is no significant relationship between teaching beliefs and duration of membership".

14. The computed r value of 0.107 between respondents' teaching beliefs and educational background was not significant since the corresponding Fisher's t of 0.397 was lower than the critical t-value of 2.447 at 0.05 significance level. So, the null hypothesis that "there is no significant relationship between respondents' teaching beliefs and educational background" was accepted.

15. Teaching beliefs of respondents and teaching position has a computed correlation coefficient of -0.250 which was not significant since the calculated Fisher's t of 0.632 was lower than the critical t-value of 2.447 at 0.05 significance level. The null hypothesis which states "there is no significant relationship between teaching beliefs and teaching position" was accepted.

16. As to number of years of being a TLE teacher, the calculated correlation coefficient with teaching beliefs was -0.650 and found out not significant since the Fisher's t-value of 2.095 was lower than the critical t-value of 2.447 at 0.05 significance level. Hence, the null hypothesis saying "there is no significant relationship between teaching beliefs and years of being a TLE teacher" was accepted.

17. The computed correlation coefficient r has a value of -0.760 between respondents' teaching beliefs and number of years in the teaching profession was significant since the corresponding Fisher's t of 2.864 was higher than the critical t-value of 2.447 at 0.05 significance level. So, the null hypothesis the "there is no significant relationship between respondents' teaching beliefs and years in the service" was rejected.

18. The correlational value of -0.540 between respondents' teaching beliefs and performance rating was not significant at 0.05 significance level since the computed Fisher's t which had a value of 1.572 lower than the critical t-value of 2.447 at 0.05 significance level. This finding led to the acceptance of the hypothesis that "there is no significant relationship between teaching beliefs and performance rating of the respondents".

19. For teaching beliefs and relevant trainings and/or seminars attended, the correlation coefficient of 0.230 was not significant for the simple reason that the computed Fisher's t-value of 0.579 was lower than the critical t-value of 2.447 at 0.05 significance level. The hypothesis that "there is no significant relationship between teaching beliefs and trainings/seminars attended by respondents" was accepted.

20. The overall level of technological literacy along 'technology operations and concepts' as perceived by teacher-respondents, their supervisors and students was 'skilled at this item' as supported by a grand weighted mean of 3.87.

21. Overall, the level of technological literacy along 'planning and designing learning environments and experiences' as perceived by teacher-respondents, their supervisors and students was 'skilled in this item' as supported by a combined grand mean of 3.82.

22. The overall level of technological literacy of TLE teachers along 'teaching, learning and the curriculum' as perceived by them, their supervisors and students was 'skilled at this item' with a grand mean of 3.81

23. The overall level of technological literacy along assessment and evaluation as perceived by the teachers themselves, their supervisors and students was 'skilled at this item' as supported by a grand mean of 3.75.

24. The grand mean was 3.86 interpreted as 'skilled in this item' for teacher-respondents' level of technological literacy along productivity and professional practice as perceived by the teachers, their supervisors and students with grand mean of 3.86.

25. 'Skilled at these items' was the overall interpretation of teacher-respondents' level of technological literacy along social, ethical, legal and human issues as perceived by the teachers, their supervisors and students with grand mean of 3.76.

26. The perceptions of the three groups of respondents along the category 'Technology Operations and Concepts', the obtained F ratio is 0.0603 with a corresponding p-value of 0.602 was not significant since the p-value was greater than the 0.05 significance level.

27. As to 'Planning and Designing Learning Environments and Experiences', the computed F-ratio of 0.357 corresponding to a p-value of 0.707 was not significant since the p-value was greater than 0.05 significance level.

28. For technological literacy along "Teaching, Learning and the Curriculum", the critical F-ratio was 2.857 accompanied by a p-value of 0.109. The p-value was greater than the stipulated significance level of 0.05 leading to no significant difference in perceptions among the three groups of respondents.

29. The calculated F-ratio value for technological literacy on 'Assessment and Evaluation" was 1.01 with a p-value of 0.392 interpreted as not significant since the p-value was greater than the significance level 0.05.

30. On 'Productivity and Professional Practice', the computed F-ratio obtained was 2.597 supported by a p-value of 0.129. This p-value was greater than the stipulated 0.05 significance level, the perceptions of the three groups of respondents was not significant.

31. Technological literacy along "Social, Ethical, Legal and Human Issues" obtained a critical F-ratio of 0.729 accompanied by a p-value of 0.502 was not significant since the p-value was greater than the stipulated significance level of 0.05 implying no significant difference in perceptions among the three groups of respondents.

32. The computed coefficient r value of -0.130 between teacher-respondents' technological literacy and age was significant since the calculated t-value of 4.003 is greater than the critical t-value of 2.447 at 0.05 significance level.

