

The Effect of K-12 Programs: Technology Livelihood Education Based Activities of the Grade-10 Students in MSU-SULU Laboratory High School

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Abstract: This study aimed to determine the effect of the K-12 programs on the Technology Livelihood Education based activities of the grade-10 students of MSU-Sulu Laboratory High School. It explores further to determine the strategies and remedial measures to augment the insufficient equipment and materials needed for the class activities. 43 grade-10 students were utilized to answer the checklist questionnaire. The data were analyzed and interpreted using descriptive statistics. Mean, standard deviation and verbal description were used to draw the conclusion. The study concluded that the grade-10 students perceived that the TLE curriculum in the K-12 is effective. The subject areas included in the TLE programs such as the Home Making Arts, Industrial Arts, Fishery and Agricultural Arts, and Business and Distributive Arts activities contribute to a great extent to TLE K-12 curriculum. The teachers always practiced making the lesson with the students and demonstration activities with explanation in TLE classes. The students perceived that the teachers should ask donations from other agencies to augment the scarcity of the equipment and materials needed in day-day activities in teaching TLE.

Keywords: Technology Livelihood Education (TLE), K-12 programs, TLE based activities.

1. Introduction

Education is one of the most important part of human life. It will provide an individual with knowledge and skills to become functional member in a society. For some people, education is the vital instruments for reducing poverty which eventually improve and develop the wellbeing as well as the quality of their lives. However, to maintain high quality of education requires proper investment.

In our country, education is one of the top priorities of government endeavors combined with the efforts of the present administration to respond to the entire needs of educational system. The Department of Education (DepEd) urgently implement the K-12 Program basically to address the poverty problem with the notion that upon accomplishment of the senior high school the students can be utilized to work for their living.

It was pointed out by the DepEd officials and no less than President Aquino that K-12 is an effective cure to the deteriorating quality of the Philippine Educational System.

They also noted that the previous ten – year curriculum is block and congested wherein students are focused to absorb all the knowledge in a very limited span of time. Hence, additional two years to the high school is better and appropriate.

As a result, high school graduates are often unprepared for employment or even for higher education. They do not possess the basic competencies or emotional maturity essential for the world outside the school. Considering global environment, people view education not only a way of developing people's skills but also a way of preparing the students to be globally competitive. If the schools will be able to produce quality graduates it will redound to do quality of work that can provide better performance in their respective workplace.

Moreover, with Technology and Livelihood Education being part of the curriculum, students have been able to acquire skills and knowledge enhancing their capabilities, strength to pursue higher education. To highlight its worth in the K–12 curriculum, the Department of Education (DepEd) has formed a Technical Vocational Unit in the Bureau of Secondary Education to create relevant programs to assist students to do vocational services. For them, this unit needs to be strengthened as one of the three key strands in the senior high school that will prepare graduates by arming them with better skills for employment.

Contrary to what most people think, the K–12 program trains students in joining the workforce as early as 7th grade. The TLE or technology and livelihood education subjects in Junior High School (JHS) follow the rules of the Technical Education and Skills Development Authority (TESDA). This will allow the students to earn a national certificate (NC) required by the industry.

Each TLE subject in Grade 7 and 8 is exploratory. This means each student has the chance to explore the following four main courses of TLE: [1] Agri–Fishery Arts; [2] Home Economics; [3] Information and Communication Technology; and [4] Industrial Arts. Students are given free will to choose a minimum of four mini courses in Grade 7 and another four in Grade 8 that the school offers per locality's needs and school

assets.

In grade 7 and 8 does not yet earn a Certificate of Competency (COC). The exploratory courses are a prelude to earning a COC in Grade 9 and an NC I/II in 10th Grade.

In Grade 9, the student chooses one course to focus on from among the exploratory courses he chose in 7th and 8th grades. Under this level, the student can earn a COC. In Grade 10, the student pursues the TLE specialization course he chose in 9th grade. This allows him to get at least an NC Level I or II (NC I or II) based on the TLE course he chose.

