Challenges of the Technology and Livelihood Education Teachers

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ABSTRACT

This study determined the challenges in the areas of training, resources, and facilities of the twenty (20) Technology and Livelihood Education teachers at the Mindanao State University – Lanao National College of Arts and Trades (MSU – LNCAT), Marawi City during the School Year 2018-2019. It also determined the remedial measures conducted by the teachers in addressing the aforementioned areas. The study employed a qualitative method of research where the gathering of data was taken primarily from the teachers in the form of interviews and focus group discussions. Narrative data analysis was utilized.

Results showed that teachers' challenges included limited training related to their specialization, classroom management, and pedagogies; a lack of local trainings like LAC and INSET; and limited opportunities to acquire new concepts and knowledge about the learning area. The study also found an insufficiency of tools and equipment, an insufficient supply of books and references, and the fact that some resources are damaged. Furthermore, findings revealed an insufficient budget to procure resources, an absence of strong school policies on the safety and security of materials, and the inadequacy of available resources. Regarding facilities, findings indicated the provision of limited facilities, limited and defective machines, and the inability of equipment to sustain long-term use.

On the other hand, the remedial measures conducted by teachers include personal attendance at trainings to acquire new ideas, surfing the net to do research, buying books on skills development, and sitting in the classes of others for coaching and mentoring. They also conducted LAC sessions with the department head, utilized what is available in the school, implemented innovative teaching strategies, and took turns in using resources. Additional measures included asking for assistance from the barangay council, using the school grounds, producing mini-libraries, using classrooms for skill demonstrations, requiring learners to bring garden tools, and converting ancillary service rooms into activity rooms.

Keywords: Technical-Vocational-Livelihood, Education, Challenges

INTRODUCTION

The school serves as an essential institution for providing career pathways, with Technology and Livelihood Education (TLE) standing as a direct response to the community's need for vocational efficiency and practical problem-solving. As a program, TLE equips learners with essential knowledge, work values, and life skills across diverse fields such as Home Economics, Industrial Arts, Agri-Fishery Arts, and Information Communication Technology (K to 12 Toolkit). The alignment of the TLE curriculum with the escalating demand for skilled labor enables graduates to obtain professional certification and employment, provided they are supported by realistic, experiential learning aided by adequate tools and equipment. However, TLE is often an ignored learning area, leaving teachers to shoulder the immense burden of developing their learners' potential to ensure they live productive lives (Garcia, 2006). EDCOM (2012) reiterated the urgency of this challenge, noting that the quality of Philippine education is continuously declining and that TLE subjects are not yet given sufficient importance by many.

In the Division of Marawi City, TLE teachers face significant hurdles, including a lack of specialized training, inadequate instructional facilities, and a lack of budget for equipment repair. These challenges regarding teaching strategies, limited resources, and insufficient facilities have forced teachers to initiate remedial measures, such as using contextualized learning materials found in the locality, seeking peer coaching, and utilizing alternative school spaces. This study aims to identify these challenges and the unique remedial measures employed by teachers, emphasizing a culture of collaboration to provide essential background information for school administrators. This inquiry is anchored on the concepts of Slovey (2009), NOAA (2009), and Corpuz and Lucido (2007). Slovey (2009) defines "needs" as a review of learning and development for staff across three interlinked levels: the organizational level (school facilities), the departmental level (available resources), and the individual level (specific trainings). Complementing this, NOAA (2009) posits that a needs assessment identifies the performance requirements and specific skills an agency's workforce needs to achieve its mission and improve productivity.

Furthermore, teachers are challenged by the application of "learning to do" as a vital pillar of learning. They are expected to be knowledgeable in the use of technologies and crafts so that students can observe, imitate, and model these skills. As Corpuz and Lucido (2007) suggest, teachers must guide the students' construction of knowledge by providing opportunities to actively participate and learn on their own. In terms of training, teachers require updated strategies to realize the competencies of the learning area, while for resources, excellent instructional materials are vital since students learn most by doing. Currently, the lack of equipment and laboratory tools remains a primary impediment to relevant instruction. Because of the shortage of funds in secondary schools, there is a pressing need for school administrators to establish networking with funding and research institutions, using project proposals as intervention schemes to address the unavailability of resources and ensure the success of the TLE program.

