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A Unified Theory of Acceptance and Use of Technology Assessment in Learning Resources Management and Development System

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Abstract

The platform for Learning Resource Management and Development System (LRMDS) has the potential to be helpful for learning. Teachers find support and resources from the learning portal of the Department of Education. This study focused on determining the acceptance of the Learning Resources Management Development System (LRMDS) as a learning resource portal using the Unified Theory of Acceptance and Use of Technology (UTAUT) model among EPP/TLE/TVL teachers in the Division of Iligan City. For the sample selection based on structures and items, Soper's (2024) a-priori sample size calculator for structural modeling was utilized. This calculator calculates the minimum need to identify desired effects for a structural equation model inquiry by considering variables, effect size, and power levels. The study was based on quantitative and qualitative research designs via demographic questionnaire based on the UTAUT theory model and the perception questions. Findings indicate that the effort expectancy and social influence have positive effects on behavior intentions and facilitating conditions; behavioral intentions also have positive effects on use behavior. However, Performance expectancy is not significant. Additionally, qualitative findings suggest that teachers believe the LRMDS can greatly improve teaching effectiveness when viewed as valuable and dependable, resulting in its effective use. Teachers generally consider the content provided by LRMDS to be relevant and sufficient. However, a significant issue is that some resources, particularly in TLE (Technology and Livelihood Education), are outdated, likely due to limited access to ready-made resources and sufficient learning materials. The findings of this study also suggest that enhancing LRMDS integration, communication and outreach efforts are recommended, including a training guide matrix to raise awareness of LRMDS benefits and address misconceptions through targeted campaigns, workshops, and peer sharing. Recommendations include improving knowledge management, simplifying user interfaces, informing teachers about support conditions, and implementing the training guide matrix in public schools to highlight the advantages of the LRMDS portal.

Keywords: Learning Resources, LRMDS, Performance, Unified Theory of Acceptance

1. Introduction

The K to 12 curriculum aims to enhance learners' basic skills, produce more competent citizens, and prepare graduates for lifelong learning and employment. It is necessary to emphasize the development of knowledge, skills, and values to uplift every student's lifelong learning.

Among the learning areas, Technology and Livelihood Education (TLE) intends to develop knowledge, skills, values, and attitudes that will prepare learners to enter the world of work. Technology and Livelihood Education in Grades 7 and 8 are exploratory. It focuses on the five fundamental competencies: using tools, equipment, and paraphernalia, performing mensuration and calculation, interpreting drawings and plans, and practicing occupational safety and health procedures (DEPED Curriculum Guide, 2012). However, one of the identified problems in TLE is that it has limited learning modules. It means that the curriculum only covers a narrow range of topics and skills and may not be sufficient to provide students with a comprehensive education in technology and livelihood.

One of the problems in teaching Technology and Livelihood subjects is the limited amount of learning materials available in schools. According to Gloria Tugade (2016), the unavailability of learning materials is just one of the problems still hounding the country's K-12 Program. The teachers, who are the K–12 program's principal implementers, should then create instructional materials suitable for the needs of the students and help them develop the fundamental skills necessary for a fulfilling and fruitful life. Although TLE attempts to provide students with knowledge and skills, its constrained learning modules may prohibit students from obtaining a comprehensive education in technology and livelihood. In connection with this, teachers handling TLE subjects were having difficulty finding a learning resource to achieve effective learning and teaching in TLE.

The incorporation of technology into many facets of education has become essential in today's quickly expanding technological landscape. The growth of technology-driven learning platforms and the digitization of educational resources have fundamentally changed how teachers and students interact with educational resources. The Learning Resource Management and Development System (LRMDS) platform has become an essential tool in this dynamic environment, making it easier for educational institutions to organize and distribute learning resources effectively.