33. The correlation between teacher-respondents' level of technological literacy and sex yielded an r-value of 0.319 corresponding to a Fisher's t-value of 0.824. It was found out not significant since the Fisher's t-value was lower than the 2.447 critical t-value.

34. The relationship between technological literacy and average monthly income was not significant since the computed Fisher's t-value of 2.388 was lower than the critical t-value of 2.447 at 0.05 significance level.

35. The computed correlation (r = 0.195) between technological literacy beliefs and number of organizations the respondents are members was significant since the observed Fisher's t-value of 0.487 was lower than the critical t-value of 2.447 at 0.05 significance level.

36. The correlation coefficient obtained between technological literacy and years of membership was 0.265 and found out not significant because the computed Fisher's t had a value of 0.673 lower than the critical t-value of 2.447 at 0.05 significance level.

37. The computed correlation coefficient r was 0.707 between technological literacy and educational background and found out significant since the Fisher's t-value of 2.449 was greater than the critical t-value of 2.447 at 0.05 significance level.

38. Technological literacy of teacher-respondents and teaching position posted a computed correlation coefficient r of 0.504. The correlation was not

significant since the calculated Fisher's t of 1.429 was lower than the critical t-value of 2.447 at 0.05 significance level.

39. On the number of years of being a TLE teacher, the calculated correlation coefficient with technological literacy was 0.534 and this correlational value was not significant since the Fisher's t-value of 1.507 is lower than the critical t-value of 2.447 at 0.05 significance level.

40. The correlation coefficient r has a value of -0.010 between technological literacy and length of service in the teaching profession. This r-value was not significant since the accompanying Fisher's t of 0.024 was lower than the critical t-value of 2.447 at 0.05 significance level.

41. The correlation -0.030 that resulted between respondents' technological literacy and performance rating was not significant at 0.05 significance level since the computed Fisher's t has a value of 0.074 lower than the critical t-value of 2.447.

42. The correlation coefficient was 0.230 between technological literacy and relevant trainings/seminars attended. This value was not significant for the simple reason that the computed Fisher's t-value of 0.344 is lower than the critical value of 2.447 at 0.05 significance level.

42. The correlation coefficient was -0.135 between teaching beliefs and technology operations and concepts and found out not significant since the computed Fisher's t at 0.334 was lower than the critical t value of 2.447.

43. Planning and Designing Learning Environments and Experiences posted a correlation value of -0.087 with teaching beliefs. The correlation was not significant since the Fisher's t of 0.214 was lower than the critical t-value of 2.447.

44. Teaching, Learning and the Curriculum yielded a correlation coefficient of -0.252 with teacher-respondents' teaching beliefs. The corresponding Fisher's t-value of 0.638 was lower compared to the critical t-value of 2.447 at 0.05 significance level, hence not significant.

45. The correlation between teacher-respondents' teaching beliefs and their technological literacy along assessment and evaluation resulted to a correlation coefficient r of -0.329 with a corresponding Fisher's t value of 0.853. The critical t-value of 2.447 at significance level 0.05 was greater than the computed Fisher's t-value implying no significant relationship.

46. The computed coefficient of correlation r of 0.807 between teaching beliefs and productivity and professional practice was significant since the accompanied by a Fisher's t-value of 3.347 that was greater than the critical t-value of 2.447 at 0.05 significance level.

47. The obtained coefficient of correlation r was -0.061 with teaching beliefs. The computed Fisher's t-value of 0.150 was lower than the critical t-value of 2.447 at 0.05 significance level. This indicated no significant relationship between the two variables.

48. Most of the student-respondents were 'low average' in manipulative skills as exhibited by 67 or 42.68 percent and also in entrepreneurial skills at 72 or 45.86 percent of them.

49. The correlation value between teacher-respondents' beliefs about teaching and students' manipulative skills is 0.485. This correlation value was moderate but not significant simply because the corresponding Fisher's t-value of 1.358 was lower than that of the critical t-value of 2.447 at 0.05 significance level.

50. The correlation between teacher-respondents' teaching beliefs and students' entrepreneurial skills was quite high and significant since the computed Fisher's t-value of 2.719 was greater than the critical t-value of 2.447.

51. Students' manipulative skills and teacher-respondents' technological literacy along technology operations and concepts and students' posted high correlation of 0.42 but not significant since the computed Fisher's t of 1.1271 was lower than the critical t-value of 2.447.

52. Manipulative skills of students and teacher-respondents along planning and designing learning environments exhibited a correlation value of 0.36 which was not significant because corresponding Fisher's t-value of 0.9362 was lower than the critical t-value at 2.447 at 0.05 significance.

