MODULE IN HANDICRAFTS

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Abstract

The purpose of this study was to develop and validate the module in handicrafts in the subject area of Technology and Livelihood Education. This study sought to determine the effects of the module in handicrafts on the students' performance of Grade 7 in Liceo de Victoria. This study aimed to answer the following questions. First, what is the level of module components in terms of learning objectives; content; activities; and assessment? Second, what is the level of module attributes in terms of: adaptability; appropriateness; design; self-instructional; usability and validity? Third, what is the level of students' performance of Grade 7 as to third quarter grade in TLE subject? Fourth, do the module components has a significant effect to the students' performance of Grade 7? and lastly, do the module attributes has a significant effect to the students' performance of Grade 7?

The respondents of the study were the fifty (50) Grade 7 students of Liceo de Victoria under distance learning. The descriptive survey research method was used in this study in order to assess the level of module components and attributes in Technology and Livelihood Education under handicrafts production.

The following were the significant findings of the study; the level of module components with regards to learning objectives, contents, activities, and assessments were all very high. The level of module attributes with regards to adaptability, appropriateness, design, self-instructional, usability and validity were all very high. The level of students' performance of Grade 7 as to third quarter grade in TLE subject are proficient. The components of the module in terms of learning objectives, content and activities has a significant effect on students' performance while there is no significant effect in terms of assessment. On the other hand, the attributes of the module in terms of adaptability, appropriateness, design, self-instructional, usability and validity has a significant effect on students' performance. Hence, there is a significant effect between the modules in handicrafts to the students' performance. Thus, the null hypothesis is rejected.

Therefore, it is recommended that the Liceo de Victoria school in which the researcher is employed may request to the SPDCSS administrators to use the said module in handicrafts as a centralize one for the whole schools' system. The TLE teachers may develop additional instructional learning materials based on the needs and interests of the students assimilated into other courses offered in Technology and Livelihood Education and the TLE teachers are encouraged to attend seminars, workshops, and training programs to acquire new knowledge and updated background information on developing instructional learning materials.

1. Main text

Introduction

Handicrafts are the unique symbol of a particular community or culture through indigenous craftsmanship and material. It is any of a wide variety of types of work where useful and decorative objects are made completely by hand or by using only simple tools.

Handicrafts is one of the areas in Technology and Livelihood Education subject to be taught to the Grade 7 students that has a topic of; use basic tools in embroidery, create embroidered article, understanding recycling, create recycled project and wrap gift items.

Educational institutions adapt and embrace the new normal, the situations are uncertain. There are challenges and difficulties in providing the necessity for the learners and teachers in distance learning. One of the common problems, especially in the private school's institution is that, there is no module given to the teachers and they are the one who will create their own modules to be use by the students every week.

Due to this reason the researcher decided to make a module in handicrafts to help the teachers to teach properly and effectively the said topics, it can also help the students to emphasize basic learning competencies intended to develop knowledge, values, skills, attitudes and it can be use particularly by the teachers of Immaculate Conception Catholic School and Liceo schools in Laguna.

Background of the Study

Technology and Livelihood Education subject in the global community intended the student to provide knowledge and develop their skills that will transform their lives toward productive ends. It is also a subject in which students learn best by doing. It aims to build an adequate mastery of knowledge and information, processes, and equip students with skills for lifelong learning.

Handicrafts is one of the area in the T.L.E. subject considered as an exploratory course where the students can show their ability to acquire practical knowledge, value, skills and attitudes. Handicrafts are a substantial medium to preserve of rich traditional art, heritage and culture, traditional skills and talents which are associated with people's lifestyle and history.

Handicrafts module is a tool that provides course materials in a logical, sequential, order, guiding students through the content and assessments in order to boost their self-confidence, creativity, and competence as they were given the opportunity to express their ideas positively in producing craft articles.

At present, there is no module in handicrafts given to the Teachers of Immaculate Conception Catholic Schools and Liceo schools in Laguna. The researcher come up with the idea to make a module in handicrafts to help the San Pablo Diocesan Catholic Schools System to have a unified and module align with the most essential learning competencies of the Department of Education. It can also help their teachers to maximize their time in mastering and preparing the lessons very well because they do not need to make modules every week. More so, this module will help the students to easily understand the lesson and provide them an opportunity to engage in an experiential, contextualized and authentic teaching learning process in the new normal education because the researcher believed that students can learn easily through the efforts, dedication and passion of the teachers to teach.

The module in handicrafts that the researcher will make can equip the students with skills and values to become positive, productive, market – oriented and customer centered. The module in handicrafts will provide activities that develop the capacity of students for self- employment and suggest pathways for further education and training in chosen careers in the future.

Theoretical Framework

This design is to verify the appropriateness and acceptability of module in handicrafts. The theoretical framework of this study is supported by different theories:

The theory of social constructivism says that learning happens mainly though social interaction with others, such as teacher or students. Lev Vygotsy develop the idea of zone of proximal development. This zone lies between what a learner can achieve alone and what a learner can achieve with their teacher's expert guidance. Skilled teacher scaffold learning by providing guidance that changes students based on their current state.

Bloom's taxonomy makes useful distinctions among possible kinds of activities that truly target students' zones of proximal development in the sense direct responsibility of the expert for making learning possible. He or she must not only have knowledge and skill, but also know how to arrange experiences that make it easy and safe

for learners to gain knowledge and skill themselves.

John Dewey explained that learning by doing is the process whereby people make sense of their experiences, especially those experiences in which they actively engage in making things and exploring the world. It is both a conceptual designation applied to a wide variety of learning situations and a pedagogical approach in which teachers seek to engage learners in more hands-on, creative modes of learning.

Harasim (2012), proposed online collaborative learning theory that foster collaboration and knowledge building with the use of technology as a subset for distance learning. This theory emphasizes the essence of technology to increase and improve the communication between teachers and learners which is vital for different distance learning modalities.