2. Statement of the Problem

This study was prompted after the researcher conducting a research about her case study on the effect of K - 12 program in T.L.E. of Grade 10 Students in MSU - SULU Laboratory High School, specifically on the tools, equipment and materials that is needed to enhance the teaching learning process in T.L.E. In view of the forgoing problems, this study covered to determine the status and problems in T.L.E education and how the researcher can help the teachers in T.L.E to overcome these problems by recommending remedy and reduce the burden of T.L.E teachers, especially in using remedial measures in the absence of facilities or equipment. Specifically, this study will seek answers of the following questions: [1] What are the effect of K - 12 program in T.L.E? [2] How does Home Making Arts, Industrial Arts, Fishery and Agricultural Arts, and Business and Distributive Arts activities contribute to T.L.E? [3] What are the teaching practices of T.L.E Teachers in terms of activity oriented teaching? [4] What remedial measures do the teachers adopt in case of insufficient equipment and tools?

3. Literature Review

It was HELE before or Home Economics and Livelihood Education. Then T.H.E. or better knowing Technology and Home Economics. Now, as the new generation of students becomes more innovative and requires a more helpful and effective way of learning, the standard of education they have to undergo has to level up. In addition to this, the demand of getting job overseas also increases. Thus, these demand served as one of the reasons to giving birth to a new standard of education. From HELE, T.H.E.; it became T.L.E or Technology and Livelihood Education.

This selective learning area aims to unlock the students' skills to open up a window to bigger and better opportunities. Now that K - 12 program has been implemented in all schools in our country, more chances and more opportunities for every K - 12 program student will be given.

The T.L.E. through K - 12 offers different choices of exploratory mini courses which the students can choose from such as Industrial Arts, Home Economics, Agri - Fisheries and ICT (Information and Communication Technology). These exploratory mini courses will be fulfilled by the students in 4 years before they proceed to the next level. The 2 added years of the new curriculum will be allotted for the specialization of the courses that the students have chosen. In here, they will be taught on how to use and maintain hand tools, how to perform

mensuration and calculation, how to prepare and interpret technical drawing and plans and on how to apply occupational health and safety procedures.

The teachers will be given K-12 Learning Modules to help the students perform and do better. One of the advantages of the K-12 program is that it offers practicality. After graduation, the students will be given TESDA Certificates for the completion of the 2 years that is allotted for the specialization courses. This certificate will allow the students to get job after High School - a better option for those families who cannot afford sending their children to college. The opportunity is not just limited locally because each K-12 program graduate can also find a job abroad.

The world today really is changing our country has already taken another step towards modernization... a step that would make our country more globally competitive. Through K - 12 program, the quality of education that students will undergo will be higher.

In the abstract Valera (2015) wrote that this study was conducted to evaluate the performance of the third year college students taking up Bachelor in Secondary Education (BSEd), major in Technology and Livelihood Education (TLE) at the ASIST Bangued Campus. Mean was used to determine the level of attainment of the desired learning competencies of the college TLE students along knowledge, skills and attitudes. A high level of knowledge, skills and attitudes was attained along Home Economics, "adequate" for agricultural arts "high" for Entrepreneurship. The general performance rating of the teachers improves the desired learning competencies along Agricultural arts and Entrepreneurship. Likewise, performance in Entrepreneurship is influenced by goals and objectives while performance in Agricultural arts is influenced by physical facilities. Faculty must pursue post-graduate education relevant to the subjects being taught. College officials should send teachers for training and seminars or even conduct the same within the campus to upgrade faculty with the new technologies or trends and issues related to their field of specialization. Vocational faculty must be sent for the appropriate National TVET schooling for them to acquire titles (TESDA National Competency levels NC's) as Trainer/assessor, Training Master, Training Designer/ Developer, in technology education and higher education training to equip all faculty qualifications in support to the Enhanced Basic Education Act of 2013 better known as K-12. TLE major students must undergo TESDA NCII assessment every semester to evaluate their performances in their field of specialization and to acquire certificate of competency or eligibility.

The teachers, being the focal figure in education, must be competent and knowledgeable in order to impart the knowledge they could give to their students. Good teaching is a very personal manner. Effective teaching is concerned with the student as a person and with his general development. The teacher must recognize individual differences among his/her students and adjust instructions that best suit to the learners. It is always a fact that as educators, we play varied and vital roles in the classroom. Teachers are considered the light in the classroom. We are entrusted with so many responsibilities that

range from the very simple to most complex and very challenging jobs. Every day, we encounter them as part of the work or mission that we are in. It is very necessary that we need to understand the need to be motivated in doing our work well, so as to have motivated learners in the classroom. When students are motivated, then learning will easily take place. However, motivating students to learn requires a very challenging role on the part of the teacher. It requires a variety of teaching styles or techniques just to capture students' interests. Above all, the teacher must himself come into possession of adequate knowledge of the objectives and standards of the curriculum, skills in teaching, interests, appreciation and ideals. He needs to exert effort to lead children or students into a life that is large, full, stimulating and satisfying. Some students seem naturally enthusiastic about learning, but many need or expect their instructors or teachers to inspire, challenge or stimulate them. "Effective learning in the classroom depends on the teacher's ability to maintain the interest that brought students to the course in the first place (Erickson, 1978). Not all students are motivated by the same values, needs, desires and wants. Some students are motivated by the approval of others or by overcoming challenges.

