



## Technology and Livelihood Education Learning Brochures for Grade 7 Students

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### ABSTRACT

**Purpose of the study:** The study focuses on developing and evaluating Technology and Livelihood Education (TLE) brochures for 7th-grade students, aiming to address educational gaps specifically lack of instructional materials among TLE exploratory subjects.

**Methodology:** The methodology involved a needs assessment survey to identify the least learned competencies in TLE 7. Select experts evaluated criteria such as design, standards alignment, content quality, and ease of use. The suggestions and recommendations were thematically analyzed to improve the learning brochures further. Cost analysis was employed to determine the cost of producing the learning materials.

**Main Findings:** Expert evaluations rated the brochures highly across design, standards alignment, content quality, and ease of use, with recommendations for improving graphic elements and layout consistency. The cost analysis confirmed the affordability and local availability of production materials. Additionally, a proposed Instructional Brochure Development Framework was introduced, encompassing five phases: Conceptualization, Designing, Development, Evaluation, and Refinement.

**Novelty/Originality of this study:** The study advocates the use of learning brochures as instructional material in Technology and Livelihood Education and proposes an Instructional Brochure Development Framework for designing and developing learning brochures for other subjects.

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## 1. INTRODUCTION

Technology and Livelihood Education is one of the subjects taught in the basic education curriculum. It covers topics that need to be honed in the skills for life. Thus, this subject is heavy on skills development. However, just like any other subject, there are basic competencies that need to be mastered by the students first before they can perform well in class. Technology and Livelihood Education are subject to make students acquire knowledge and skills that are valuable in life [1]. The pandemic era affected many young students in elementary schools. Most of the students especially at young ages are experiencing difficulty in learning and developing their skills in various areas of Technology and Livelihood Education. It was determined based on the study on the General Effects of COVID-19-Related School Closures on Student Achievement that the pandemic-era classroom setting brought negative effects on the student's achievement in class [2].

The educational set-up during the pandemic era brought problems among the students in terms of lack of readiness or mastery of pre-requisite competencies in acquiring knowledge to perform a more complex

learning output such as occupational safety and health, performing calculations related to mensuration, laying-out, and estimating among others. Students also lack interest in learning complex skills as they find it difficult to appreciate the value of learning livelihood technologies. There is a very limited number of localized and contextualized learning resources [3].

To address the issue of the lack of instructional materials in Technology and Livelihood Education, it is necessary to come up with learning material that will suffice the needs of the students in learning the basic competencies. The output may help the students supplement their learning and help them improve their understanding of concepts in TLE and performance in class. In this study, it is the goal to have an effective yet cheap instructional material. It has been determined that using brochures as a means to disseminate information is convenient and cost-effective [4]. Entrepreneurial enterprises often use brochures for promotional purposes and information campaigns because of the following reasons: 1. It is cheap to produce, 2. Light to carry, 3. Simple and inexpensive, 4. Attractive to potential customers and, 5. Simplifies complex information to make it easy to understand for potential clientele [5].

In today's teaching environment, there are several challenges to address. Some of the more obvious ones include poor internet connection, lack of access to suitable devices for online classes, limited resources such as materials and equipment, distractions from household chores, gaming, and social media, as well as limited teacher presence [6]. As a solution, this study aims to provide teachers with supplementary materials in the form of a brochure, which can be used alongside their regular instructional materials [7]. This additional resource is intended to help teachers deliver content more effectively, identify subject area difficulties more easily, and plan necessary interventions. Students will also benefit from this material as it can be accessed offline and includes user-friendly instructions with images. This study's results may help address the issue of the lack of instructional material in Technology and Livelihood Education. Leading the development of brochure-type instructional materials may encourage other teachers to create similar learning materials [8], preventing this type of issue in the future and contributing to the goal of achieving quality education as part of sustainable development.

The pandemic has greatly reshaped our education context. It made us reconsider the ways of the teaching and learning process. It revealed the weaknesses of our educational setup and the extreme need for a good ICT infrastructure [9]. Another notable effect of CoVid- 19 pandemic is how students' especially young ones obtained poor performance in terms of skill-based subjects [10]. The global crisis prompted unscheduled school closures in over 100 countries, affecting more than one billion learners. This study provides a foundational understanding of the pandemic's impact on education, offering valuable insights for policymakers, educators, and researchers [11]. The researchers underscore the damaging effects of COVID-19 on the education sector and advocate for the adoption of technology and the improvement of digital skills among educators and learners [12]. The study calls for educational institutions to align with emerging global trends and realities in education, emphasizing the necessity for robust digital infrastructure and enhanced digital literacy. This paper highlights the importance of developing strategies such as coming up with instructional material that deviates from the traditional types and offers cheaper yet effective alternatives.

The brochure is a learning material systemically arranged to provide students and teachers with a learning material that is visually appealing, aligned to standards, with a brief yet sufficient amount of content, and easy to use. It should be economical. With a strong emphasis on the least learned competencies among students. The development of brochure-based teaching materials for persuasive text instruction in Grade 7 students highlights the effectiveness and practicality of using brochures as educational tools [13]. This approach is particularly relevant when considering the development of Technology and Livelihood Education (TLE) brochures for Grade 7 students, as it offers a structured and validated method for creating instructional materials that address specific educational needs. The development of TLE brochures for Grade 7 students offers a strategic solution to the challenges faced in TLE education. By following a structured development process, involving expert validation, and conducting thorough product testing, educators can create effective, engaging, and accessible instructional materials that significantly enhance student learning outcomes [14].