Kolbs theory of learning styles which is one of most widely used learning style theories. Psychologist David Kolb first outlined his theory of learning style in 1984. He believed that our individual learning style emerge to our genetics, life experiences, and the demand of our current environment and whatever the influence of learning style itself is actually oriented to one extent to another base more on the reflection of experiences.

The above theories are essential to the present study since the researcher needs to determine level of module components and attributes under handicrafts production.

Independent Variable   **Dependent Variable**

Module Components
  ➢ Learning Objectives
  ➢ Content
  ➢ Activities
  ➢ Assessment

Module Attributes
  ➢ Adaptability
  ➢ Appropriateness
  ➢ Design
  ➢ Self-Instructional
  ➢ Usability
  ➢ Validity

Students' Performance
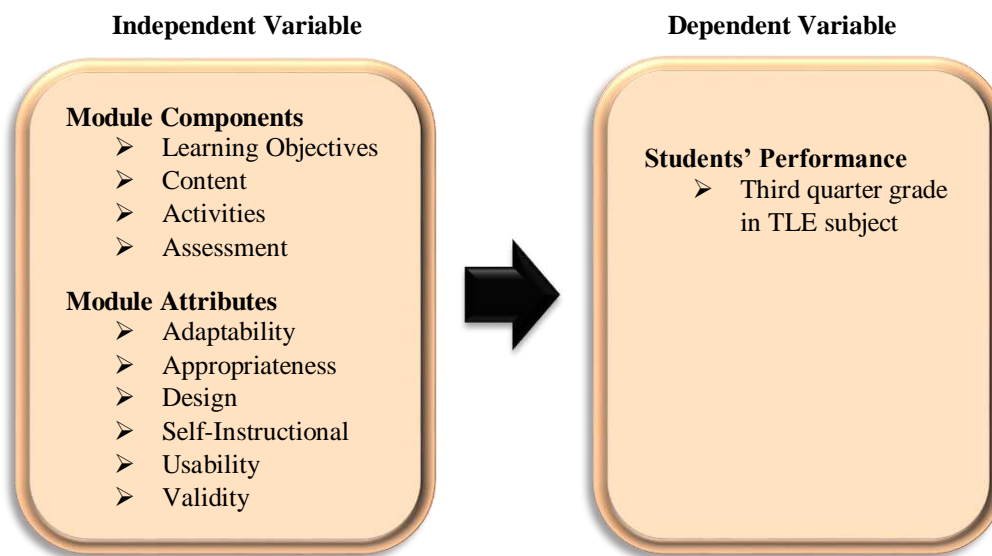 ➢ Third quarter grade in TLE subject

Figure 1. The Research Paradigm of the Study

Frame 1 is independent variable of the study which is about the components of module in terms of learning objectives, content, activities and assessment and the attributes; adaptability, appropriateness, design, self-instructional, usability and validity.

Frame 2 is dependent variable of the study is the students' performance in terms of third quarter grade in TLE subject.

Statement of the Problem

This study aimed to develop and validate the modules in Technology and Livelihood Education under Handicrafts Production.

Specifically, it answered the following questions:
1. What is the level of module components in terms of:
    1.1 learning objectives;
    1.2 content;
    1.3 activities; and
    1.4 assessment?
2. What is the level of module attributes in terms of:
    2.1 adaptability;
    2.2 appropriateness;

2.3 design;
2.4 self-instructional;
2.5 usability and
2.6 validity?
3. What is the level of students' performance of Grade 7 as to third quarter grade in TLE subject?
4. Do the module components has a significant effect to the students' performance of Grade 7?
5. Do the module attributes has a significant effect to the students' performance of Grade 7?

Research Methodology

In conducting this study, the researcher used descriptive survey method of research in assessing the level of module components and attributes in Technology and Livelihood Education under handicrafts production. It was done through a set of questionnaire which is for the components and attributes of the module in handicrafts.

According to Rick Penwarden (2014), descriptive research is conclusive in nature, as opposed to exploratory. This means that descriptive research gathers quantifiable information that can be used for statistical inference on the target audience through data analysis.

This study determines the significant effect on using module in handicrafts towards students' performance.

The researcher tried to get deep data and information about the cause and effect relationship of the two variables.

The respondents of the study were the fifty (50) Grade 7 students of Liceo de Victoria under distance learning. The respondents were selected using the purposive sampling technique based on their knowledge and ability skills needed by the researcher.

The researcher formulated the title of the study as the first step, then submitted to the research adviser for approval. Important suggestions and comments of the adviser was noted to serve as guide in the study.
The researcher asked information from some experts in order to form a concept regarding the components and attributes of handicrafts module. Once the researcher had made the module it was distributed to the experts for initial review and evaluation for the betterment and revision of the module. When the module was revised and the questionnaire was already validated, it was used by the students and after the third quarter, a questionnaire was given to the students for them to evaluate, give feedback and write a recommendation regarding on the module that they used. After collecting the answered modules and questionnaires, the data based on the information was tabulated, analyzed and interpreted by the researcher.

The researcher made questionnaire as an instrument to gather adequate data and information in this study. The researcher used one (1) set of questionnaire in this study. The questionnaire has two (2) parts wherein the first part has four (4) criteria to assess and the second part has six (6) criteria to assess the components and attributes of the module in handicrafts.

As this study employs a descriptive research design, the researcher decided to use questionnaire accompanied by a five (5)-point Likert scale as the main tool in gathering data.

Scale	Description
5	Strongly Agree
4	Agree
3	Moderately Agree
2	Disagree
1	Strongly Disagree

The following statistical measures or treatments were used for the treatment of the data gathered in the study. The weighted mean and standard deviation was used to determine the level of module components in terms of learning objectives, contents, activities, and assessments; and level of module attributes in terms of adaptability, appropriateness, design, self-instructional, usability and validity. Percentage and weighted mean was used to determine the level of assessment result of the students' performance of Grade 7 after using the module in handicrafts in terms of third quarter grade in TLE subject. The Regression Analysis was used to determine the effects of the module components and attributes in handicrafts to the students' performance.