53. Students' manipulative skills and technological literacy among teacher-respondents along teaching, learning and the curriculum had a correlation coefficient of 0.12. The correlation was not significant since the

corresponding Fisher's t-value was 0.2936 which was lower compared to the critical t-value of 2.447 at 0.05 significance level.

54. The correlation between teacher-respondents' ability to assess and evaluate using technology and students' manipulative skills resulted to a correlation coefficient r of 0.30 with a corresponding Fisher's t-value of 0.7816. The critical t-value of 2.447 at significance level 0.05 was greater than the computed Fisher's t-value implying no significant relationship.

55. The computed correlation coefficient r of 0.17 between technological literacy along productivity and professional practice of teacher-respondents and manipu-lative skills of students was not significant since the Fisher's t-value of 0.4302 was lower than the critical t value of 2.447 at 0.05 significance level.

56. The 0.16 r-value between teacher-respondents' technological literacy along social, ethical, legal and human issues and students' manipulative skills was not significant due to lower computed Fisher's t-value of 0.4021 than the critical t-value of 2.447 at 0.05 significance level.

57. The relationship between teacher-respondents' technological literacy along technology operations and concepts and students' entrepreneurial skills posted a correlation coefficient r of 0.483 which was not significant since the Fisher's t-value of 1.3512 was lower than the critical t-value of 2.447 at significance level 0.05.

58. The 0.455 r-value between teacher-respondents' technological literacy of teacher-respondents along planning and designing learning environments and experiences and entrepreneurial skills of students was not significant since the Fisher's t-value of 1.2516 was lower than the critical t-value at 2.447 at 0.05 significance.

59. Technological literacy among teacher-respondents along teaching, learning and the curriculum yielded a correlation coefficient of 0.223 with students' entrepreneurial skills. This correlational value was not significant since Fisher's t-value posted at 0.5603 was lower compared to the critical t-value of 2.447 at 0.05 significance level.

60. The correlation coefficient of 0.302 between technological literacy of teacher-respondents along assessment and evaluation and students' NCAE performances in entrepreneurial skills was not significant because the computed Fisher's t of 0.776 was lower compared to the critical t-value of 2.447 at 0.05 significance level.

61. Productivity and Professional Practice technological literacy or teacher-respondents posted a correlation coefficient r of 0.722 with students' entrepreneurial skills. The computed Fisher's t-value of 2.5561 was greater than the critical t-value of 2.447 at 0.05 significance level, hence, the two variables were significantly correlated.

62. The computed correlation coefficient r of 0.311 between technological literacy of teacher-respondents along social, ethical, legal and

human issues and entrepreneurial skills of students was not significant because the Fisher's t-value of 0.8015 was lower than the critical t-value of 2.447 at 0.05 significance level.

Conclusions

The following conclusions were drawn based on the major findings of the study:

1. The TLE teacher-respondents have average age of 42.78 years with an average monthly income of PhP13,996.00 and were mostly females.

2. Majority of the TLE teacher-respondents were not were not members in any organization.

3. Majority of the TLE teacher-respondents were education graduates majors in technology.

4. The most common teaching position or rank of TLE teacher-respondents were Secondary School Teacher I.

5. The number of years in the teaching field was almost the same as the number of years teaching TLE subjects.

6. Majority of the respondents 'agree' on the statements measuring their teaching beliefs.

7. TLE teacher-respondents' teaching beliefs was significantly related to their age and number of years in the teaching service.

8. TLE teacher-respondents' teaching beliefs was not significantly related to sex, average monthly income, number of organizations the respondents were members, number of years in an organization, educational background, teaching position, number of years teaching TLE, performance rating, and relevant trainings and/or seminars attended.

9. TLE teacher-respondents were skilled in term of level of technological literacy along technology operations and concepts; planning and designing learning environments and experiences; teaching, learning and the curriculum; assessment and evaluation; productivity and professional practice; and social, ethical, legal and human issues.

10. TLE teacher-respondents, supervisors and students held equal or the same perceptions regarding TLE teacher-respondents' skilled level of technological literacy.

11. TLE teacher-respondents' level of technological literacy was significantly related to age and educational background.

12. TLE teacher-respondents' level of technological literacy was not related to sex; average monthly income; number of organizations involved in; years of membership; teaching position; length of service; number of years of being a TLE teacher; performance rating; and relevant trainings/ seminars attended.

13. TLE teacher-respondents' teaching beliefs and productivity and professional practice was significantly related but not with technology

operations and concepts; planning and designing learning environments and experiences; teaching, learning and the curriculum; assessment and evaluation; and social, ethical, and legal and human issues.