Improvised materials involve the selection and deployment of pertinent instructional elements of teaching and learning processes for the meaningful realization of specified educational goals and objectives in the absence or shortage of standard teaching and learning materials [15]. There is a good relationship between effective teaching and the use of instructional materials. Some educators have acknowledged the potential of IMs to improve teaching and learning, but most of them are still behind in their use of these resources in the classroom, and some have expressed skepticism that they can ever spark educational transformation [16]. The requirement to create an efficient instructional system poses both an opportunity and a risk. It is both a challenge and a chance to educate instructors, providing them with learning opportunities based on properly thought-out learning experiences [17].

Holistic skill development among young students is very important because it enhances creativity, makes education purpose-driven, encourages independent thinking, enables students to accept failures, and contributes to the skilled workforce in the future [18,19]. The aftermath effects of the COVID-19 virus are now considered the "new normal" [20]. This requires schools to develop different modalities of teaching and learning

to accommodate all types of students. The abrupt need for remote teaching has popularized online learning, brought new opportunities to both learners and teachers, and assessed the current educational system [21]. With this development in education, various ways of delivering lectures, activities, and other learning techniques to students have emerged. Teachers don't just rely on a certain teaching strategy to reach out to the learner.

Educators of the post-pandemic should embrace the relevance of having instructional materials that are cheap to produce yet provide the necessary content and learning experience to help students acquire the desired learning competencies. Post-pandemic education should promote the practicality and flexibility of curriculum implementation. The prolonged closures of school premises due to COVID-19 lockdowns, which lasted over eighteen months, had a profound impact on the education system [22]. The extended period of remote learning and the slow transition back to in-person classes pose significant challenges for both educators and students. This literature review underscores the critical need for effective instructional materials that can bridge the gaps created by the pandemic and support diverse learning environments. One such solution is the development of Technology and Livelihood Education (TLE) brochures for Grade 7 students.

Developing and implementing TLE brochures for Grade 7 students are vital in addressing the educational challenges exacerbated by the prolonged school closures. These brochures provide accessible, flexible, and engaging learning materials that support students' diverse needs and facilitate a smoother transition back to in-person education. By investing in such innovative instructional tools, the education system can better adapt to current realities and prepare for future disruptions, ensuring that all students receive a quality education.

Most TLE teachers realized that there was a lack of instruction during the pandemic era of education. Reproducing modular learning materials became an inconvenience and relatively cheaper than their printed counterparts [23]. The introduction of using brochures in instructional material development would highlight a perspective on how a learning material should be. Understanding the professional landscape of Technology and Livelihood Education (TLE) teachers in Philippine public schools is crucial for addressing the challenges they face and capitalizing on the opportunities available to them. This lack of available and appropriate instructional material during the pandemic created significant obstacles and potential growth areas for TLE teachers [24]. This examination provides valuable insights into the necessity and benefits of developing TLE brochures for Grade 7 students. Developing TLE brochures for Grade 7 students is a strategic response to the challenges identified in the professional landscape of TLE teachers. These brochures not only provide essential teaching materials but also support pedagogical improvement and stakeholder engagement. Comprehensive support systems and policies, coupled with practical resources like TLE brochures, can significantly enhance the quality of TLE education in Philippine public schools, ensuring that both teachers and students can thrive in an evolving educational environment. To fully capture the basis for developing the learning brochures, a learning needs assessment has to be conducted, however, care is needed to prevent it from becoming a straitjacket [25]. It might seem self-evident that the need to learn should underpin any educational system. If the needs of the students have been identified, then, it will help develop brochures by identifying which topics had to be addressed more and be placed in the brochures.

This research study is dedicated to the development and evaluation of instructional brochures designed for Technology and Livelihood Education (TLE) exploratory subjects. Specifically, the focus was placed on utilizing the least acquired competencies in Electrical Installation and Maintenance (Exploratory) as the basis for shaping the educational content within the instructional brochures. To ensure a comprehensive and expert evaluation, individuals possessing relevant subject expertise were engaged as evaluators to assess the instructional brochures. The evaluation encompassed criteria such as design, alignment to standards, content, and ease of use and implementation. The principal objective of this study is to develop instructional brochures leveraging locally sourced materials and equipment, thereby rendering the instructional material both cost-effective and easily producible. It is imperative to note that this study does not encompass the implementation of the developed instructional brochures in actual classroom instruction, nor does it encompass an evaluation of its impact on students' academic performance.

The feedback, comments, and suggestions provided by the evaluators were meticulously reviewed and integrated into the iterative improvement process of the instructional brochures.