METHODS

This study employed a qualitative research method, specifically utilizing a narrative research strategy. As defined by Clandinin and Connelly (2000), this approach allows the researcher to study the lives of individuals through their stories, which are then re-storied into a narrative chronology. This collaborative narrative combines the participants' lived experiences with the researcher's analysis to describe the challenges encountered and the remedial measures adopted by the teachers.

The study was conducted at the Mindanao State University – Lanao National College of Arts and Trades (MSU – LNCAT), Marawi City. The institution offers Technology and Livelihood Education (TLE) for Junior High School and Technical-Vocational-Livelihood (TVL) strands for Senior High School. The participants consisted of twenty (20) TLE teachers during the School Year 2018–2019. Total population sampling was used, as all teachers handling the subject served as participants. These educators possess over five years of teaching experience and varied qualifications, including master's studies, though often outside their specific fields of specialization.

Data collection involved a multi-phased process. Initially, a structured questionnaire was used to gather the demographic profiles of the teachers, including age, marital status, length of service, and educational attainment. To identify specific challenges and remedial measures, a set of guide questions was developed for individual interviews. To achieve an in-depth analysis and clarify responses, Focused Group Discussions (FGD) was conducted over a period of more than two months. All necessary permissions were secured from the Dean of the Graduate School, the School Superintendent of MSU-LNCAT, Marawi City, and the School Principal prior to data collection.

The researcher followed a rigorous process of data transcription and inter-coding. Audio-recorded interviews and FGDs were transcribed and translated from Filipino to English. To ensure the correctness, reliability, and validity of the findings, inter-coding was performed in collaboration with the Department Head. This process of authenticating and verifying the codes served to check the preciseness of the answers and ensure that the encoded transcriptions accurately reflected the raw data gathered from the participants' discourses.

RESULTS AND DISCUSSIONS

Three themes were drawn from the analysis of the coded data of the interview responses regarding the challenges encountered by the TLE teachers. These are (1) challenges on trainings, (2) challenges on resources, and (3) challenges on facilities. Several responses from the participants regarding their challenges were generated from series of interviews conducted sometime in November 2018 – January 2019 which was followed by a Focus Group Discussion to some selected group of teachers within the school.

Frame 1 contains the responses of the teachers on their challenges encountered related to the trainings they need in improving their skills in teaching TLE. These teachers are handling subjects related to food and beverages preparations, dressmaking, electrical installation, computer technology, automotive and machine shop, and drafting,

Frame 1. Challenges Encountered by TLE Teachers on Trainings

P1: Of the immediate trainings that I can enumerate, I am more of actual demonstration so that I can acquire skills from it. I have difficulty explaining to the learners the concepts they need especially on actual display of skills.

P3: I can think of the following such as Home Economics, Garments, and Food Technology. I included these because for me, I need more trainings on these areas considering that I am handling the subjects. I hope that resource speakers who are experts on these can teach me more.

P4: There a lot like TESDA trainings, handicraft, wood lamination, food processing, carpentry, masonry, tile setting, and many more. Can I have more exposures on these areas? I really struggle my skills on these. I think benchmarking can help me out.

P5: TESDA…yes we have TESDA but we do not have enough technical assistance from them.

P6: I badly needed actual performance in the classroom instruction. Maybe our School Head can include this in one of our LAC sessions or INSET.

P8: These are the trainings I needed: training on automotive, electricity, dressmaking, food technology, and other related to this field. I need more teaching strategies and classroom management as well so I can deliver my lessons very well.

P9: I am more in need of the training that teaches me the skills needed in food trades.

P10: Skills in dressmaking, tailoring, and others. I have encountered inadequacy of trainings that can best suit to my needs.

P12: The new trends, methods, and techniques on the use of TLE for specialization. What I have right now are not so updated. I know that my learners need more especially on teaching strategies like using integrating technology in teaching.

P15: TESDA training, computer training and international training for TLE

P16: I need a lot of trainings and workshops. I can't name one because for me, anything that is all about my field of specialization.

P17: As my observations, my students need actual demonstration and trainings on skills such as steel fabrication and other metal works.

P18: Trainings on the latest skills concerning TLE subject.

P19: Teachers need training to impart or to share her knowledge to the students.

Based on the transcripts provided, TLE teachers encountered varied challenges regarding trainings, specifically the need for pedagogies that facilitate learning through actual demonstrations and specialized instruction. They believe that exposure to expert-led, specialized trainings would significantly improve the transfer of learning. While these teachers possess foundational knowledge, they require more technical skills and applications, suggesting that TESDA could provide much-needed technical assistance to the school.