In line with that, the Department of Education, Learning Resources Management and Development System is available as a learning portal providing teachers and students with access to a wide range of digital learning resources, such as e-books, videos, lesson plans, and other educational materials. Based on the requirements set by the Enhanced Basic Education Act of 2013, the Department of Education (DepEd) in the Philippines created and deployed the Learning Resource Management and Development System (LRMDS) in 2013. The LRMDS played a crucial role in this effort to allow teachers and students to access a wide range of digital learning resources, such as e-books, videos, lesson plans, and other educational materials for distance and online learning. Learning Resource Management and Development System (LRMDS) meets several challenges that impact its use and acceptability, including such as inadequate digital literacy and misalignment. Additionally, gaps in professional development, technical assistance, and user engagement hinder its effectiveness.

Generally, teachers need to source learning materials following quality and consistency standards. Thus, this research aims to focus on determining the acceptance of the Learning Resources Management Development System (LRMDS) as a learning resource portal using the Unified Theory of Acceptance and Use of Technology (UTAUT) model among EPP/TLE/TVL teachers in the Division of Iligan City. This can determine the significant influence of performance expectancy, effort expectancy, and social

influence toward the behavioral intention of teachers in using LRMDS. And the facilitating condition towards the use behavior using structural equation modeling. It also aims to determine the perceptions of teachers with the quality and reliability of the contents available in the portal.

2. Literature Review

2.1 Learning Resource Management and Development System (LRMDS)

According to the requirements of the Enhanced Basic Education Act of 2013, the Department of Education (DepEd) in the Philippines created and deployed the Learning Resource Management and Development System (LRMDS) in 2013. The system was created to improve the norm of instruction for Filipino students and to better manage and expand learning resources in Philippine public schools. Learning Resource Management Development System made digital learning resources available to support online and remote learning at the height of the COVID-19 pandemic in the Philippines. The LRMDS was instrumental in this initiative by giving teachers and students access to a variety of online and distant learning resources, including e-books, videos, lesson plans, and other educational materials. In the study of Torbila (2021), the Department of Education's Learning Resource Management and Development System is a tool that, when properly applied, can significantly improve the standard of instruction provided to children in public schools. According to the study, it is essential that they obtain the expertise required to create, maintain, and sharing good educational materials through more research or their extensive teaching expertise gained throughout time a time frame. If the LRMDS is to be evaluated, its effectiveness primarily hinges on the teachers' willingness to use all that it has to offer.

2.2 Unified Theory of Acceptance and Usage of Technology (UTAUT) Model

In 2003, Venkatesh, et.al., developed the Unified Theory of Acceptance and Usage of Technology (UTAUT) model, rectifying the limitations of the TAM model. UTAUT goes a step further by encompassing social factors and human behaviors in its framework. Moreover, it delineates the pivotal factors influencing the acceptance of Information and Communication Technology (ICT).

The UTAUT Model, a technology acceptance model created by Venkatesh and his colleagues, aims to elucidate how users accept and adopt technology. This model encompasses four primary constructs:

1. **Performance Expectancy:** This pertains to a user's belief in the extent to which the system can enhance their skills and job performance.
2. **Effort Expectancy:** It relates to the perceived ease of using the system.
3. **Social Influence:** Within UTAUT, it signifies how much a user believes that someone more influential than them thinks they should use the technology.
4. **Facilitating Conditions:** This concept assesses the extent to which the technology simplifies organizational processes and how much a user believes that the organization and technical infrastructure can support technology use (Venkatesh et al., 2003).

The first three constructs directly determine Behavioral Intention (BI), while the fourth construct, Facilitating Conditions, directly determines Usage Behavior (UB) (Venkatesh et al., 2003). Gender, which has a consistent and strong psychological influence, as well as age, experience, and the voluntary nature of technology use, are suggested to moderate the impact of the four primary constructs on BI.