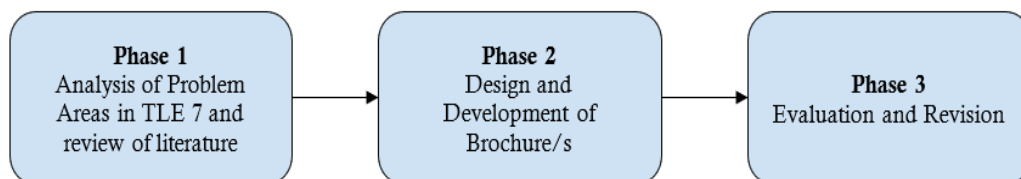


Figure 1. Conceptual Paradigm of the Study

The initial phase entails a review of relevant works of literature to understand the problems involving the availability of instructional materials in TLE 7 and collecting data on the least learned competencies in Technology and Livelihood Education (Exploratory) Electrical Installation and Maintenance [26]. TLE 7

teachers were invited to take part in the survey. They were provided with a checklist and asked to identify the least understood competencies, which would serve as the basis for selecting topics to be used in creating instructional brochures.

During the second phase, the focus was on designing and developing the learning material for the Grade 7 TLE brochures. This involved a comprehensive review of various aspects such as the color scheme, layout, delivery of learning content, lesson chunking, and thematic elements in the brochures. Additionally, careful consideration was given to the selection of materials used in the production of the instructional brochures to ensure that the production process would be cost-effective while maintaining quality. During the evaluation and revision phase, the instructional brochures underwent rigorous scrutiny by five expert teachers in Technology and Livelihood Education (TLE). These individuals were purposefully selected for their expertise in the subject matter. A thorough evaluation was conducted to guarantee that the materials were technically sound. The evaluators' feedback and suggestions were carefully analyzed along thematic lines to identify patterns and common threads. This process aimed to further enhance the instructional brochures, focusing on aspects such as design, alignment to standards, content depth, and ease of use and implementation.

## 2. RESEARCH METHOD

The study employed Instructional Material Development (IMD) Design to create a well-designed learning material that aligns with academic standards and is user-friendly. IMD design encompasses the development of instructional materials, taking into careful consideration how students learn and determining the most effective materials and methods to support academic achievement. The brochure was assessed using a scoring rubric incorporating the evaluation of four main components: design/visual appeal, alignment to standards, content, and ease of use/implementation. Before the distribution of the scoring rubric to the selected evaluators, its content was validated by experts to ensure the appropriateness and acceptability of all indicators. This step was taken to maintain the quality of the evaluation process.

To ensure that the instructional brochures were academically sound, Merrill's First Five Principles of Instruction was employed during the design phase. Educational models and designs should focus on the following principles: problem-centric, activation, demonstration, application, and integration [27]. Taking these principles into consideration, the TLE brochures were designed to include a Case/Problem Presentation, Objectives of the Lesson, Lesson Content/Abstraction, Quiz (with answer key), Enrichment Activity, and a Summary of the lesson.

To identify the least mastered competencies in TLE 7 (Electrical Installation and Maintenance-Exploratory), a needs assessment survey was carried out. The survey results guided the identification of competencies that necessitate strategic intervention through the development of instructional materials. After the development of instructional brochures, five evaluators possessing relevant expertise were tasked with assessing the brochures based on design, alignment to standards, content, and ease of use and implementation [28]-[30]. The evaluators provided feedback and suggestions using the comment/suggestion section of the scoring rubric. This approach facilitated a more thorough means of pinpointing the specific areas in which the brochures require improvement.

In this study, both descriptive and thematic analysis techniques were employed. Descriptive analysis was used to quantitatively describe the instructional brochures based on predetermined study parameters. Conversely, thematic analysis was utilized to identify themes indicating areas for improvement in the brochures. To identify the least learned competencies in Technology and Livelihood Education 7 among grade 7 students, data from the needs assessment survey were analyzed using frequency counts. Descriptive analysis was used to examine the content of Technology and Livelihood Education brochures for grade 7 students.

The mean score, along with a verbal description, was used to evaluate the developed Technology and Livelihood Education brochures for grade 7 students. The evaluation was conducted by experts in terms of design, alignment to standards, content, and ease of use. The Likert Scale was employed to establish score intervals and determine corresponding verbal descriptions.

Table 1. The Likerts Scale

Interval	Verbal Description
4.21- 5.00	Excellent
3.41- 4.20	Very Good
2.61- 3.40	Good
1.81- 2.60	Fair
1.00- 1.81	Poor

Comments and suggestions from the evaluators regarding the instructional brochures were Thematically analyzed to establish the themes indicating areas for improvement in the brochures.

### 3. RESULTS AND DISCUSSION

This portion provides the study's results and findings. It includes in-depth discussions on data analysis, interpretation, and insights to effectively achieve the study's objectives. Additionally, it presents the cost and list of materials required for brochure production. Furthermore, a suggested framework for instructional brochure development has been incorporated based on the conduct and findings of this study.

#### Least learned competencies in Technology and Livelihood Education 7 among grade 7 students

After conducting a needs assessment survey, the least learned competencies in Technology and Livelihood Education 7 (Electrical Installation and Maintenance) among grade 7 students have been identified. These competencies were used as the learning topics for the development of the learning brochures.