Furthermore, teachers highlighted difficulties in classroom management and the selection of appropriate teaching strategies. These challenges are often intensified by learner behaviors, such as the tendency for students to rush through tasks due to limited time, which creates class disturbances. Teachers identified a need for training on how to manage these specific classroom situations and behaviors during the instructional process. To address these gaps, they suggested utilizing school-based Learning Action Cell (LAC) sessions, In-Service Trainings (INSET), and seeking technical assistance from School Heads, department heads, and master teachers to learn new trends and technology integration.

Similarly, the study of Torres (2014) found that the competency of TLE teachers is often lower than desired standards, leading to difficulties in skill application and low learner motivation. Consequently, teachers in that study also recommended intensive workshops and related programs to enhance the acquisition of new knowledge. Spasovski (2011) and Learning Design (2011) emphasize that competency-based trainings—which involve job skills analysis to separate "need to know" from "nice to know"—allow teachers to set and achieve professional development goals.

Finally, when TLE teachers are trained according to their identified needs, the acquisition of learning among students is maximized. As underscored by Espejo (2015), the upgrading of educational qualifications and technical know-how through a dedicated human resource development program is essential for the TLE faculty to meet the training and learning requirements of their students.

Frame 2. Challenges Encountered by TLE Teachers on Resources

P1: There is a need for me to have these resources like tools and equipment because my students need hands-on on learning rather than learning from theories and ideas. I want them to demonstrate their skills through using the tools and equipment. It is so hard for me to teach the subject and I don’t apply it.

P2: With the number of students I have in my class, I need more books and references. How can they learn when most of them do not have enough books, It will hamper their eagerness to learn. Books and references are indeed necessary in teaching and in learning the subject

There is an increase of enrolment in the school and from time to time the resources are damaged that can cause delay in the conduct of activities.

P3: I think, the school should provide budget especially on making available learning materials needed in the subject such as activity sheets, tools and equipment. These are all important in the subject to substantiate theory that I am teaching them.

P4: I need slide presentations and handouts to supplement the materials I have for the moment. I need these because I have so many students and I want them to learn the topics with materials they can study even at home. And for my personal consumption as well, I can study some topics ahead of time.

There is limited budget for TLE subjects resulting to the inadequacy of resources.

P5: The school property custodian has no enough space to keep the resources and the teachers do not have extra space in their classrooms. The books are not properly kept.

P7: Although there are some resources in the school that are used for TLE subjects, yet there is no strong school policy that protects its security and safety.

P10: I need more books for my students. It is really different if they have books because they can answer their assignments at home and we can finish the competencies on time.

The resources like the sewing machines and garden tools are not regularly repaired whenever there is malfunction and slight damage

P12: We only received limited resources and it is not enough.

P13: As a teacher, I need references. It would be better if the school library has enough books for supplemental readings so that I can also give more examples and my students can also learn better.

P15: What are my needs? These include school supplies. I want these so that I can devise my own instructional materials because my students do not have enough books. With the instructional materials that I make, they can follow the lesson for the day.

I think one of the factors that caused the inadequacy of resources is the lack of support from the stakeholders. We only depend from the provision coming from the Department of Education.

P17: I need enough working space with equipment. Sometimes, the classroom is too crowded that we cannot perform the activities very well. With functional units of equipment, I am sure learning will take place.

P19: I need more sewing machines for my TLE students. It is nice to have more of this equipment so that I can proceed to my lesson faster and students can have more equipment to use.

Our books are insufficient because we only received once in 2017 and up to now we do not receive more.

Regarding the challenges encountered by TLE teachers on resources, the study identified a critical insufficiency of tools, equipment, books, and references, compounded by a low budget provision. Since TLE emphasizes hands-on learning, teachers at MSU-LNCAT stressed that adequate resources are a must for learners to validate theory through application. However, the current book-to-learner ratio of 1:8, coupled with damaged and torn materials, limits the teachers' ability to enrich discussions and expedite lessons.

A significant challenge is the low budget allotted to TLE, which is often compromised as the school addresses other programs and projects. This financial constraint extends to the lack of supplemental instructional materials, such as slide presentations and worksheets. Furthermore, the shortage of storage space leads to the misplacement and damage of resources, such as sewing machines, which remain unrepaired. Teachers also struggle with a school library that lacks specialized TLE references, forcing them to rely on limited classroom materials.