According to Phil Schlecty (1994), students who understand the lesson tend to be more engaged and show different characteristics such as they are attracted to do work, persist in the work despite challenges and obstacles, and take visible delight in accomplishing their work. In developing students' understanding to learn important concepts, teacher may use a variety of teaching strategies that would work best for her/his students.

According to Raymond Wlodkowski and Margery Ginsberg (1995), research has shown no teaching strategy that will consistently engage all learners. The key is helping students relate lesson content to their own backgrounds which would include students' prior knowledge in understanding new concepts.

Due recognition should be given to the fact that interest, according to Saucier (1989:167) directly or indirectly contributes to all learning. Yet, it appears that many teachers apparently still need to accept this fundamental principle. Teachers should mind the chief component of interest in the classroom. It is a means of forming lasting effort in attaining the skills needed for life. Furthermore teachers need to vary teaching styles and techniques so as not to cause boredom to the students in the classroom. Seeking greater insight into how children learn from the way teachers discuss and handle the lesson in the classroom and teach students the life skills they need, could be one of the greatest achievements in the teaching process.

In the abstract Acosta and Acosta (2016) states that the focus of this study is on the readiness of higher education institutions in the Philippines to the implementation of the Senior High School program of the new K-12 curriculum. Data were collected through a survey questionnaire. The findings reveal five predisposing factors, namely: eligibility, staffing guidelines, course streamlining, workforce surplus management, and alternative programs to be determinants of

senior high school readiness among college teachers and higher education institutions that will ensure sustainability and the promotion and protection of the welfare of the affected faculty and other employees in the higher education sector.

Research made by Lucas (1990), Weinert and Kluwe (1987) show that several styles could be employed by the teachers to encourage students to become self-motivated independent learners. As identified, teachers must give frequent positive feedback that supports students' beliefs that they can do well; ensure opportunities for students' success by assigning tasks that are either too easy nor too difficult; help students find personal meaning and value in the material; and help students feel that they are valued members of a learning community. According to Brock (1976), Cashin (1979) and Lucas (1990), it is necessary for teachers to work from students' strengths and interests by finding out why students are in your class and what are their expectations. Therefore, it is important to take into consideration students' needs and interests so as to focus instruction that is applicable to different groups of students with different levels.

School facility condition for the participating schools was determined by the Total Learning Environment Assessment (TLEA) as completed by the principal or principal's designee on high school campuses in Texas with enrollments between 1,000 and 2000 and economically disadvantaged enrollments less than 40%. Each school in the study population was organized by grades nine through twelve. Data for achievement, attendance, discipline, completion rate and teacher turnover rate were collected through the Public Education Information Management System (PEIMS) managed by the Texas Education Agency.

Student achievement, attendance, discipline, completion rate and teacher turnover rate and their relation to school facilities were investigated using multiple regression models to compare sections and subsections of the TLEA with each of the five dependent variables. Major research findings of this study included the following: first, student achievement, attendance and completion rate measures were not found to be statistically significant in relation to school facility conditions as measured by the TLEA at the 0.05 level; second, discipline, or behavior, was found to be significantly related to the TLEA. This indicates that the subsections of the TLEA could be used to predict discipline factors for schools in the study population; third, teacher turnover rate was found to be related to the TLEA subsections of Specialized Learning Space and Support Space, with the correlation to Support Space being indirect.

Literature from prior studies infers that relationships do exist between all five of the study's dependent variables. However, this study only yielded significant findings in the areas of student discipline and teacher turnover. The researcher's recommendations based upon this study include the following: administrators and designers should take into account factors such as interior environment and academic learning space when planning schools to positively impact student discipline; school design and construction should focus on specialized learning spaces and other academic areas more than administrative support spaces when striving to increase teacher satisfaction

with physical working conditions.