1. Perform Pre-operation Check-up of Tools and Equipment
2. Estimate & Measure of Materials for Project Making
3. Identification of job requirements given through oral or written communication
4. Lay outing and Designing
5. Planning and Following System Protocols
6. Perform First Aid and Emergency Response

#### Design Contents of Technology and Livelihood Education brochures for Grade 7 students

The instructional brochures were designed to be both compact and comprehensive. They feature a consistent design theme, utilizing blue and green as base colors, and an 8-point font size to ensure readability while accommodating the necessary learning content. These brochures are designed to be visually appealing and engaging for students. In addition to being effective learning tools, they are intended to be cost-effective and easy to produce, facilitating their use in various educational settings, including flipped classrooms, modular learning, remedial teaching, and flexible learning approaches.

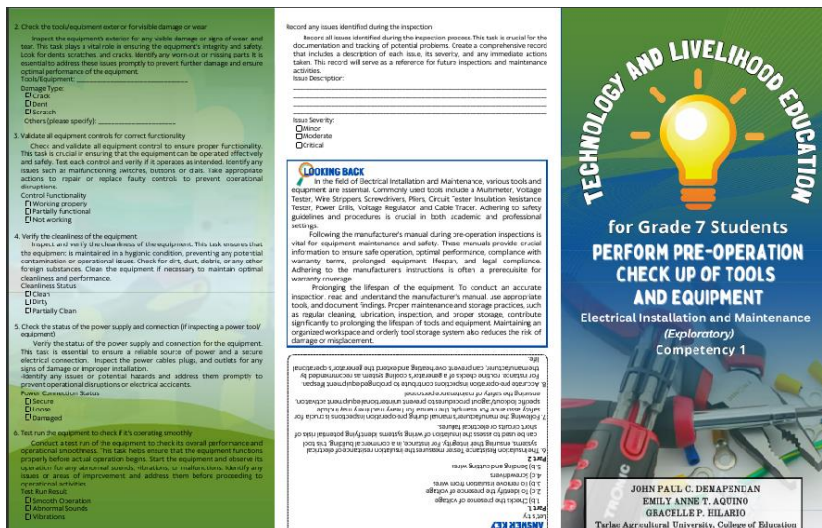


Figure 2. Outer Face of Technology and Livelihood Education Brochures for Grade 7 Students

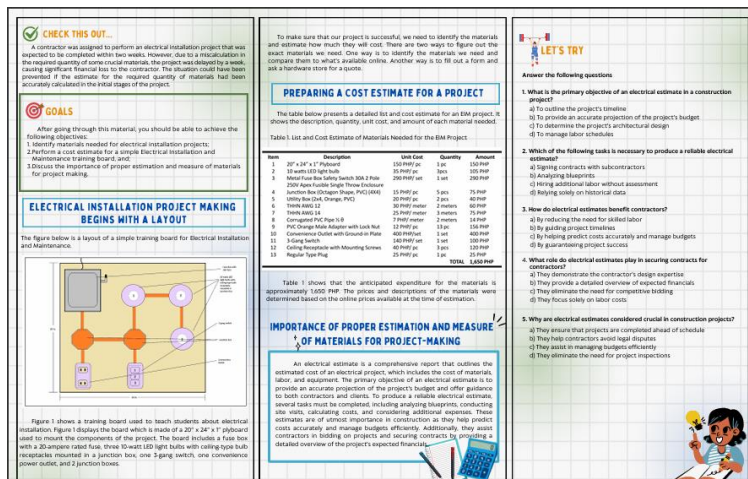


Figure 3. Inner Face of the Technology and Livelihood Education Brochures for Grade 7 Students



### Instructional Brochure Contents

The content of the brochures is based on the Department of Education K-12 Curriculum Most Essential Learning Competencies in Technology and Livelihood Education- Electrical Installation and Maintenance (Exploratory). The brochures are divided into the following parts:

1. *Title face*- this contains the title of the brochure, the competency/module series, and the authors of the brochure.

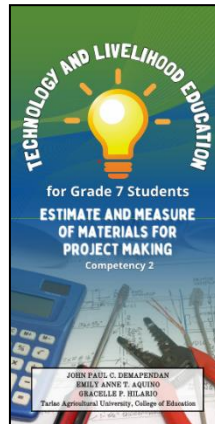


Figure 4. Title Face

2. *A Related Scenario (Check this out)*- In this section of the instructional brochure, a practical, real-life situation is used to illustrate the significance of the competency explained in the brochure.

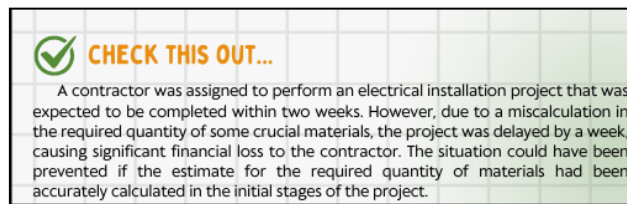


Figure 5. A Related Scenario (Check this out) Section of the Instructional Brochure

3. *Learning Objectives (Goals)*- This section outlines the intended learning outcomes, setting clear expectations for both teachers and students. These outcomes guide the use of the learning material, ensuring that both parties are aware of the competencies to be achieved.