Results and Discussion

Table 1. Level of Module Components in terms of Learning Objectives

The objectives of the module in handicrafts are…	Mean	SD	Remarks
…consistent and relevant to the course goal.	4.62	0.49	Strongly Agree
…precisely describe the expected learning outcomes.			
…measurable and attainable.	4.72	0.45	Strongly Agree
…consist of three learning areas which are knowledge, skills, and attitude.	4.56	0.50	Strongly Agree
…stated in student-friendly language.	4.64	0.49	Strongly Agree
	4.64	0.53	Strongly Agree
Overall Mean: SD	**4.64:**	**0.49**	**Very High**

Table 1 illustrates the level of module components in terms of learning objectives. Among the statements above, "The objectives of the module in handicrafts are precisely describe the expected learning outcomes" yielded the highest mean score (M=4.72, SD=0.45) and was remarked as Strongly Agree. This is followed by "The objectives of the module in handicrafts are consist of three learning areas which are the knowledge, skills and attitude" and "The objectives of the module in handicrafts are stated in student-friendly language" with the mean score (M=4.64, SD=0.49, 0.52) and were also remarked as Strongly Agree. On the other hand, the statement "The objectives of module in handicrafts are measurable and attainable "received the lowest mean score of respondents with (M=4.56, SD=0.50) yet was also remarked Strongly Agree.

It can be gleaned from table 1, that the level of Module Components in terms of Learning Objectives is 4.64 with "Very High" as verbal interpretation. This means that the objectives of the module were presented clearly and understood by the students.

It was supported by Torrefranca (2017) that module objectives could be perceived as the backbone of instruction upon completion of a course. Learning objective is a guide to ascertain and pick appropriate lesson content, activities, and assessment to achieve a more comprehensive learning progress. The value of creating learning modules lies in the ability to integrate related content and activities, providing a rich, interactive learning experience for students.

Table 2 illustrates the level of module components in terms of contents. Among the statements above, "The contents of the module in handicrafts are appropriate to gain essential learning competencies" yielded the highest mean score (M=4.70, SD=0.46) and was remarked as Strongly Agree. This is followed by "The contents of the module in handicrafts clear and precise descriptive directions" with the mean score (M=4.68, SD=0.47,) and were also remarked as Strongly Agree. On the other hand, the statement "The contents of module in handicrafts are motivating learners to acquire skills" received the lowest mean score of respondents with (M=4.60, SD=0.54) yet was also remarked Strongly Agree.

Table 2. Level of Module Components in terms of Contents

The contents of the module in handicrafts are…	Mean	SD	Remarks
…clear and precise descriptive directions.	4.68	0.47	Strongly Agree
…appropriate in the lessons.	4.64	0.49	Strongly Agree
…relevant to the student's level of understanding.	4.66	0.48	Strongly Agree
…motivating learners to acquire skills.	4.60	0.54	Strongly Agree
…appropriate to gain essential learning competencies.	4.70	0.46	Strongly Agree
Overall Mean: SD	**4.66:**	**0.49**	**Very High**

It can be gleaned from table 2, that the level of Module Components in terms of Contents is 4.66 with "Very High" as verbal interpretation. This means that the content of the module was relevant to the needs of the

students that provide meaningful learning opportunity.

According to Briggs (2014), every module must point to significant categories of content or conceptual pieces of the course which will guide students to discern big ideas. Relevance is necessary in providing a learning context. It will also help the students realize the value of the content of the learning module therefore, creating great content that will cater diverse learners takes a lot of creativity, time, and effort.

Table 3 illustrates the level of module components in terms of activities. Among the statements above, "The activities of the module in handicrafts improve the student's sense of responsibility for their own learning." yielded the highest mean score (M=4.78, SD=0.42) and was remarked as Strongly Agree. This is followed by "The activities of the module in handicrafts contain challenging activities that used creativity, intelligence, and ability" with the mean score (M=4.76, SD=0.43,) and were also remarked as Strongly Agree. On the other hand, the statement "The activities of module in handicrafts are adequate for learners' interest" received the lowest mean score of respondents with (M=4.54, SD=0.65) yet was also remarked Strongly Agree.

Table 3. Level of Module Components in terms of Activities

The activities of the module in handicrafts	Mean	SD	Remarks
...improve the student's sense of responsibility for their own learning.	4.78	0.42	Strongly Agree
*...uses loc*alized or alternative products, materials, *and equipment available in the students' house.*	4.64	0.49	Strongly Agree
...are adequate for learners' interest.			
...contain application of knowledge and skills.	4.54	0.65	Strongly Agree
...contain challenging activities that used creativity, intelligence, and ability.	4.66	0.48	Strongly Agree
			Strongly Agree
	4.76	0.43	
Overall Mean: SD	**4.68:**	**0.49**	**Very High**

It can be gleaned from table 3, that the level of Module Components in terms of Activities is 4.68 with "Very High" as verbal interpretation. This implies that students were able to engage in learning activities that are relevant to real-life situations to acquire enjoyable and meaningful learning experience.

It has been supported by Tasmanian Institute of Learning & Teaching (2021), that a learning module must contain learning activities that are aligned to the result of intended learning outcome. Meaningful activities engage students in active, constructive, intentional, authentic, and cooperative ways.