Perhaps not surprisingly, Whitney (2007) states “almost every aspect of modern life is affected in some way by technology.” Most of today’s students have never lived in a technology free environment. Children today spend a great deal of their time interacting with some form of technology, be it the television, internet, or an interactive video game. For students to be successful in life, they need knowledge and skills demanded by 21st century communities and workplaces. Schools are facing the challenges of renovating their learning environments to adequately prepare students for these realities (Lento, 2005). Fortunately, society is forcing the improvement of educational technology through unparalleled investments.

While Bruce, Beranek, Michaels, and Cazen (1985) state that technology alone does nothing to enhance education, Rivero’s (2005) findings indicate that certain technologies can bring a new level of inquiry learning and leadership into the classroom. Part of the role of technology is to make the learning experience relevant for students. A large and growing knowledge base exists on the effects of technology-assisted instruction on the learning experience and academic development of students (Woodul, Vitale, & Scott, 2000).

School leaders continue to scramble for dollars to build, renovate or maintain educational facilities and politicians still debate over which entities should provide such funding. Meanwhile, millions of students in the United States attend school surrounded by inadequate facilities (U.S. General Accounting Office, 1995). According to a report from the National Priorities Project (2000) entitled *Recess is Over!*, Texas students in deteriorating schools score 10 to 17 points lower on state standardized tests than their counterparts attending schools with adequate facilities. *Recess is Over!* (National Priorities Project, 2000) purports that students in these substandard school facilities are also more likely to be less orderly and distract teachers from their instructional duties.

Still, the usefulness of technology in education is fairly undefined as evidenced by the increasing number of studies seeking to identify the effects of technology usage on classroom learning (Lynch, 2006).

Description of the study The purpose of this study is to analyze the use and effect of technology in the public school classroom. Specifically, this study will have three steps. First, the researcher will investigate and present types and prevalence of technologies currently used in our nation’s public schools. Second, the researcher will review and present the knowledge base of research on the effects of technology use in the classrooms. Third, using data collected in the first two steps, the researcher will highlight effective technology implementation practices which benefit student learning.

The organizational structure for this thesis follows. Chapter one will set the issue in context by presenting the history, cost, and effects of technology implementation in public schools. Chapter two will present the literature on the types of technology available and what is being used in the classroom.

Chapter three will synthesize the research on the classroom effects of technology. Finally, chapter four will identify effective technology implementation practices and provide

direction for further research. This research will be conducted through a review of literature using ERIC, EBSCOhost and other educational sources. Two major bodies of research will be analyzed: types and prevalence of technologies currently used and technologies effect on classroom teaching and learning. Once both areas have been studied, the researcher will identify effective technology implementation practices which benefit student learning.

One must not rely upon published reports to hear what American students think of the buildings in which they attend school. Renowned educational author and professor Carl D. Glickman (2004) notes that students interviewed regarding the challenges that they face on a daily basis are more likely to note deplorable building conditions rather than curriculum standards. In preparation for his book *Letters to the Next President*, Glickman (2004) interviewed one student who noted working toilets and tissue in the restrooms as the greatest need in her school. A growing body of research literature is finding that such concerns by American students are valid and that building condition has a profound impact on student success and professional development of teachers.

4. Theoretical/Conceptual Framework

Ocampo (2014) specified that Technology and Livelihood Education (TLE) for Junior High School. TLE in Junior High School is exploratory in grades 7 and 8. The learners are given the opportunity to explore from a maximum of 4 TLE mini courses to each level. They are taught basic competency in grade 9 & 10 and conferred with National certificate VII. They may opt to take the Technical Vocational Livelihood Track in Grades 11 & 12 to continue the TLE specialization taken in grades 9 & 10 that enable them to get an NC II. Valera (2015) has found that a high level of knowledge, skills and attitude was attained along along Home Economics, “adequate” for agricultural arts “high” for Entrepreneurship. The general performance rating of the teachers improves the desired learning competencies along Agricultural arts and Entrepreneurship. Likewise, performance in Entrepreneurship is influenced by goals and objectives while performance in Agricultural arts is influenced by physical facilities. The figure shows the paradigm.