Muneer M. M. Abbad (2021) recently used the UTAUT as a base model to understand students' usage of e-learning systems in developing countries. The central aim of the study is to explore the factors influencing how students engage with e-learning systems in higher education. The findings indicate that students' willingness to embrace and utilize e-learning systems can be forecasted by their behavioral

intentions, which, in turn, are influenced by their perceptions of how effective and effortless the systems are to use. Moreover, the study highlights that the presence of conducive conditions significantly influences student behavior. In the realm of higher education, this research reaffirms the applicability of the UTAUT model in predicting both the intentions and the real-world usage of e-learning systems by students in developing nations.

2.3 Limited Learning Modules

With the limited learning modules and resources in TLE exploratory subjects, this may affect the learning opportunities of the students. This can limit their ability to explore other areas in technical and vocational education and may lessen their chances of developing necessary skills for their future careers. One of the basic problems seen in the study of Calanog (2019) about the Challenges in Teaching Exploratory Courses of Technology and Livelihood Education using Pedagogical Approaches, is the teacher-respondents also faced challenges in using the approaches due to the inadequate supplies of learning materials like modules, tools, and equipment. It also revealed that the teacher respondents challenged to a very great extent on the preparation of instructional materials guided by the pedagogical approaches.According to the conclusion of the study of Albarico et. al (2014), there is an inadequacy in the number of instructional resources as well as the number of tools and equipment in relation to the number of students enrolled. And for this reason, students experienced buying their own materials which are supposedly provided by the school. Ghanney (2008) conducted a study that showed how the failure of teachers to effectively use instructional materials results in students being passive listeners in class, exhibiting poor participation, lacking interest in the subject, being absent, and eventually performing poorly in the subject matter. Therefore, it is essential to strike a balance between teachers' practices in sourcing teaching and learning materials from the LR Portal and other sources, without neglecting potential areas of concern related to the identified problems.

2.4 User Satisfaction

According to Almarashdeh (2016), user satisfaction is a general assessment of the system's user experience and is likely to have an impact on users. Users can share information, give feedback, negotiate, and integrate system users with the assistance of effective communication. Additionally, it can increase user satisfaction with online learning. In the study of Santhanamery T. (2018), it showed that the relationship between perceived usefulness and attitude has a significant impact on the intention to continue using the system, with attitude being the primary predictor. Additionally, confirmation was identified as the primary factor of satisfaction, and perceived ease of use was identified as the primary determinant of perceived usefulness. User satisfaction serves as an important proxy for assessing the ultimate impact of the information system on organizational effectiveness, which is a complex outcome that cannot be directly measured.

3. Methodology of the Study

The study employed the use of quantitative and qualitative research design. In this research, the Unified Theory of Acceptance and Use of Technology (UTAUT) framework will be utilized, incorporating the variables, to assess behavioral intentions and establish the connection with usage behavior of Learning Resources Management Development System (LRMDS) among TLE teachers in the Division of Iligan City.

Figure 1: Hypothesized UTAUT framework with the constructs using SMART PLS Software for Structural Equation Modelling