The study further highlights a lack of support from stakeholders and the administration. Some teachers expressed frustration over the indifference of school heads regarding requests for instructional materials. This lack of support makes teachers vulnerable, forcing them to depend on limited school provisions or personal initiatives. In the study of Ariaso and Tancinco (2016), a major problem identified was the insufficient support from the community. Because parents often presume the government fully funds these programs, there is a lack of community initiative, leaving TLE teachers "at a loss trying to let both ends meet."

Frame 3. Challenges Encountered by TLE Teachers on Facilities

P3: We don't have enough facilities like buildings that can be used in applying the skills required in the major where the learners can display their outputs.
P5: Our sewing machines are limited that only few learners can use it. P7: The school has only few computer sets and others are defective. They are not anymore functional.

P8: The machines we have in the shop cannot sustain for longer use. P13: Kitchen utensils are not enough.
P14: Plates, tables, glasses, etc are limited. I really need more of these so that I can teach my learners more skills they need for food and beverages.

P17: The laboratories can be used as classrooms because there are only few classrooms so my time contact with the kids will be affected.

P19: We only have few machines that can be used to demonstrate the automotive parts and their functions.

In terms of facilities, TLE teachers are significantly challenged by the lack of functional shops, laboratories, and demonstration areas, which deters them from realizing their instructional objectives. Classrooms often serve multiple purposes, shifting between instructional and laboratory spaces, which hinders specialized activity. A primary concern is that computers are not all functional, forcing teachers to delay their instructional pacing and preventing learners from acquiring information through practice. Similarly, kitchen utensils are limited in number, and the school struggles to ensure their safety and maintenance due to a lack of dedicated laboratory manpower and the heavy additional workloads of teachers.

These local findings are mirrored in broader research. Gregorio (2016) found that in technical-vocational schools, the available tools and facilities often do not conform to recommended standards in terms of quantity, with the list of unavailable requirements far exceeding what is actually provided. Research from the Department of Education (2009) further highlights that public schools struggle with the availability of quality facilities. This is aggravated by the fact that many school facilities in the Philippines are approximately fifty years old and in poor condition (Schneider, 2010). As noted by Filardo (2008), public schools face constant pressure from out-of-date designs and deteriorating conditions. Ultimately, the lack of facilities and equipment across the various areas of TLE leads to a significant decrease in the attainment of the subject's objectives (Balcita, 2014).

Frame 4. Remedial Measures by TLE Teachers on Trainings

P3: In order to get more knowledge and skills about TLE, we had LAC sessions with our Department Head where we watch videos pertaining to how we cascade skills development to the learners.
P5: Sometimes, we sit in the class of other teachers for coaching and mentoring to gain more techniques.
P7: I buy books on skills development then I apply what I learn to my learners.
P10: I surf in the Internet and I also found some techniques in teaching then I tried it out to my subject. It has worked a lot.
P13: I attended trainings but not related to my subject but at least I can also apply some like the teaching strategies.

To address the challenges in teaching TLE, teachers have initiated practices such as coaching, mentoring, and collaborative knowledge sharing to improve their teaching skills. The Department Head has also extended initiatives through Learning Action Cell (LAC) sessions to bridge existing gaps. Rather than waiting for administrative provisions, teachers have taken personal responsibility for their professional development, often procuring their own resources and integrating technology—such as YouTube video presentations—to help learners visualize and understand complex concepts.

Despite the difficulty of finding TLE-specific workshops, teachers have attended general trainings to adapt various instructional strategies to their field. This aligns with RA 10533, Section 7, which mandates that the Department of Education and CHED collaborate with various stakeholders to ensure teacher education programs meet the demand for quality leadership. Similarly, Gregorio (2016) found that TLE teachers often invest personal time and funds into reading books, buying reference materials, and mentoring one another to foster professional growth.

Furthermore, as noted by Arnedo (2004), teachers must pay close attention to the developmental stages of students, ensuring they are exposed to learning materials and educational stimulation when they are most ready to benefit. Ultimately, it is within this framework that vocational teachers must develop effective teaching techniques to successfully "put over" the subject matter to the learners and enhance the joy and effectiveness of the learning process.

Frame 5. Remedial Measures by TLE Teachers on Resources

P2: Since we do not have enough resources, I just use the available resources in the school such as the books. Although not sufficient, I assigned learners on the different topics to master and report these to their classmates. So it is more on allowing them to learn first the concepts then relay this to their classmates through collaboration. I will just give some inputs to strengthen the topic.
P6: I have some innovative teaching aids. I use instructional materials. I photocopy the pictures then I mount them and beautify some. I took important notes form the books and present them through visual aids.