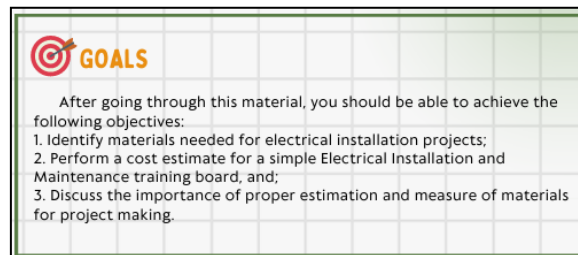


Figure 6. Learning Objectives (Goals) Section of the Instructional Brochure

4. *Learning Contents/Abstraction*- This section offers a thorough presentation of the information students need to achieve the instructional brochure's learning objectives. High-quality images are carefully selected to provide students with clear and accurate perspectives of the content for each competency.

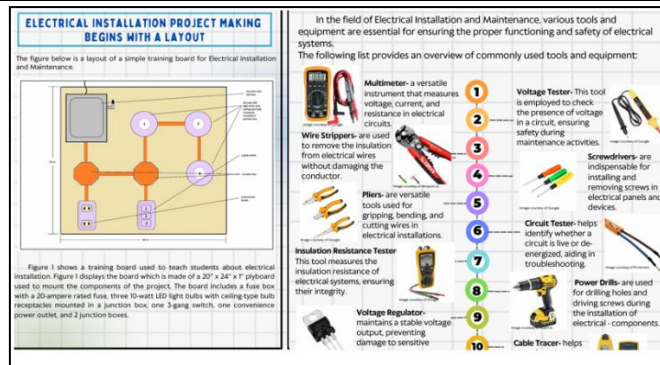


Figure 7. Sample Learning Contents from the Instructional Brochures

5. *Assessment Activity (Let's Try)*- This section includes a series of questions designed to assess students' knowledge. To ensure variety and engagement, multiple types of assessments have been incorporated into these brochures.

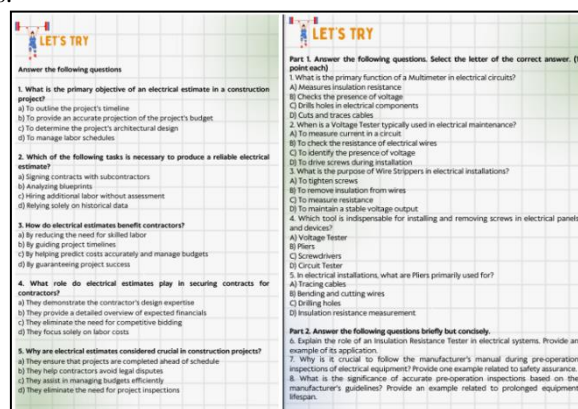


Figure 8. Sample of Assessment Activity (Let's Try) of the Instructional Brochures

6. *Learning Enrichment Section (You Can Do this...)*- This section offers supplementary learning activities designed to enhance the learning experience and further develop students' mastery of the content.

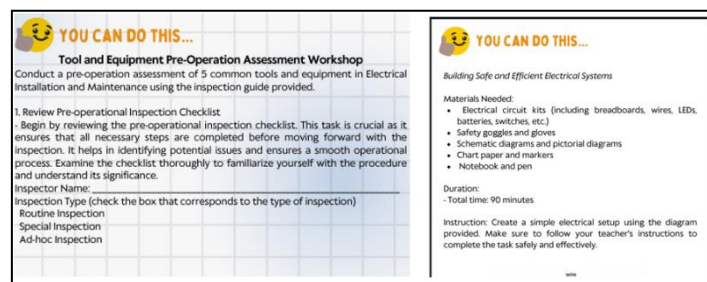


Figure 9. Sample Learning Enrichment Section (You Can Do this...) of the Instructional Brochures

7. *Lesson Summarization (Looking Back)*- This section contains the summary of the learning contents. This helps students to identify the most important ideas in a text, how to ignore irrelevant information, and how to integrate the central ideas in a meaningful way.

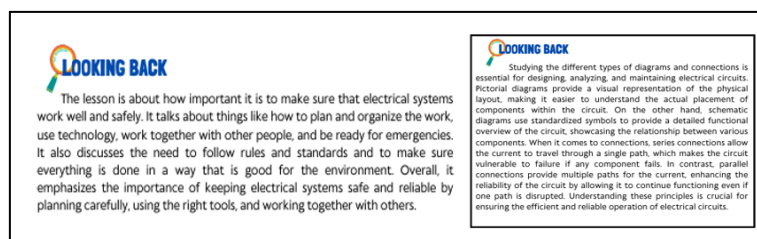


Figure 10. Sample Lesson Summarization (Looking Back) of the Instructional Brochures

8. *Reference/Resources Section*- This section lists the information sources used to thoroughly develop the learning content of the instructional brochures.