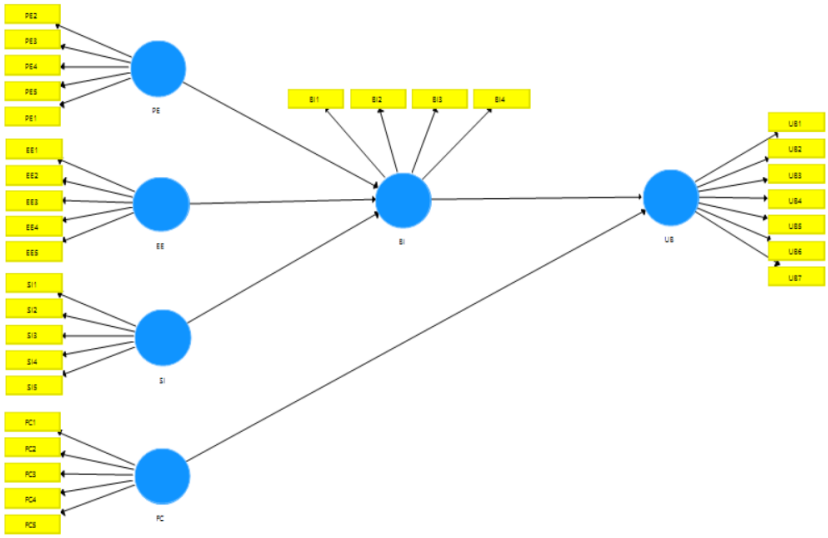

Figure 1 detail the visual relationship between the Unified Theory of Acceptance and Use of Technology (UTAUT) constructs. Incorporating the variables to assess the Behavioral Intentions are Performance Expectancy (PE), Effort Expectancy (EE) and Social Influence (SI). And establish the connection with the usage behavior of LRMDS are Behavioral Intention (BI) and Facilitating Conditions (FC).

3.1 Respondents of the Study

The respondents of the study were (170) EPP/TLE/TVL teachers of the whole district in the Division of Iligan City. For the sample selection based on structures and items, Soper's (2024) a-priori sample size calculator for structural modeling was utilized. This calculator calculates the minimum need to identify desired effects for a structural equation model inquiry by considering variables, effect size, and power levels.

Table 1: Total Respondents

Characteristics	Categories	Frequency	Percentage (%)
Gender	Female	94	65.27
	Male	51	35.42
Age	Below 30	2	1.39
	30-35 years old	30	20.83
	36-41 years old	38	26.39
	42-47 years old	25	17.36
	48-53 years old	30	20.83
	54-59 years old	16	11.11
	60 above	4	2.78
Highest educational attainment	College Graduate	78	54.16
	Masteral	63	43.75
	Doctoral	3	2.08
	Juris Doctor	1	0.69
Designation	Teacher 1	54	37.49
	Teacher 2	34	23.61
	Teacher 3	45	31.25
	Master Teacher 1	7	4.86
	Master Teacher 2	3	2.08
	Special Science Teacher 1	2	1.39
Grade Level Taught	Elementary	38	26.39
	Junior High School	64	44.44
	Senior High School	34	23.61
	Both JHS and SHS	9	6.25
Years in Serving	Less than 5 years	18	12.50
	5-10 years	59	40.97
	11-15 years	24	16.67
	16 years above	45	31.25

3.2 Research Instruments

This research employed the following research instruments:

A. Respondent's Demographic Questionnaire

The preliminary part of the survey questionnaire concentrated on gathering information about the respondents' demographic information. It is a self-made questionnaire with information such as age, gender, years of service, highest educational attainment, and grade level taught.

B. Acceptance Model

For the acceptance model, an adapted Likert scale from Venkatesh et al. (2003) and the comprehensive information about the constructs used in this survey can be found in previously published articles of Briz-Ponce & García-Peñalvo (2015) will be used by the researcher. The acceptance model checklist collects the data related to the acceptance of the learning portal and is formed by 31 items. Respondents indicate the degree of agreement or disagreement with the statement on a 5-point scale, where 1 strongly disagrees and 5 strongly agree.

C. Perception Questionnaire

Open-ended questions were asked in the third part of the questionnaire in order to determine teachers' experience and perceptions on the quality and reliability of contents available in the portal.

3.3 Data Gathering and Analysis

Prior to the conduct of the study, the researcher sought permission from the office of the Schools Division Superintendent to conduct a survey to the teacher respondents in the division of Iligan City. Upon approval, the researcher asked permission to the Principal of the target school with teacher respondents. Furthermore, after the approval the researcher immediately asked the respondents to gather data from them through written informed consent. Next, the researcher assured the respondents of their responses' confidentiality and anonymity. Demographic questions based on the UTAUT theory model were incorporated into the survey instrument. These questions sought information about participants' age, gender, learning portal experience, and other relevant factors. Then the teachers answered the questionnaire checklist. The teachers' answers will serve as their assessment of the study. The respondents have given enough time to complete the surveys' questions. The researcher disclosed the respondents' availability and consideration timeframe. All the gathered data were sent to the statistician for analysis and interpretation. This study had ensured to follow the analytical procedure of the research ethics of the College of Education, MSU-IIT and had received its approval before conducting this research to secure that the manner of data gathering was done in a proper course of action.