14. Majority of the student-respondents were 'low average' in manipulative and also in entrepreneurial skills in term of NCAE performance.

15. No significant correlation was detected between TLE teacher-respondents' beliefs about teaching and students' manipulative skills. However, TLE teacher-respondents' teaching beliefs and students' entrepreneurial skills were significant related.

16. Students' manipulative skills was not significantly related to TLE teacher-respondents' technological literacy along technology operations and concepts; planning and designing learning environments; teaching, learning and the curriculum; assessment and evaluation; productivity and professional practice; and social, ethical, legal and human issues.

17. Student-respondents' entrepreneurial skills was significantly related to TLE teacher-respondents' technological literacy along productivity and professional practice but not with technology operations and concepts; planning and designing learning environments and experiences; teaching, learning and the curriculum; assessment and evaluation; and social, ethical, legal and human issues.

Recommendations

The following recommendations were formulated based on the findings of the study:

1. Teachers must understand their beliefs about what constitutes good instructional practice because it will affect their teaching. Their own instructional practices reflect, to a large extent, what they believe to be good teaching, and their beliefs about good teaching reflect their understandings about how students learn.

2. TLE teachers must be flexible in their teaching philosophies even if they get older. New development in effective teaching will not be implemented inside the classroom if teachers will always cling to their old beliefs of teaching.

3. The findings showed that TLE teacher-respondents' technological literacy was related to the students' NCAE performance in entrepreneurial skills but not in manipulative skills. As such there is a need for teachers to focus not only on developing the entrepreneurial skill of students but also their manipulative skills.

4. Every body lives in a global knowledge-based economy today calls for a clear commitment towards lifelong learning for society. It is therefore suggested that TLE teachers should not focus only on the development of students' manipulative skills and entrepreneurial skills but also lifelong learning - learning throughout one's lifetime which encompasses formal, non-formal and informal education aiming at producing citizens who are able to utilize various

kinds of knowledge, especially those related to science and technology creativity in everyday life, to solve problems, make decisions and improve the quality of life.

5. Samar State University is one institutions of higher which produces TLE teachers. It is therefore suggested that the results of this study be considered in the planning teacher education programs with majors in technology. It is the responsibility of teacher preparation programs at institutions of higher education to prepare teachers that are capable of using technology in effective and efficient ways to positively influence student achievement.

6. Result of the present study revealed that technological literacy was significantly related to the performance of student-respondents in entrepreneurial skills based on the NCAE results. Hence, TLE teachers who are not technology majors retool themselves by attending seminars, pursuing graduate school like Master of Arts in Vocational Education and the like.

7. Based on this study, it is possible to begin to better understand how some of the models of preparing TLE teachers to integrate technology influence their teaching beliefs toward technology integration. However, much remains unanswered about the emergence of teaching beliefs toward technology integration. A further expansion of this study will be necessary to identify how specific activities are able to improve teaching beliefs and technological literacy.

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APPENDICES

APPENDIX A

APPROVAL OF RESEARCH TITLE

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

July 12, 2008

MARILYN D. CARDOSO, Ph. D.
Dean, College of Graduate Studies
Samar State University
Catbalogan City

Madam:

In my earnest desire to start writing my thesis proposal, I have the honor to submit for approval one of the following research problem, preferably number 1.

1. TECHNOLOGY AND LIVELIHOOD EDUCATION (T.L.E) TEACHER'S TEACHING BELIEF AND THEIR TECHNOLOGY LITERACY.
2. THE EFFECT OF MULTIPLE ROLES WHICH INFLUENCE POTENTIAL ROLE OF SECONDARY SCHOOL STUDENTS.
3. THE INFLUENCE OF PARENTAL STRESS AND CHILD-REARING QUALITIES ON SECONDARY SCHOOL STUDENTS SOCIAL COMPETENCE.

I hope for your favorable action on this request.

Very truly yours,

(Sgd.) PUREZA E. BABALCON
Researcher

Approved:

(Sgd.) MARILYN D. CARDOSO, Ph. D.
Dean, College of Graduate Studies

APPENDIX B

ASSIGNMENT OF ADVISER

Republic of the Philippines
Samar State University
COLLEGE OF GRADUATE STUDIES
Catbalogan City

July 19, 2008

MARIANITA B. CONDE, Ph. D.
This University
Catbalogan City

Please be informed that you have been designated as adviser of Mrs. PUREZA E. BABALCON Candidate for the degree of Master of Arts major in Home Economics who poses to write a thesis entitled "TECHNOLOGY AND LIVELIHOOD EDUCATION (T.L.E) TEACHER'S TEACHING BELIEF AND THEIR TECHNOLOGY LITERACY.

Thank you for your cooperation.