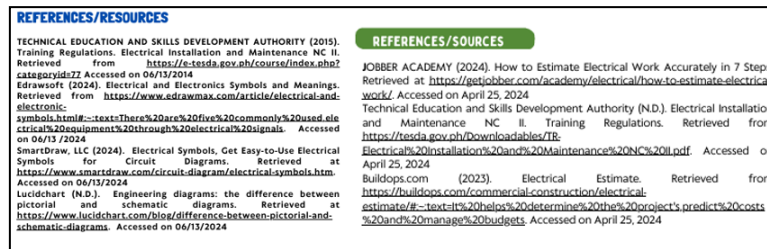


Figure 11. Sample Reference/Resources Section of the Instructional Brochures

9. *Answer Key Section*- This section offers accurate answers for the 'Let's Try' exercises, providing students with feedback on the questions featured in the instructional brochures. The answer keys are deliberately placed upside down to encourage independent thinking and prevent students from relying solely on the provided answers.

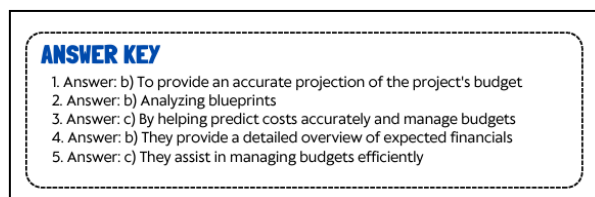


Figure 12. Sample Answer Key Section of the Instructional Brochures

The Technology and Livelihood Education (TLE) Brochures designed for grade 7 students serve as comprehensive instructional materials structured into several key sections. These include: Title Face, A Related Scenario (Check this out), Learning Objectives (Goals), Learning Contents/Abstraction, Assessment Activity (Let’s Try), Learning Enrichment Section (You Can Do this...), Lesson Summarization (Looking Back), Reference/Resources Section, and Answer Key Section. This structured approach, known as lesson chunking, allows for the effective design and development of instructional brochures. Each section plays a crucial role in enhancing learning experiences. For instance, the 'A Related Scenario' section contextualizes theoretical concepts with real-world applications, while 'Learning Objectives' clearly outlines educational goals. 'Learning Contents/Abstraction' provides in-depth subject matter, followed by 'Assessment Activity (Let’s Try)' which offers students opportunities to apply their knowledge.

Additionally, the 'Learning Enrichment Section' encourages further exploration and application beyond the basic curriculum, fostering deeper understanding. 'Lesson Summarization' aids in reinforcing learning by recapping key points, and the 'Reference/Resources Section' offers supplementary materials for extended study. Lastly, the 'Answer Key Section', strategically placed upside down, ensures students engage critically with content before checking their answers, promoting independent learning and verification of understanding.

This comprehensive yet compact approach ensures that TLE Brochures not only cover a wide range of topics effectively but also facilitate active student engagement and understanding.

Table 2. Mean Score and Verbal Description of the TLE Brochures in terms of Design, Alignment to Standards, Contents, Ease of Use/Implementation

Scoring Criteria	Mean Score	Verbal Description
Design	3.8	Very Good
Alignment to Standards	4.4	Excellent
Contents	4.4	Excellent
Ease of Use/ Implementation	4.4	Excellent

Table 2, presents the mean scores and corresponding verbal descriptions of the TLE brochures evaluated on four criteria: Design, Alignment to Standards, Contents, and Ease of Use/Implementation. The data showcases how these brochures perform in each category based on the feedback gathered. The design of the TLE brochures received a mean score of 3.8, which translates to a verbal description of “Very Good.” This indicates that while the design is above average, there is still room for improvement to achieve an "Excellent" rating. A score of 3.8 suggests that the brochures are visually appealing engaging and interesting but may lack some elements that could enhance their overall aesthetic appeal and functionality. Potential areas for improvement



could include the use of more engaging graphics, improved layout consistency, or better use of color schemes to capture attention and aid in information retention.

The TLE brochures performed exceptionally well in the alignment to standards category, scoring an average of 4.4 and receiving an “Excellent” rating. This high score indicates that the brochures are highly compliant with established educational standards and guidelines. Their alignment ensures that the content is relevant, accurate, and meets the necessary educational requirements for effective learning. The "Excellent" rating suggests that the brochures have been thoroughly reviewed and revised to ensure adherence to curricular standards, making them reliable resources for educators and learners. The high score also implies that the content is engaging, informative, and structured in a manner that facilitates learning. However, due to the recent update in the Department of Education K-12 curriculum, it is necessary to review the curriculum to ensure that the learning content aligns with the updated curriculum.

Similar to the alignment to standards, the content of the TLE brochures received a mean score of 4.4, described as “Excellent.” This indicates that the information provided within the brochures is comprehensive, well-organized, and highly relevant to the target audience. The excellent rating in contents suggests that the brochures effectively cover the necessary topics and concepts, provide clear and detailed explanations, and include valuable insights that enhance understanding. The TLE brochures received a high rating with a mean score of 4.4 and were described as “Excellent” for ease of use and implementation. This indicates that the brochures are user-friendly and easy to use and implement in an educational setting. The high score suggests that the brochures are well-organized, with clear instructions and guidelines, making them easy to produce and utilize. Educators can efficiently incorporate them into their teaching practices without significant difficulties or extensive training. Additionally, the use of commonly available materials for production makes the brochures cost-effective compared to traditional learning modules, as the TLE brochures only require one piece of bond paper per module.