To quantify the results of this study, descriptive statistics were used to measure and analyze the data and address the research questions presented in the study. The quantitative data for this research were derived from survey responses among EPP/TLE/TVL teachers' acceptability and use of LRMDS portal. The data collected through observations and surveys will be processed using excel to generate descriptive quantitative statistical summaries. Furthermore, the licensed SmartPLS software was utilized to investigate the estimation of the links between the constructs in the proposed model and that includes the structural equation model (Ringle et al., 2015). For the qualitative part of the study, open-ended questions were answered by the teacher respondents with regards to their perceptions on the quality and reliability of the contents available in the portal. Furthermore, the collected data were subjected to content and thematic analyses.

4. Results and Discussions

The data below are results and discussion based on the objectives of the study. The step-by-step process of Research and Development research design is presented with presentation of results, and data interpretation and discussion.

4.1 The significant influence of teachers' performance expectancy on their behavioral intention to use them.

Performance expectancy refers to the extent to which an individual perceives that utilizing a system will contribute to enhancing their job performance (Venkatesh et al., 2003).

Table 4.1 Relationship of the constructs of Performance Expectancy to Behavioral Intention

Hypothesis	Relationships	Path Coefficients	T-Values	P-Values	Interpretation
H1	PE -> BI	0.042	0.649	0.517	Not Significant

From the hypothesis above, teachers don't expect their performance in LRMDS to increase their intentions to use it. The path coefficient is 0.042 with a low T-value of 0.649and a p-value of 0.517, manifesting weak support for this hypothesis. In other words, teachers don't expect their performance in LRMDS to increase their intentions to use it. This contradicts the study of Cruz et al, (2014) and Durak (2019), that performance expectancy (PE) notably and decisively influences behavioral intention (BI) to utilize technology in educational settings.

4.2 The effort expectancy of teachers with their behavioral intention to use LRMDS.

As a construct within the Model, Effort expectancy is characterized as "the level of simplicity associated with utilizing the system" (Venkatesh et al., 2003). However, the impact of this construct diminishes in significance with prolonged technology usage (Gupta, Dasgupta & Gupta, 2008; Chauhan & Jaiswal, 2016).

Table 4.2 Relationship of the constructs of Effort Expectancy to Behavioral Intention

Hypothesis	Relationships	Path Coefficients	T-Values	P-Values	Interpretation
H2	EE -> BI	0.417	6.186	0.000	Significant

It is reflected in the result of the hypothesis that teachers expect LRMDS to be easy to use and it can increase their intentions to use it. The path coefficient is 0.417 with a T-value of 6.186 and a significant p-value of 0.000, indicating strong support for this hypothesis. This means that teachers expect LRMDS to be easy to use and it can increase their intentions to use it. According to Raza et al. (2017), individuals who find technology easy to use typically hold a more positive disposition towards utilizing it.

4.3 Social influence of teachers towards the behavioral intention in using LRMDS.

Social Influence is characterized as "the extent to which an individual believes that influential others expect them to adopt the new system" (Venkatesh et al., 2003). This concept shares similarities with subjective norms, social factors, and image constructs, as they all indicate that people's behavior is influenced by others' perceptions of them. The impact of social influence is particularly pronounced in situations where technology use is obligatory (Venkatesh et al., 2003).