Table 4. Level of Module Components in terms of Assessment

The activities of the module *in handicrafts* …	Mean	SD	Remarks
...provides a clear and specific instructions.	4.68	0.47	Strongly Agree
...are applicable to achieve the learning objectives in the offered course.	4.70	0.46	Strongly Agree
...provides evaluation that uses critical thinking skill.	4.58	0.50	Strongly Agree
*...provides performance tasks that develo*p their full potential.	4.68	0.55	Strongly Agree
...engages students with different learning styles			
	4.64	0.43	Strongly Agree
Overall Mean: SD	**4.66:**	**0.49**	**Very High**

Table 4 illustrates the level of module components in terms of assessment. Among the statements above, "The assessment of the module in handicrafts are applicable to achieve the learning objectives in the offered course" yielded the highest mean score (M=4.70, SD=0.46) and was remarked as Strongly Agree. This is followed by "The assessment of the module in handicrafts provides a clear and specific instructions" and "The assessment of the module in handicrafts provides performance tasks that develop their full potential" with the mean score (M=4.68, SD=0.47, 0.43) and were also remarked as Strongly Agree. On the other hand, the statement "The assessment of module in handicrafts provides evaluation that uses critical thinking skill" received the lowest mean

score of respondents with (M=4.58, SD=0.50) yet was also remarked Strongly Agree.

It can be gleaned from table 4, that the level of Module Components in terms of Assessment is 4.66 with "Very High" as verbal interpretation. This explains that students were able to recognize thoroughly the process in accomplishing their performance assessment.

As indicated by Kampen (2020), instructional materials must contain of significant assessment suitable for students to demonstrate their achievement of the module's learning outcomes. Assessment directly defines whether the learning objectives of the module are being met or not. It required the students to demonstrate their skills, knowledge, competencies, and use a range of higher-order thinking skills for the ultimate purpose of ensuring quality education. Teachers should take consideration in finding creative ways of delivering assessments and understanding to students' learning process, provide necessary feedback, and improve teaching approaches. Through assessment, teachers can easily classify the strength and weaknesses of the learners, provide necessary feedback, and improve teaching approaches.

Table 5 illustrates the level of module attributes refer to the adaptability. Among the statements above, "The module in handicrafts provides a variety of opportunities for independent learning" yielded the highest mean score (M=4.64, SD=0.49) and was remarked as Strongly Agree. This is followed by "The module in handicrafts can be changed in order to suit in other purposes" and "The module in handicrafts caters diversity of learners" with the mean score (M=4.60, SD=0.50) and were also remarked as Strongly Agree. On the other hand, the statement "The module in handicrafts is versatile that can be modified across the curriculum" received the lowest mean score of respondents with (M=4.54, SD=0.45) yet was also remarked Strongly Agree.

Table 5. Level of Module Attributes in terms of Adaptability

The module in handicrafts…	Mean	SD	Remarks
…can be changed in order to suit in other purposes.	4.60	0.50	Strongly Agree
…caters diversity of learners.			
…is versatile that can be modified across the	4.60	0.50	Strongly Agree
curriculum.	4.54	0.45	Strongly Agree
…provides a variety of opportunities for			
independent learning.	4.64	0.49	Strongly Agree
…contains practical activities appropriate for			
exploratory courses.	4.58	0.61	Strongly Agree
Overall Mean: SD	**4.59:**	**0.52**	**Very High**

It can be gleaned from table 5, that the level of Module Attributes in terms of Adaptability is 4.59 with "Very High" as verbal interpretation. This means that students were able to experience independent learning.

It was supported by Lucero and Petrocino (2017), that the ability to adapt to change is what makes self-learning module adaptable. It refers to the ability to adapt to new roles, responsibilities, materials, and schedules in general. It will be difficult to provide your students with the best possible learning experience if you are unable to accommodate for these different aspects of teaching, which is often the aim.

Leaders are motivated and cannot easily discourage if they can adapt to change (Doyle 2021). Adaptability arises as a necessity for facilitating the learning process through recognizing learning difficulties so that learners were able to internalize content effectively.

Table 6. Level of Module Attributes in terms of Appropriateness

The module in handicrafts…	Mean	SD	Remarks
…provides interesting learning activities based on the target learning objectives and outcomes in each lesson.	4.78	0.41	Strongly Agree
…contains topics that are suitable for handicraft production.	4.76	0.43	Strongly Agree
*…associates lessons which are relevant in real-*world context.	4.68	0.47	Strongly Agree
…contains discussion that allows students to think critically.	4.68	0.51	Strongly Agree
*…assesse*s the level of knowledge, skills, and interest of the learners.	4.72	0.50	Strongly Agree
Overall Mean: SD	**4.72:**	**0.47**	**Very High**

Table 6 illustrates the level of module attributes in terms of appropriateness. Among the statements above, "The module in handicrafts provides interesting learning activities based on the target learning objectives and outcomes in each lesson" yielded the highest mean score (M=4.78, SD=0.41) and was remarked as Strongly Agree. This is followed by "The module in handicrafts contains topics that are suitable for handicraft production" with the mean score (M=4.76, SD=0.43) and were also remarked as Strongly Agree. On the other hand, the statement "The module in handicrafts associates lessons which are relevant in real-world context" and "The module in handicrafts contains discussion that allows students to think critically" received the lowest mean score of respondents with (M=4.68, SD=0.47, 0.51) yet was also remarked Strongly Agree.

It can be gleaned from table 6, that the level of Module Attributes in terms of Appropriateness is 4.72 with "Very High" as verbal interpretation. This meant that students were able to obtain and empower their learning competencies in handicraft production using the developed module in handicrafts.

It has been supported by Funa (2019), that educators at all levels utilize a variety of instructional materials such as textbooks, presentations and handouts to enhance the quality of their lessons. The quality of those materials directly impacts the quality of teaching and improve students' knowledge, abilities, and skills, to monitor their assimilation of information. Materials must be appropriate on the subject matter and learners' level of understanding. Therefore, such educational tools must be carefully planned, selected, organized, refined, and used in a course for maximum effect.