Very truly yours,

(Sgd.) MARILYN D. CARDOSO, Ph.D.
Dean, College of Graduate Studies

CONFORME:

(Sgd.) MARIANITA B. CONDE, Ph.D.
Adviser

APPENDIX C

PERMIT TO ADMINISTER RESEARCH INSTRUMENT

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

December 7, 2008

The Superintendent
Department of Education
Catbalogan City

Sir/Madam:

The undersigned is conducting a study entitled **"TECHNOLOGY AND LIVELIHOOD EDUCATION (TLE) TEACHERS' TEACHING BELIEF AND TECHNOLOGICAL LITERACY: THEIR RELATIONSHIP TO STUDENTS' PERFORMANCE"** as a requirement for graduation for her masteral degree.

In this regard, the undersigned would like to seek permission from your office in administering the research instrument to the different identified Technology and Livelihood Education (TLE) teachers of the Division of Samar during school year 2008-2009.

Your kind and favorable consideration and preferential attention to this request is highly appreciated for the good of the service.

Very truly yours,

(Sgd) **PUREZA E. BABALCON**
Researcher

APPENDIX D

COVER LETTER OF QUESTIONNAIRE

Republic of the Philippines
SAMAR STATE UNIVERSITY
GRADUATE SCHOOL
Catbalogan City

December 10, 2008

Dear Respondent:

You have been selected as one of the respondents to the study entitled **"TECHNOLOGY AND LIVELIHOOD EDUCATION (TLE) TEACHERS' TEACHING BELIEF AND TECHNOLOGICAL LITERACY: THEIR RELATIONSHIP TO STUDENTS' PERFORMANCE"** as requirement for graduation.

The information that you will provide will be used for educational purposes. Please answer the questions as frankly and honestly as possible. Rest assured that the information you will share in this research will be kept confidential.

Hoping for your favorable response.

Very truly yours,

(Sgd) PUREZA E. BABALCON
Researcher

APPENDIX E

SURVEY QUESTIONNAIRE

PART I. PERSONAL PROFILE

Name: _____
(Optional)

Direction: The following block of questions asks you about some personal information about you. Please answer the following questions by providing the appropriate information or by putting a check (/) mark on the appropriate space provided.

1.1 Age: _____ 1.2 Sex: Male _____ Female _____

1.3 Civil Status: [ ]Single [ ]Married [ ]Separated [ ]Widow(er)

1.4 Religion: _____

1.5 Highest Educational Attainment
- _____ College graduate (Major/Minor) _____
- _____ Masteral units
- _____ Masteral graduate
- _____ PhD/EdD/DA units
- _____ PhD/EdD/DA graduate

1.6 Type of school undergraduate degree obtained: [ ]Public [ ] Private

1.7 Teaching Position: _____

1.8 Teaching Experience as TLE teacher: _____ years

1.9 Length of Service: _____ years

2.0 Latest Performance Rating: _____

2.1 Relevant Trainings/Seminars Attended:

Title	Number of Hours
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

2.2 Membership in Professional Organization:

Name	Year(s) of Membership
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

PART II. TEACHING BELIEF QUESTIONNARE

Direction: Below is a list of statements about teaching as a profession or what someone might consider important in teaching. There are no right or wrong answers because each teacher has his/her own beliefs or opinions about education. Please read carefully the statements below and indicate (check) your level of agreement for each statement using the scale below:

5	=	Strongly Agree	(SA)
4	=	Agree	(A)
3	=	Uncertain	(U)
2	=	Disagree	(D)
1	=	Strongly Disagree	(SD)

STATEMENTS	SA (5)	A (4)	U (3)	D (2)	SD (1)
1. If I had to start all over I would choose teaching again without any hesitation					
2. I believe that my most important role as a classroom teacher is to assess students' knowledge					
3. I believe that teaching is a lifelong career					
4. I believe that my most important role as a classroom teacher is to dispense knowledge					
5. I look forward to meeting my first students as a classroom teacher					
6. I feel anxious about meeting my first students as a classroom teacher					

Continued:

STATEMENTS	SA (5)	A (4)	U (3)	D (2)	SD (1)
7. I believe that one of the most important roles as a classroom teacher is to facilitate learning					
8. I believe that one of the most important roles as a classroom teacher is to foster students' social growth					
9. I believe that one of the most important roles as a classroom teacher is to foster students' moral growth					
10. I believe students learn best through direct instruction					
11. I believe that students learn more from asking questions than from listening to the teacher					
12. I believe that students learn best through active participation in cooperative learning activities					
13. I believe that punishment is necessary to maintain order in schools					
14. I believe that my most important role as a classroom teacher is to discipline students in class					
15. I believe that one of the most important roles as a classroom teacher is to foster students' emotional growth					
16. I believe that teachers are born, not made					
17. I believe that teaching is a very difficult job to do well					

PART III. TECHNOLOGY LITERACY QUESTIONNAIRE

Direction: Please rate your skill or ability to accomplish each of the following tasks using the scale indicated below. Please give honest answers but be sure to give yourself credit where credit is due!