Table 4.3 Relationship of the constructs of Social Influence to Behavioral Intention

Hypothesis	Relationships	Path Coefficients	T-Values	P-Values	Interpretation
H3	SI -> BI	0.479	5.718	0.000	Significant

Social Influence (S.I.) significantly influences teachers' Behavioral Intention (B.I) toward using LRMDS portal. The path coefficient is 0.479 with a T-value of 5.718 and a significant p-value of 0.000, indicating strong support for this hypothesis. These findings suggest that when teachers' peers or someone important to them suggests that they use LRMDS portal, they increase their intentions to use them. Likewise, Nair and colleagues (2015) validated that social influence plays a notable role in shaping the intention to use within the higher education domain.

4.4 Facilitating Conditions of LRMDS towards teachers' use behavior in using the portal.

Facilitating conditions are described as "the extent to which an individual perceives that an organization and technical infrastructure are in place to support the utilization of the system" (Venkatesh et al., 2003). This construct of facilitating conditions is constructed from elements such as compatibility, perceived behavioral control, and facilitating conditions. Initially, facilitating conditions exert a direct positive influence on the intention to use.

Table 4.4 Relationship of the constructs of Facilitating Conditions to Use Behavior

Hypothesis	Relationships	Path Coefficients	T-Values	P-Values	Interpretation
H4	FC -> UB	0.251	3.252	0.001	Significant

The table above shows that the Facilitating Conditions (F.C.) significantly influence teachers' Use Behavior (U.B.) when using LRMDS. The path coefficient is 0.251 with a T-value of 3.252 and a p-value of 0.001, manifesting strong support for this hypothesis. In other words, when teachers receive more facilitating conditions in using LRMDS, they use the websites frequently. Attuquayefio and Addo (2014) noted that facilitating conditions (FC) have a significant impact on usage behavior (UB), implying that enhancing FCs leads to increased utilization of available ICT for learning purposes.

4.5 Behavioral intention of teachers to use LRMDS towards their use behavior in using the portal.

A person's readiness or willingness to participate in a certain activity associated with using a technology is referred to as their behavioral intention in the Unified Theory of Acceptance and Use of Technology (UTAUT). More specifically, it indicates the degree to which a person is likely to accept and make use of a specific technology in a specific setting. Several variables, including social influence, enabling environment, performance expectancy (perceived usefulness), and effort expectancy (perceived ease of use), affect behavioral intention (Venkatesh et al., 2003). It is a crucial indicator of how people will use technology.

Table 4.5 Relationship of the constructs of Behavioral Intention to Use Behavior

Hypothesis	Relationships	Path Coefficients	T-Values	P-Values	Interpretation
H5	BI -> UB	0.644	8.292	0.000	Significant

It shows above the Behavioral Intention (B.I.) significantly influences teachers' Use behavior (U.B) toward using LRMDS portal. The path coefficient is 0.644 with a T-value of 8.292 and a significant p-value of 0.000, indicating strong support for this hypothesis. These findings suggest that when teachers have more intent to use LRMDS, they use the website more frequently. Ertmer et al. (2016) found in their research that educators perceive technology as useful when they notice its ease and convenience of use. This indicates that the level of comfort with technology directly affects their intention to use it.

The development of the hypotheses of this study is anchored on UTAUT model.

Figure 4.1-4.7 shows the hypothesized model and the structural results.

Figure 4.1 ***Structural Result of Smart PLS Algorithm emphasizing Path Coefficients in the Inner Model, Outer Model loadings, and constructs' R-square adjusted.***