Table 7. Level of Module Attributes in terms of Design

The module in handicrafts…	Mean	SD	Remarks
...has an appropriate text font, size and color.	4.80	0.40	Strongly Agree
...uses well defined language which is easy to understand.	4.70	0.51	Strongly Agree
...contains visuals that fit the level of interest, knowledge, and skills of the target learners.	4.66	0.48	Strongly Agree
...is generally attractive and appealing to the eyes of the learners.			
...is well-organized and properly laid out.	4.70	0.51	Strongly Agree
	4.86	0.35	Strongly Agree
Overall Mean: SD	**4.74:**	**0.56**	**Very High**

Table 7 illustrates the level of module attributes in terms of design. Among the statements above, "The module in handicrafts is well-organized and properly laid out" yielded the highest mean score (M=4.86, SD=0.35) and was remarked as Strongly Agree. This is followed by "The module in handicrafts has an appropriate text font, size and color" with the mean score (M=4.80, SD=0.40) and were also remarked as Strongly Agree. On the other hand, the statement "The module in handicrafts contains visuals that fit the level of interest, knowledge, and skills of the target learners" received the lowest mean score of respondents with (M=4.66, SD=0.48) yet was also remarked Strongly Agree.

It can be gleaned from table 7, that the level of Module Attributes in terms of design is 4.74 with "Very High" as verbal interpretation. This meant that students were able to connect and learn easily to the lessons and develop higher levels of visual literacy.

It was supported by Paudyal (2016), that the correct choice of color, font and text size can prove to be vital for attracting the target audience. The font should be clean as possible. It shouldn't be too small and crummy. Using fonts that are easy to read are key to good presentation. This will have a positive outcome in engagement and retention of the subject matter.

According to Simui, et al. (2017), the design of the module should be user friendly because learning module cannot flow well if the language is difficult to understand.

Table 8. Level of Module Attributes in terms of Self-Instructional

The module in handicrafts…	Mean	SD	Remarks
…allows the students to learn at their own pace about a new topic.	4.64	0.49	Strongly Agree
…increases attention to a task.	4.62	0.57	Strongly Agree
…provides students with an element of control over their learning.	4.52	0.51	Strongly Agree
…allows the students to actively engage in their own learning process.	4.52	0.54	Strongly Agree
…requires a minimal amount of time to maintain skills once they are developed.	4.54	0.58	Strongly Agree
Overall Mean: SD	**4.57:**	**0.54**	**Very High**

Table 8 illustrates the level of module attributes in terms of self-instructional. Among the statements above, "The module in handicrafts allows the students to learn at their own pace about a new topic" yielded the highest mean score (M=4.64, SD=0.49) and was remarked as Strongly Agree. This is followed by "The module in handicrafts increases attention to a task" with the mean score (M=4.62, SD=0.57) and were also remarked as Strongly Agree. On the other hand, the statement "The module in handicrafts provides students with an element of control over their learning" and "The module in handicrafts allows the students to actively engage in their own learning process" received the lowest mean score of respondents with (M=4.52, SD=0.51, 0.54) yet was also remarked Strongly Agree.

It can be gleaned from table 8, that the level of Module Attributes in terms of self-instructional is 4.57 with "Very High" as verbal interpretation. This implies that students can easily learn on their own without the assistance of their guardian.

According to Myron Carroll (2016), a self-instructional module usually focuses on one topic and the hallmark of this format is independent study. Self-instructional method can also be an effective for introducing principles and step by step guidelines prior to demonstration of psychomotor skills that is why self-instructional method is effective for learning the cognitive and psychomotor domains which aims to master information and application for practice.

Table 9 illustrates the level of module attributes in terms of usability. Among the statements above, "The module in illustrates lifelong learning experiences" yielded the highest mean score (M=4.72, SD=0.45) and was remarked as Strongly Agree. This is followed by "The module in handicrafts can be easily used and understand", "The module in handicrafts can be used as a guide or pattern when making different crafts" and "The module in handicrafts accommodates varied learners" with the mean score (M=4.70, SD=0.51, 0.46) and were also remarked as Strongly Agree. On the other hand, the statement "The module in handicrafts provides recreation, enjoyment and possible income opportunity" received the lowest mean score of respondents with (M=4.66, SD=0.48) yet was also remarked Strongly Agree.

Table 9. Level of Module Attributes in terms of Usability

The module in handicrafts…	Mean	SD	Remarks
…can be easily used and understand.	4.70	0.51	Strongly Agree
…can be used as a guide or pattern when making different crafts.	4.70	0.46	Strongly Agree
…provides recreation, enjoyment and possible income opportunity.	4.66	0.48	Strongly Agree
…accommodates varied learners.	4.70	0.46	Strongly Agree
…illustrates lifelong learning experiences.	4.72	0.45	Strongly Agree
Overall Mean: SD	**4.70:**	**0.47**	**Very High**

It can be gleaned from table 9, that the level of Module Attributes in terms of usability is 4.70 with "Very High" as verbal interpretation. This means that the module in handicrafts will be usable as learning materials in the teaching and learning process.

According to Schroeter (2021), usability is how easily a person can accomplish a given task with your product; it is the result of intentional, research-based, and user-tested design decisions made with one goal in mind: to make it as easy as possible for users to do what they need to do with the product. If the module is poorly developed, it can result in confusion, distraction and the students will not learn. The Learning module usability can help the students to accomplish a given task by providing clear and specific instructions with careful arrangement of the information leads to accurate navigation. Usability is the ease with which a person can accomplish a given task with your product. Therefore, to guarantee usability of the learning module, the teachers must have adequate seminar and training in the entire development process.

Table 10 illustrates the level of module attributes in terms of validity. Among the statements above, "The module in handicrafts provides learning task that relates directly to the objectives of the lessons" yielded the highest mean score (M=4.76, SD=0.48) and was remarked as Strongly Agree. This is followed by "The module in handicrafts used suitable words fitted to the student's level of understanding" and "The module in handicrafts focuses on important lessons that develop skills in Handicrafts production" with the mean score (M=4.72, SD=0.45) and were also remarked as Strongly Agree. On the other hand, the statement "The module in handicrafts contains valid pictures and illustrations" received the lowest mean score of respondents with (M=4.64, SD=0.53) yet was also remarked Strongly Agree.