.

5 = Expert – able to instruct others
4 = Skilled at this item
3 = Can accomplish this item
2 = Can do this but occasionally need help
1 = No knowledge of this item

Items	5	4	3	2	1
A. TECHNOLOGY OPERATIONS AND CONCEPTS					
1. A. demonstrate introductory knowledge, skills, and understanding of concepts related to technology					
2. demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies					
B. PLANNING AND DESIGNING LEARNING ENVIRONMENTS AND EXPERIENCES					
1. design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners					
2. apply current research on teaching and learning with technology when planning learning environments and experiences					
3. identify and locate technology resources and evaluate them for accuracy and suitability					
4. plan for the management of technology resources within the context of learning activities					
5. plan strategies to manage student learning in a technology-enhanced environment					
C. TEACHING, LEARNING, AND THE CURRICULUM					
1. facilitate technology-enhanced experiences that address content standards and student technology standards					
2. use technology to support learner-centered strategies that address the diverse needs of students					

Continued

Items	5	4	3	2	1
3. apply technology to develop students' higher order skills and creativity					
4. manage student learning activities in a technology-enhanced environment					
D. ASSESSMENT AND EVALUATION					
1. apply technology in assessing student learning of subject matter using a variety of assessment techniques					
2. use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning					
3. apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity					
E. PRODUCTIVITY AND PROFESSIONAL PRACTICE					
1. use technology resources to engage in ongoing professional development and lifelong learning					
2. continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning					
3. apply technology to increase productivity					
4. use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning					
F. SOCIAL, ETHICAL, LEGAL, AND HUMAN ISSUES					
1. facilitate technology-enhanced experiences that address content standards and student technology standards					
2. apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities					
3. identify and use technology resources that affirm diversity					
4. promote safe and healthy use of technology resources					
5. facilitate equitable access to technology resources for all students					

THANK YOU VERY MUCH FOR YOUR COOPERATION.

APPENDIX F

Teacher-Respondents' Teaching Beliefs

Statements	Responses					Total	Mean/ Inter-pretation	
	5 (SA)	4 (A)	3 (U)	2 (D)	1 (SD)			
1. If I had to start all over I would choose teaching again without any hesitation	3	5	1	0	0	9	4.22	A
2. I believe that my most important role as a classroom teacher is to assess students' knowledge	5	4	0	0	0	9	4.56	SA
3. I believe that teaching is a lifelong career	5	3	1	0	0	9	4.44	A
4. I believe that my most important role as a classroom teacher is to dispense knowledge	5	2	1	1	0	9	4.22	A
5. I look forward to meeting my first students as a classroom teacher	2	6	1	0	0	9	4.11	A
6. I feel anxious about meeting my first students as a classroom teacher	0	4	3	2	0	9	3.22	U
7. I believe that one of the most important roles as a classroom teacher is to facilitate learning	5	3	0	1	0	9	4.33	A
8. I believe that one of the most important roles as a classroom teacher is to foster students' social growth	5	3	0	1	0	9	4.33	A
9. I believe that one of the most important roles as a classroom teacher is to foster students' moral growth	6	2	1	0	0	9	4.56	SA
10. I believe students learn best through direct instruction	3	4	2	0	0	9	4.11	A
11. I believe that students learn more from asking questions than from listening to the teacher	3	5	0	1	0	9	4.11	A
12. I believe that students learn best through active participation in cooperative learning activities	5	3	1	0	0	9	4.44	A
13. I believe that punishment is necessary to maintain order in schools	1	3	3	1	1	9	3.22	U

Continued:

Statements	Responses					Total	Mean/ Inter-pretation	
	5 (SA)	4 (A)	3 (U)	2 (D)	1 (SD)			
14. I believe that my most important role as a classroom teacher is to discipline students in class	2	5	1	1	0	9	3.89	A
15. I believe that one of the most important roles as a classroom teacher is to foster students' emotional growth	2	5	2	0	0	9	4.00	A
16. I believe that teachers are born, not made	1	5	2	0	1	9	3.56	A
17. I believe that teaching is a very difficult job to do well	1	4	3	0	1	9	3.44	A
Total								
Grand Total	-	-	-	-	-	-	68.78	-
Grand Mean	-	-	-	-	-	-	4.05	A