The evaluation of the TLE brochures based on four criteria shows an overall high quality and effectiveness. Although the design scored slightly lower, achieving a “Very Good” rating, the other three categories-alignment to standards, contents, and ease of use/implementation-received “Excellent” ratings, indicating their strong performance. To further improve the quality of the brochures, efforts could be made to enhance the design, aligning it with the exemplary standards set by the other criteria.

**Estimating the Cost of Production of Instructional Brochures**

To estimate the cost of producing an instructional brochure, several factors were taken into account. An inkjet printer can produce 6750 copies of instructional brochures using 14 reams of high-quality bond paper and 3 sets of dye ink. Additionally, a computer equipped with a 3.5 GHz Quad-Core Quad-Thread CPU Processor is deemed suitable for brochure production.

Table 3. Cost and List of Materials for the Production of Instructional Brochures

Item	Description	Unit Cost	Quantity	Amount (Php)
1	Long bond paper (8.5” x 13”) Substance 20	250.00 PHP/ Ream	14 reams	3500.00
2	Inkjet Printer	8800.00 PHP/ Unit	1 unit	8800.00
3	Portable Laptop (3.5 GHz Quad-Core Quad-Thread CPU Processor)	30,000.00 PHP/ Unit	1 unit	30,000.00
4	Ink Dye Ink for inkjet Printer (Set)	1500 PHP/ Set	3 Set	4500.00
<b>TOTAL</b>				46,000.00/6750 copies = 6.93 PHP/ Learning Brochure

Table 3 details the cost and list of materials for producing instructional brochures for TLE 7 Electrical Installation and Maintenance (Exploratory). The total investment necessary to produce 6750 copies of instructional brochures amounted to 46, 000 PHP. This shows that 6.93 PHP is the cost of producing a single piece of instructional brochure. It is also evident that the equipment and materials required for the production of the instructional brochures are readily available locally and are cost-effective.

Standardly, learning modules for exploratory subjects in TLE 7 comprise up to 16 learning modules. Each learning module contains 12-17 pages of learning content, while the instructional brochures will typically consist of 16 pieces of paper materials for each learning module, offering a more resource-efficient means to deliver the same level of competence to the students.

## Suggestions from the Evaluators for the Improvement of Instructional Brochures

### *Curriculum Revisit*

Evaluators emphasized the necessity of revisiting the updated DepEd curriculum to confirm that the brochure's learning content aligns with the prescribed learning experiences. This ensures that the brochures reflect the current educational standards and provide relevant and accurate information.

### *Use of Higher Quality Paper Material*

Evaluators suggested using thicker bond paper for the brochures. This would improve their durability and enhance the quality of the printed materials, making the brochures more resilient and visually appealing.

### *Improving Learning Objectives*

In the development of learning brochures, it was recommended that learning objectives should encompass cognitive, affective, and psychomotor domains. This approach ensures a comprehensive learning experience, addressing various aspects of learner development. Additionally, it was noted that the content and evaluation activities within the brochures should be closely aligned with these learning objectives to maintain coherence and effectiveness.

### *Establishing Chronology for Better Implementation*

Evaluators advised that instructional brochures should indicate the order of implementation. This sequential structure helps teachers create a systematic timetable for delivering each brochure, ensuring a logical progression of instruction and better management of teaching schedules. To significantly enhance the effectiveness of the instructional brochures and ensure they meet the educational needs of the learners, it is important to consider the suggestions provided by the evaluators of this study. The instructional brochures can be enhanced to better meet their purpose and deliver valuable educational content to learners if the suggestions gathered in this study are taken into account.

## Proposed Framework for Developing Instructional Brochures

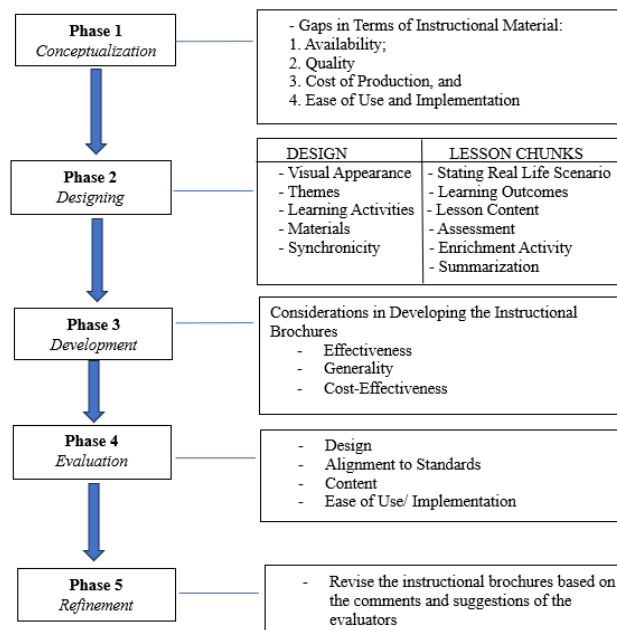


Figure 13. Proposed Instructional Brochure Development Framework

The Proposed Instructional Brochure Development Framework outlines a systematic approach to developing effective instructional materials through five phases: Conceptualization, Designing, Development, Evaluation, and Refinement. Each phase is designed to ensure that the final instructional brochures meet the identified needs and standards of quality education.