Table 10. Level of Module Attributes in terms of Validity

The module in handicrafts…	Mean	SD	Remarks
...contains valid pictures and illustrations.	4.64	0.53	Strongly Agree
...provides learning task that relates directly to the objectives of the lessons.	4.76	0.48	Strongly Agree
...used suitable words fitted to the student's level of understanding.	4.72	0.45	Strongly Agree
...includes a clear and simple presentation.			
...focuses on important lessons that develop skills in Handicrafts production.	4.70	0.51	Strongly Agree
	4.72	0.45	Strongly Agree
Overall Mean: SD	**4.71:**	**0.48**	**Very High**

It can be gleaned from table 10, that the level of Module Attributes in terms of validity is 4.71 with "Very High" as verbal interpretation. This meant that students were able to understand information quickly using authentic images and student-friendly language.

According to Catuday (2019), validating instructional modules is crucial to ensure quality before widespread implementation. It also refers to the correctness and exactness of the information provided in the instructional tool being evaluated in terms of facts, concepts grammar, illustrations, format, and language. With the aim of better education, it is vital that instructional material undergo validation to ensure quality and effectiveness.

Table 11. Level of Students' Performance

Grading Scale	Frequency (f)	Percentage (%)	Description
90 – 100	22	44.00	Advance
85 – 89	20	40.00	Proficient
80 – 84	8	16.00	Approaching Proficiency
75 – 79	0	0.00	Developing
Below 75	0	0.00	Beginning
Total	**50**	**100%**	
Mean = 88.66%			**Proficient**

It was found out that most of the respondents belong to advance, which represented by twenty-two (22) or forty-four percent (44 %). Followed by proficient comprises of twenty (20) or forty percent (40%). The third range of the respondent belong to the approaching proficiency which consist eight (8) or sixteen (16%). It also depicts that there were no developing and beginning as.

Table 12. Regression Analysis of Module Components and Students' Performance

Module Components	Beta	t-value	p-value	Verbal Interpretation
Learning Objectives	0.8423	2.929	0.005	Significant
Content	0.9080	2.874	0.006	Significant
Activities	1.0363	2.874	0.003	Significant
Assessment	0.4259	1.342	0.186	Not Significant

The result of the analysis showed that Module Components such as learning objectives, content and activities has the beta coefficient of 0.8423, 0.9080, 1.0363 with t-value 2.929, 2.874, 2.874 respectively are above the critical value of 1.677 with degree freedom of 49 at alpha 0.05 are interpreted as significant. On the other hand, the Module Component in terms of assessment has the coefficient of 0.4259with t-value 1.342 is not above the critical value of 1.677 with degree freedom 49 at alpha 0.05 is interpreted as not significant. Hence it revealed that the Module Components has a significant effect on the faculty development in terms of physical. This means that teachers should adapt the components of these module in handicrafts to boost the performance of every student.

The table 13 shows the regression analysis of Module Attributes and Students' Performance.

The result of the analysis showed that Modules Attributes such as adaptability, appropriateness, design, self-instructional, usability and validity has the beta coefficient of 0.7931, 0.7035, 0.6629, 0.7936, 0.7226, 0.7990 with t-value 2.692, 2.005, 2.056, 2.882, 2.326, 0.766 respectively are above the critical value of 1.677 with degree freedom of 49 at alpha 0.05 are interpreted as significant .Therefore it revealed that Module Attributes has a significant effect on the Students' Performance. This means that teachers should adapt the attributes of these module in handicrafts for the students to develop independent learning that can help them in the near future.

Table 13. Regression Analysis of Module Attributes and Students' Performance

Module Attributes	Beta	t-value	p-value	Verbal Interpretation
Adaptability	0.7931	2.692	0.010	Significant
Appropriateness	0.7035	2.005	0.051	Significant
Design	0.6629	2.056	0.453	Significant
Self-Instructional	0.7936	2.882	0.006	Significant
Usability	0.7226	2.326	0.024	Significant
Validity	0.7990	2.766	0.008	Significant

Table 13 presents the significant effect of module attributes to student's performance. From the beta coefficient, it is observed that as the module attributes increases by a unit, the performance of the students in TLE subject also increases. However, there is a significance observed in the test as the computed –p-value were all less than the significance value 0.05.

From the findings above, it can be inferred that at 0.05 level of significance, the null hypothesis "There is no significant effect between the module in handicrafts to the students' performance of Grade 7" is rejected. Thus, this calls for the acceptance of the alternative which incites that there is an effect between the two.

Summary of Findings

This study utilized the descriptive method of research to develop and validate the module in handicrafts in teaching TLE subject. It was validated by three (3) Technology and Livelihood Education teachers and three (3) experts who were Academic Coordinator, Head Teacher and Master Teacher from the different private and public secondary schools in Third District of Laguna.

This study sought answers to the following questions: 1). What is the level of module components in terms of learning objectives, content, activities, and assessment? 2) What is the level of module attributes in terms of adaptability, appropriateness, design, self-instructional, usability and validity? 3) What is the level of students' performance of Grade 7 as to third quarter grade in TLE subject? 4) Do the module components have a significant effect to the students' performance? 5) Do the module attributes have a significant effect to the students' performance?

The respondents used the questionnaire in the validation of the module in handicrafts. Weighted mean and standard deviation were used in determining the level of module components in terms learning objectives, content, activities, and assessment; level of module attributes in terms of adaptability, appropriateness, design, self-instructional, usability and validity and level of students' performance of Grade 7 as to third quarter grade in TLE subject in establishing the relationship in the evaluation of module in handicrafts given by the Technology and Livelihood Education teachers, group of experts, and student-respondents.