CURRICULUM VITAE

CURRICULUM VITAE

PERSONAL DATA

Name	:	Pureza Ebias Babalcon
Age	:	44 yrs. Old
Date of Birth	:	December 7, 1964
Place of Birth	:	Sulopan, Paranas, Samar
Present Address	:	Brgy. 6, Poblacion Paranas, Samar
Civil Status	:	Married
Husband	:	Tinny A. Babalcon
Children	:	Rits Ian, Rincelle and Quennilen Raquel
Father	:	Leonardo C. Ebias
Mother	:	Aurora B. Ebias
Brother	:	Virgilio
Sisters	:	Gina, Thelma, Rebecca, Ida and Nelia

EDUCATIONAL BACKGROUND

Primary	:	Sulopan, Primary School, Sulopan Paranas, Samar 1972 - 1976
Elementary	:	Pequit Elementary School, Lipata Paranas, Samar 1976 - 1978
Secondary	:	Wright Vocational school, Lipata Paranas, Samar 1978 - 1982

Tertiary	:	Samar State Polytechnic College, Catbalogan, Samar Bachelor of Science in Industrial Technology major in Garments Technology 1984 - 1988
		Bachelor of Science in Technician Education major in Garments Technology 1993 - 1996
Graduate Studies	:	Samar State University, Catbalogan, Samar Master of Arts in Home Economics Major in Home Economics 1999 - 2009

AWARDS AND DISTINCTION

Primary	:	Class Honors from Grade I to IV
Elementary	:	Second Honorable Mention – Grade V
		First Honorable Mention – Grade VI
		Awardee, Most Active in GSP Award
Secondary	:	Class Honors – Second and Third Years
		Second Honorable Mention – Fourth Year
		Awardee, Best in Dressmaking Award
Tertiary	:	BSIT – Class Honors First to Third Years
		Cum Laude – Fourth Year
		Awardee, Best in Garment Technology Award
		BSTE – Dean's lister SY 1994 – 1995

CIVIL SERVICE ELIGIBILITY

Civil Service Eligible, under P.D. # 907 - March 23, 1988

Licensure Examination For Teachers (LET) - August 20, 2000

WORK EXPERIENCE

Secondary School Teacher III - 2008 to present
Lawaan National High School
Lawaan, Paranas, Samar

Secondary School Teacher I - 2004 to 2008
Lawaan National High School
Lawaan, Paranas, Samar
Quality Control Supervisor - 1990 to 1993
AVEN FASHION MFG.
Banawe, Quezon City, Manila

Quality Inspector - 1989 to 1990
AVEN FASHION MFG.
Banawe, Quezon City, Manila

Garment Technician - 1988 to 1989
AVEN FASHION MFG.
Banawe, Quezon City, Manila

SEMINARS AND TRAININGS ATTENDED

Mass Training of Understanding by Designed (UbD) As New Curriculum. Held at San Jose, Tacloban City. On June 9 – 11 2010

Teachers' Forum and Ground Breaking Ceremonies for Eastern Visayas Regional Science High School. Held on Oct. 1, 2009, at Samar National School, Social Hall, Catbalogan, Samar.

8th DIVISION STEP COMPETITION (Division Level) at Calbiga National High School, Calbiga, Samar on September 25, 2009.

Pansangay na Seminar Workshop sa Filipino Antas Secondary. Ika-11 hanggan 13 ng Setyembre 2009 sa Samar National School, Social Hall, Catbalogan, Samar.

Division Orientation Seminar-Workshop on YECS, STEP, and School Canteen Management (Elementary and Secondary Level) on August 14-16, 2009 at Samar National School, Catbalogan, Samar.

Cluster III Training Workshop on the Rool-out of SBM Assessment Tools and Orientation Training of the National Competency-Based Teacher Standards (NCBTS) held at Jiabong National High School, Jiabong, Samar on July 2-4, 2009.

Certificate Training Program for Non-Specialist DepEd Secondary (Filipino) Summer 2009 sponsored by Department of Education (DepEd) held at Leyte Normal University, Tacloban City, from April 15, 2009 to May 27, 2009.

PAGE 08 ANNUAL GENERAL ASSEMBLY held on March 7, 2009 at the Gonzaga Hall, Holy Infant College, Tacloban City.

Division Orientation and Planning Conference for the 2008 STEP SYNCHRONIZED SCHEDULE OF ACTIVITIES (SECONDARY) held on September 12, 2008 at the Redaja Hall, DepEd, Division Office, Catbalogan City.

Certificate Training Program for Non-specialist DepEd Secondary Teachers (Filipino) Summer 2008 sponsored by Department of Education (DepEd) held at Leyte Normal University, Tacloban City from April 15, 2008 to May 23, 2008.