P7: Since we have no enough supply of tool and equipment, I used the taking- turns approach. I assigned the learners by group so they can perform the activity.

P11: For agriculture, we ask assistance from the Barangay to allow us to use some of their garden tools so we can apply what we learn in the classroom.

P19: With what are available in the school like the resources found in the canteen, we borrow some of the materials there that we can use in cooking. Sometimes we have our classes inside the canteen to apply the concepts.

To address challenges related to resources, TLE teachers utilize available school materials and empower learners through peer teaching and group applications in the laboratory. Teachers also independently produce and share instructional materials—such as charts, pictures, illustrations, and models—to help students visualize concepts in the absence of real materials. Furthermore, strong support from the Barangay Council allows students to use community land for agricultural gardening and seek guidance from local personnel on plant care. The school canteen also serves as a makeshift laboratory for cooking and food handling lessons.

Despite these initiatives, teachers emphasize that the school must provide more resources to accommodate the high number of learners and improve the resource-to-learner ratio. This resonates with the findings of Ariaso and Tancinco (2016) in Naval, Biliran, where insufficient reading materials and technology hindered student motivation. Their study highlights that computer-assisted instruction and adequate materials are vital factors in enhancing academic performance and student participation. Additionally, teachers have adopted the practice of encouraging learners to use their own materials or equipment from home for classroom activities. This strategy of resource-sharing is similar to the remedial measures observed by Gregorio (2016), where students were permitted to practice with personal tools to supplement the school's limited provisions.

Frame 6. Remedial Measures by TLE Teachers on Facilities

P5: I use the school ground because some of our facilities are damaged and the area is small. It cannot accommodate all my learners.
P7: I have mini-library in the classroom. I will not anymore require my learners to go to the library because they can use the books available in the classroom. I have collected many books related to TLE.

P10: We use the classrooms during skill demonstration. I require my learners to bring the materials needed in cooking, etc.

P11: I require my learners to bring their garden tools so that they can prepare their gardens anytime.

P17: The ancillary service rooms were utilized like the canteen, the laboratories, the offices, but we ask permission first from the teacher in- charge. I also assign the learners to clean the area before we leave the space.

To address the challenge of limited facilities, TLE teachers maximized the use of available spaces for instruction, experiments, and practical applications. Classrooms were frequently converted into makeshift laboratories and vice versa, depending on the specific demands of the subject. Some teachers also established mini-libraries within their classrooms to provide accessible reading materials, an initiative that proved effective for students who could not find the necessary books in the main school library.

Furthermore, teachers utilized ancillary service rooms, such as the canteen and other laboratories, through a system of mutual permission and collaboration. By sharing facilities and supporting one another, they ensured that students could still perform the required activities. This positive approach and culture of collaboration provided teachers with the necessary strength to manage their instructional predicaments.

Ultimately, the most effective strategy identified through the interviews was personal initiative and resourcefulness. As highlighted by Ariaso and Tancinco (2016), TLE teachers resorted to their own ingenuity to lessen the burden caused by a lack of equipment and inadequate support from the administration and the community. This resourcefulness remains a vital factor in maintaining the continuity of TLE instruction despite significant facility constraints.

CONCLUSIONS

In light of the findings of this study, it is concluded that because Technology and Livelihood Education (TLE) encompass diverse components and specialized majors, teachers inevitably encounter significant challenges regarding trainings, resources, and facilities. These challenges have compelled the implementation of various remedial measures as teachers strive to address the inadequacies in their instructional environment. To mitigate these concerns, it is recommended that School Administrators prioritize the provision of targeted training activities, such as LAC and INSET, to help teachers acquire more specialized skills while simultaneously assessing and finding means to upgrade laboratory needs and managerial competencies. Furthermore, teachers must go beyond traditional boundaries to strengthen partnerships with stakeholders, thereby gaining better access to the resources and facilities essential to the subject. With the rapid advancement of information technology, TLE teachers are encouraged to keep themselves abreast with the times; failing to update their technical and managerial knowledge would cause both educators and students to be left behind by new trends in TLE education. Finally, it is recommended that DepEd provide strong support for the instructional needs of teachers through the provision of educational supplies, technology equipment, and enhanced seminars to further strengthen the capabilities and professional competencies of the TLE faculty.

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