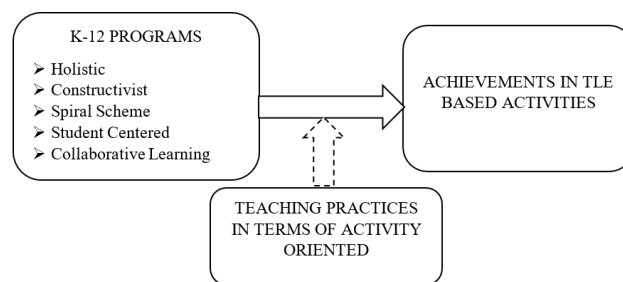


Fig. 1. Theoretical/Conceptual framework

5. Research Method

This study used mix of qualitative and quantitative research design. Using the descriptive method of research this study determined the status of the teachers and students in Grade 10

of MSU - SULU Laboratory High. The T.L.E teachers developed his or her techniques and strategies to teach well and grow professionally. The administration pay some attention to the T.L.E department so that quality education would be achieved.

6. Findings of the Study

Careful analysis of the data revealed the following significant findings: The TLE curriculum is effective as perceived by the grade 10 students. It is very effective, however when the teacher is using the strategy of localization strategy and adopt the student-centered approach of teaching; the teachers always practiced effective teaching method in TLE. Most of the time the teachers always practiced the collaborative approach and always practiced demonstration with explanation in the TLE activities; The best remedial measures the teachers can do to fix the insufficient equipment in teaching TLE. The teacher and school administrator should always tap the NGOs, NGUs and Cooperative to help providing the necessary equipment or at least the teacher should always require the students to bring their own materials for the specific activities in the classroom. At the least extreme cases, the teacher should make a request by sending a letter to the chancellor to inform the shortage of materials to perform the activities or often skip from doing the activities. The teachers and the students should collaboratively join efforts to use their initiative to involve parents, dean, PTCA and other school stakeholders to improve the teaching and learning processes in TLE. After all, the TLE classes under the K-12 curriculum involved in developing the student performance though actual handling of the activities known as student-centered approach.

7. Conclusion

The grade-10 students perceived that the TLE curriculum in the K-12 is effective. The subject areas included in the TLE programs such as the Home Making Arts, Industrial Arts, Fishery and Agricultural Arts, and Business and Distributive Arts activities contribute to a great extent to T.L.E K-12 curriculum. The teachers always practiced making the lesson with the students and demonstration activities with explanation in TLE classes. The students perceived that the teachers should ask donations from other agencies to augment the scarcity of the equipment and materials needed in day-day activities in teaching TLE.

8. Recommendation

Based on the significant findings of the study, the following recommendations are forwarded. In terms of Research Agenda: There should be a replication of this study conducted in the other national high schools of Sulu; There should be yearly monitoring of the DepEd and CHED of the equipment and materials for better learning and teaching; The teachers should be sent annually to trainings and seminars to improve the teaching activities in the student-centered approach to improve skills and performance based on hands-on activities; The NGOs, NGUs, and Cooperatives should participate in the

development of TLE K-12 curriculum by giving donations in cash or in kind to support the livelihood education of the students; The PTCA, individual parent and community should cooperate to sustain the materials needed for experimental based activities of the students.

In terms of Research Policy: The DepEd should issue memorandum to the NGOs, NGUs, and Cooperatives to support the TLE curriculum in the K-12 National High Schools by way of giving donations in cash or in kind to improve the experimental based activities of the students; The governor, mayor, Board Members, and Councilors should create provincial, municipal and barangay ordinances to support school board to center the activities on the TLE curriculum by way of providing the school with donations or permanent programs to support TLE programs. The DepEd should create Memorandum of Agreement between NGOs, LGUs, and Cooperatives for collaborative assistance for the TLE curriculum; The School Heads of the high schools in the province of Sulu should create yearly programs for TLE classes and provide the NGOs, LGUs, and Cooperative with the copy of the programs of activities to develop awareness for these agencies to support TLE programs; The parents, PTCA and other school organizations should initiate programs of activities and invite the NGOs, LGUs, and Cooperatives personalities to give insights during the programs and present to them the essential programs needed their assistance.

In terms of further research: Inventories of Equipment Necessary for TLE Classes: Experimental Based; TLE Teaching Strategies and Its Impact on the Skills and Behavior of Grade-10 Students; The Academic Performance of Grade-10 Students in TLE Skills Indicator and Knowledge Indicator; Correlational Study on the Laboratory and Lecture Methods of Teaching TLE Classes; Technology Skills and Its Impact on Academic Achievements of Grade-10 Students.

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