Top Students' Summit held at the Regional Teachers Training Center, Government Center, Candahug, Palo, Leyte on April 1, 2008.

School Based Management Program and School Governing Council through the Education Summit held on February 11, 2008 at the Municipal Auditorium, Paranas, Samar.

Developmental Counseling Skills Training for Guidance Counselors and Coordinators on November 16-17, 2007 at the Redaja Hall, Catbalogan, Samar.

Division Workshop on Career Guidance of Guidance Counselors and Coordinators for Public National High School using the Result of the National Career Assessment Examination (NCAE) held at Redaja Hall, Catbalogan City on October 20, 2007.

Seminar-Workshop in Reading Enhancement Through Communication Skills held on August 31 to September 1, 2007 at Wright National High School.

One-Day Professional Conference held at Motiong National High School, Motiong Samar on August 17, 2007.

Annual National Convention of the Philippine Home Economics Association (PHEA) held on November 4-6, 2006 at DepEd Ecotech, Lahug, Cebu City, Philippines.

Provincial Junior/Senior and Cadet Encampment held at Balantac Resort. So. Rawis, Brgy. Guirang, Basey, Samar on October 20-24, 2006.

Division School Paper Advisers Training conducted on October 27-28, 2005 at Samar National School, Social Hall, Catbalogan, Samar.

Divisyunal Seminar-Workshop Sa Filipino sa Temang, "Iba't-ibang Isyu, Istratehiya. Iskema sa Pagpapaunlad ng Filipino at Ebalwasyong Pangwika na idinaos sa Oktobre 22-23, 2005 sa Redaja Hall, Catbalogan, Samar, bilang pag alinsunod sa Memorandum ng Divisyon Blg. 84 s. 2005.

Outdoor Leadership course for 40 training hours conducted at Samar Girl Scout Council, Catbalogan, Samar on September 3-4, 2005.

Basic Leadership Course for 24 training hours conducted at Samar Girl Scout Council, Catbalogan, Samar on July 22-24, 2005.

Re-echo Orientation Training on a more effective assessment of Student Learning held at Wright National High School, Paranas, Samar on September 19, 2003.

Division Seminar-Workshop on MAKABAYAN (Secondary Level) held at the Boys Scout Building, Catbalogan, Samar on November 508, 2003.

Re-echo Seminar Workshop for the Empowerment of Head Teachers on School-Based Primary Health Care System held at Wright National High School, Paranas, Samar on September 19, 2003.

Seminar Workshop Towards Teachers Effectiveness Through Awareness of Teacher Performance Assessment at Wright National High School, Paranas, Samar on January 6-7, 2003.

In-Service Program on Re-echo Seminar Workshop on the BEC Reform Implementation held at Wright National High School, Paranas, Samar on May 6-10, 2002.

Training on Sewing Machine Technician held at SSPC Catbalogan, Samar from December 3, 1994 to Febuary 18, 1995. (every Saturday and Sunday only)

APPRECIATION AND RECOGNITION

Coach of a First Place winner of Handicraft (Hat Weaving) in 2010 9th Student Technologists and Entrepreneurs of the Philippines, Regional Skills Development and Competitions (STEP-RSDC) held at Hilongos National Vocational School, Hilongos, Leyte on November 24-27, 2010.

Coach of a First Place winner of Handicraft (Hat Weaving) during the 2010 Division Student Technologists and Entrepreneurs of the Philippines (STEP) competition held on November 18, 2010, at Wright National High School, Paranas, Samar.

Coach of a Third Place winner of Cocktail Mixing during the 2010 Division Student Technologists and Entrepreneurs of the Philippines (STEP) competition held on November 18, 2010 at Wright National High School, Paranas, Samar.

Coach of a 2nd Place of 2008 STEP Competition for Secondary-Regional Level held at Lawaan National School of Craftsmanship and Home Industries, Lawaan Eastern Samar, on November 6-8, 2008.

Coach of a First Placer of Handicraft (Fruit Basket Weaving) in 2008 7th Division Student Technologist and Entrepreneurs of the Philippines (STEP)

Competition (Secondary Division Level) held at VCYMAS, Basey, Samar on October 17, 2008.

Coach of a candidates during the Search for Ms. DSSPC '08 held at the Redaja Hall, Catbalogan on October 1-3, 2008.

Outstanding Performance and Dedication to Service thus contributing to the very Satisfactory Performance of Samar Division with Mean Performance Score of 75% and above in the National Achievement Test (NAT-Y2) for the S.Y. 2006-2007.

Fourth Placer Photojourn (Secondary) Division School Paper Advisers Training held on October 27-28, 2005 at Samar National School, Catbalogan, Samar.

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