The following were the significant findings of the study:

1. The level of module components with regards to learning objectives, content, activities and assessment were all very high.

2. The level of module attributes with regards to adaptability, appropriateness, design, self-instructional, usability and validity were all very high.

3. The level of students' performance of Grade 7 as to third quarter grade in TLE subject are proficient.

4. The analyzed data revealed that the components of module in terms of learning objectives, content and activities has a significant effect on the students' performance as indicated that all of the corresponding t-values are higher than the designated critical value. However, there is no significant effect in terms of assessment as indicated from corresponding t-value is lower than the critical value.

5. Based on the data presented, the attributes of module has a significant effect on the students' performance with corresponding t-values that are higher than the critical value of 1.667.

Conclusion

Based on the findings above, the study has drawn the following conclusion:

The components of the module in terms of learning objectives, content and activities has a significant effect on students' performance while there is no significant effect in terms of assessment. On the other hand, the attributes of the module in terms of adaptability, appropriateness, design, self-instructional, usability and validity has a significant effect on students' performance. Hence, there is a significant effect between the modules in handicrafts to the students' performance. Thus, the null hypothesis is rejected.

Recommendations

Based on the conclusions formulated from the findings, the following recommendations are hereby formulated:

1. Liceo de Victoria school in which the researcher is employed may request to the San Pablo Diocesan Catholic Schools System administrators to use the said module in handicrafts as a centralize one for the whole schools' system.

2. The TLE teachers may develop additional instructional learning materials based on the needs and interests of the students assimilated into other courses offered in Technology and Livelihood Education.

3. The TLE teachers are encourage to modify and reconstruct the module in handicrafts to fulfil the demands of education in the future.

4. The TLE teachers are encouraged to attend seminars, workshops, and training programs to acquire new knowledge and updated background information on developing instructional learning materials.

5. Future researchers can further validate the module in handicrafts to measure and assess the effectiveness of the instructional tool.

References

Abdulla, M. H. (2018). The Use of an Online Student Response System to Support Learning of Physiology during Lectures to Medical Students. Education and Information Technologies, 23(6), 2931-2946. DOI:10.1007/s10639-018-9752-0.

Adanır, G. A. (2021). Assessment Types and Methods in Distance Learning. In Handbook of Research on Determining the Reliability of Online Assessment and Distance Learning (Pp. 24-42). IGI Global.

Akbayeva, G. N., & Aitkazina, A. S. (2018). Modular Training as a Pedagodical Technology. Education & Science without Borders, 9(17).

Ariebowo, T. (2021). Autonomous learning during COVID-19 pandemic: Students' objectives and preferences. Journal of Foreign Language Teaching and Learning, 6(1), 56-77.

Ambayon, C. (2020). Modular-Based Approach and Students' Achievement in Literature. International Journal of Education and Literacy Studies, Vol. 8 No. 3.

Aziz, N. N. B. A., & Mamat, N. (2017). Content criteria for the Module of Efficacy Enhancement in English Teaching for Preschool Teachers (MEET-PT) based on Bandura Self Efficacy Theory. International Journal of Academic Research in Business and Social Sciences, 7(12), 2222-6990.

Baron, Verma, V., Bansal, T., A., & Amresh, A. (2019). Emerging practices in game-based assessment. In Game-based assessment revisited (pp.327-346). Springer, Cham.

Briggs, S. (2014). How To Make Learning Relevant To Your Students (And Why It's Crucial To Their Success).

Catuday, R. (2019). Validation of Laboratory Workbook in Plant Biology. International Journal of Current Research Vol. 11, Issue, 03, pp.2194- 2204. ISSN: 0975-833X.

Cowan, N. (2014). Working Memory Underpins Cognitive Development, Learning, and Education

Dwianto, A. et al. (20217) The Development of Science Domain Based Learning Tool which is Integrated with Local Wisdom to Improve Science Process Skill and Scientific Attitude. Journal Pendidikan IPA Indonesia.

Doyle, Alison (2021). Important Adaptability Skills for Workplace Success.

Fikriyanda, F., Daharnis, D., & Yuca, V. (2018). The Profile of Students Activities; Before, During and After Learning. International Journal of Research in Counseling and Education, 3(1), 49-54.

FitzPatrick, B., Hawboldt, J., Doyle, D., & Genge, T. (2015). Alignment of learning objectives and assessments in therapeutics courses to foster higher-order thinking. American journal of pharmaceutical education, 79(1).

Forrin, Sana, F., N. D., Sharma, M., Dubljevic, T., Ho, P., Jalil, E., & Kim, J.   A.(2020). Optimizing the efficacy of learning objectives through pretests. CBE—Life Sciences Education, 19(3), ar43.

Funa, A. (2019), "Validation of Gamified Instructional Materials in Genetics for Grade 12 STEM Students". International Journal of Sciences: Basic and Applied Research. Vol. 47 No. 2

Gallardo, G. P. (2021). Development and Validation of Self-Learning Module in Horticultural Production.

Garg, Rachit (2021). Adapting to the new normal for education: the stance of online learning and online semester.

Guido, R. M. D. (2014). Evaluation of a modular teaching approach in materials science and engineering. American Journal of Educational Research, 2(11), 1126-1130.

Habibi, M. et al. (2019). Validity of Teaching Materials for Writing Poetry Based on Creative Techniques in Elementary Schools.

Harasim, L. (2012). Learning theory and online technologies. Routledge.

Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. Evidence-based nursing, 18(3), 66-67.

Hemming, Rutherford T. (2015). Determining Content Validity and Reporting a Content Validity Index for Simulation Scenarios. Nursing Education Perspectives, 36(6), 389-393.

Hernandez, M. F. M. (2021). Localized Instructional Tool in Slippery Making: A Module.

Ho, et al, (2020). Transformable Classroom: Designing an Adaptable.

Kampen, M. (2020). 36 Teaching Strategies to Try in 2020. Prodigy.