### *Phase 1. Conceptualization*

In this initial phase, the primary focus is on identifying the gaps in the existing instructional materials. These gaps are categorized into four main areas:

1. Availability- Assessing the accessibility and distribution of instructional materials.

2. Quality- Ensuring that the materials meet the educational standards and are effective in conveying the intended content.
3. Cost of Production- Evaluating the financial feasibility of producing the instructional brochures.
4. Ease of Use and Implementation- Considering how user-friendly and implementable the materials are for both educators and students.

This phase sets the groundwork for the project by clearly defining the objectives and parameters for the instructional brochures.

### *Phase 2: Designing*

During the designing phase, the focus shifts to creating the layout and structure of the brochures. This phase is divided into two main components:

1. Design
  - a) Visual Appearance- Ensuring the brochures are visually appealing and engaging.
  - b) Themes- Establishing cohesive themes that align with the educational goals.
  - c) Learning Activities- Incorporating activities that enhance learning and engagement.
  - d) Materials- Select appropriate materials that support the instructional content, locally available and cheap produce.
  - e) Synchronicity- Ensuring that the elements of the brochure work harmoniously together. Adding an order or sequence for the implementation makes the instructional brochures easy to implement.
2. Lesson Chunks
  - a) Stating Real-Life Scenarios- Including practical examples to make the content relatable.
  - b) Learning Outcome- Clearly defining what students are expected to learn. Target learning outcomes must be holistic and should enable students to learn prescribed competencies.
  - c) Lesson Content- Providing detailed and structured educational content. Lesson contents must be compact yet comprehensively presented.
  - d) Assessment- Incorporating assessment tools to measure learning outcomes.
  - e) Enrichment Activities- Offering additional activities for deeper understanding.
  - f) Summarization- Summarizing key points to reinforce learning.

### *Phase 3: Development*

This phase involves the actual creation of the instructional brochures. Major considerations during this phase include:

1. Effectiveness- Ensuring the materials effectively meet the learning objectives.
2. Generality- Making sure the materials apply to a wide range of learners and contexts.
3. Cost-Effectiveness- Balancing quality with cost to produce feasible instructional materials.

### *Phase 4: Evaluation*

In the evaluation phase, the developed brochures are assessed based on several criteria:

1. Design- Reviewing the visual and structural elements.
2. Alignment to Standards- Ensuring the content aligns with educational standards and up-to-date curriculum guides.
3. Content- Evaluating the accuracy, relevance, and comprehensiveness of the content.
4. Ease of Use/Implementation- Assessing how user-friendly and implementable the brochures are for both teachers and students.

This phase is critical for identifying areas of improvement and ensuring the instructional brochures meet the desired standards of quality.

### *Phase 5: Refinement*

The final phase involves revising the instructional brochures based on the feedback received during the evaluation phase. This process includes:

1. Incorporating comments and suggestions from evaluators.
2. Making necessary adjustments to improve the overall quality and effectiveness of the brochures.

Through this systematic and iterative process, the Proposed Instructional Brochure Development Framework aims to create high-quality, effective, and user-friendly instructional materials that address the identified gaps and meet the educational needs of grade 7 students in Technology and Livelihood Education.

## **4. CONCLUSION**

The least learned competencies among grade 7 students in Technology and Livelihood Education 7 (Electrical Installation and Maintenance- Exploratory) are as follows: performing pre-operation check-ups of

tools and equipment; estimating and measuring materials for project making; identifying job requirements given through oral or written communication; laying out and designing; planning and following system protocols; and performing first aid and emergency response. These competencies were used as the learning topics for the development of the learning brochures. The brochures for 7th grade TLE are instructional materials that are organized into different sections. These sections include a Title Face, a relevant scenario, objectives for learning, the main content for learning, an assessment activity, enrichment activities for learning, a summary of the lesson, references, as well as an answer key. This organized method, known as lesson chunking, improves learning experiences by putting theoretical concepts into context, identifying educational objectives, providing detailed subject matter, creating opportunities for application, encouraging further exploration, assisting in reinforcing learning, promoting independent learning, and checking for understanding. The instructional brochures developed in this study are the result of a thorough review of crucial elements for creating effective and affordable instructional materials. An instructional brochure should be visually appealing, aligned with the latest curriculum guides, have comprehensive learning content, and be easy to use for both students and teachers.

The brochures for TLE received positive evaluations in four areas: design, alignment to standards, content, and ease of use/implementation. Although the design suggests that there is still space for improvement, particularly in the color schemes, graphics, and layout consistency, the brochures demonstrated strong compliance with educational standards and were rated as "Excellent" due to their exceptional alignment with standards. Overall, the brochures exhibit high quality, but enhancing the design could further improve their effectiveness. The recommendations for enhancing educational brochures involve reviewing the curriculum to guarantee it aligns with the learning content, opting for a more durable and visually appealing instructional brochure, including thorough learning objectives, and arranging the content in chronological order for implementation. The consideration of these suggestions would improve instructional brochures and more effectively address the educational requirements of the learners.

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