Khandoobhai, Tofade, & Leadon, K. (2012). Use of SMART learning objectives to introduce continuing professional development into the pharmacy curriculum. American journal of pharmaceutical education, 76(4).

Kizlik, Dr. Bob (2013), Measurement, Assessment and Evaluation in Education.

Lacireno-Paquet, N., Morgan, C., & Mello, D. (2014). How states use student learning objectives in teacher evaluation systems: A review of state websites. US Department of Education, Institute of Education Sciences.

Lai, C. L., & Hwang, G. J. (2016). A Self-Regulated Flipped Classroom Approach To Improving Students' Learning Performance in a Mathematics Course. 126-140.

Limon et.al (2016) Module Development in Home and Family Living for College Students of a State University in the Philippines Mariano Marcos State University College of Teacher Education, Ilocos Norte, Philippines.

Limon, M. R., & Vallente, J. P. C. (2016). Module Development in Home and Family Living for College Students of a State University in the Philippines. Global journal of educational studies, 2(1).

Lockwood, F. (2018). The design and production of self-instructional materials. Routledge. The Design and Production of Self-Instructional Materials.

Lucero, M. and Petrocino, A. (2017). A Resource for Eliciting Student Alternative Conceptions: Examining the Adaptability of a Concept Inventory for Natural Selection at the Secondary School Level. Eric Journal. ISSN: ISSN-0157-244X.

Mayalagu, G., Jaafar, M., & Lam, K. C. (2018). Validity of Module Geographic Information System-Spatial Thinking Skills (GIS-STS). International Journal of Engineering & Technology, 7(4.34), 427-430.

Meador, D. (2018). Creating a Great Lesson to Maximize Student Learning. Thought Co.Zambia. Journal of Learning for Development, 4(1), 90-98.

Mitchell, K. M., & Manzo, W. R. (2018). The Purpose and Perception of Learning Objectives. Journal of Political Science Education.

Monroe, M. C., et al. (2019). Identifying Effective Climate Change Education Strategies: A Systematic Review of

the Research. Environmental0 Education Research, 25(6), 791-812.

Myron Carroll (2016), Self Instructional Module.

Nardo, M.T. B. (2017), Modular Instruction Enhances Learner Autonomy. American Journal of Educational Research. 2017, 5(10), 1024-1034. DOI: 10.1269.

Neibling, J. (2014). Teachers' Conceptions Toward Type of Assessment: Grade Level and State Tested Content Area (Doctoral dissertation, University of Kansas).

Nielsen, Jakob (2013). Usability 101: Introduction to Usability.

Paquet, Lacireno N., Morgan, C., & Mello, D. (2014). How states use student learning objectives in teacher evaluation systems: a review of state websites (REL 2014–013).

Paudyal, N. (2016). 8 Reasons Why Typography Is Important.

Ping, I. L. L., & Osman, K. (2019). Laboratory-Modified Argument Driven Inquiry Module: Content Validity Process. IPA Indonesia, 8(1), 129-   140.

Reisman, A. (2017). Integrating Content and Literacy In Social Studies: Assessing Instructional Materials And Student Work From A Common Core-Aligned Intervention. 517-554.

Rick Pendawarden (2014) Descriptive Research

Rieckmann, Marco (2017). Education for Sustainable Development Goals: learning Objectives.

Riihiaho, S. (2018). Usability testing. The Wiley Handbook of Human Computer Interaction, 1, 255-275.

Schroeter, E. (2021). What is Usability? (And How to Do It).

Simui, et al. (2017), Distance Learner's Perspective on User-friendly Instructional Materials at the University of Zambia.

Sung, Y. T., Chang, K. E., & Liu, T. C. (2016). The Effects of Integrating.

Sushma Jogan (2016) "Self learning modules in the achievement and   retention of higher secondary students in English.

Talib, J. A., Mohamad, Z., & Wahab, N. A. (2015). Validity and Reliability of Career Exploration Module.

Tasmanian Institute of Learning & Teaching Every learning activity in your unit should be intentional, meaningful and useful. (June 7, 2021).

Torrefranca, E. (2017). Development and Validation of Instructional Modules on Rational Expressions and Variations. The Normal Lights Journal on Teacher Education, Vol. 11, No. 1.

Tubiera, C. (2014). The Effect of Using Modules on the Performance in Elementary Algebra of Grade Seven Students of Calumpang National High School 2014".

Valdez, J. (2021). Characteristics of Good Materials.

Welch, M. (2012). Appropriateness and acceptability: Employee perspectives of internal communication. Public Relations Review, 38(2), 246-254.

Zook, C. (2017). Formative and Summative Assessment: What's the Difference?. Applied Educational System.

Internet Resources

https://www.edglossary.org/student-engagement/

https://files.eric.ed.gov/fulltext/EJ1097629.pdf

https://files.eric.ed.gov/fulltext/EJ1092847.pdf

https://www.edglossary.org/assessment/

https://www.slideshare.net/Nilsa1991/instructional-module

https://www.slideshare.net/ErlaJadeAgustin/arts-kinds-of-handicrafts

https://www.igi-global.com/dictionary/instructional-modules/51368

https://slideplayer.com/slide/11116730/

https://easternct.makekb.com/entry/602/

https://lss.at.ufl.edu/help/Learning_Modules

https://lp2m.uma.ac.id/overview-of-the-understanding-of-learning-modules-and-main-functions/

https://courses.lumenlearning.com/edpsy/chapter/social-constructivism-vygotskys-theory/

https://link.springer.com/10.1007%2F978-1-4419-1428-6_544

https://socialsci.libretexts.org/Courses/Achieving_the_Dream/Book%3A_Child_Development_(CummingsClay)/06%3A_Module_4%3A_Theories_(Part_I)/06.4%3A_Major_theories_and_models_of_learning

https://www.verywellmind.com/kolbs-learning-styles-2795155