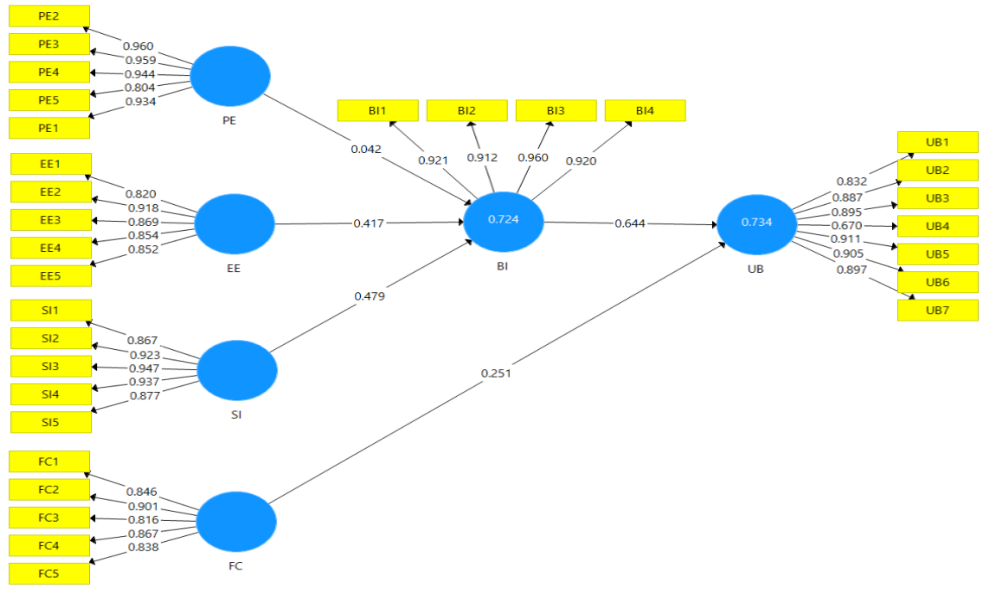

Figure 4.2 Structural Result of Smart PLS Algorithm emphasizing Path Coefficients in the Inner Model, Outer Model loadings, and constructs' Average Variance Extracted (AVE).

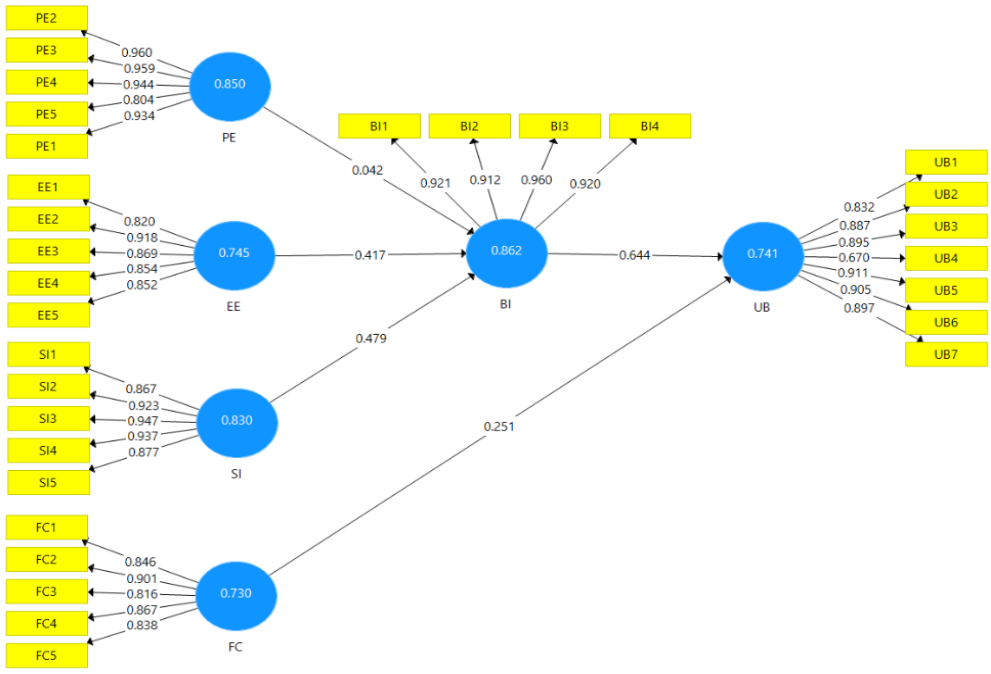

Figure 4.3 Structural Result of Smart PLS Algorithm emphasizing Path Coefficients in the Inner Model, Outer Model loadings, and constructs' Composite Reliability.

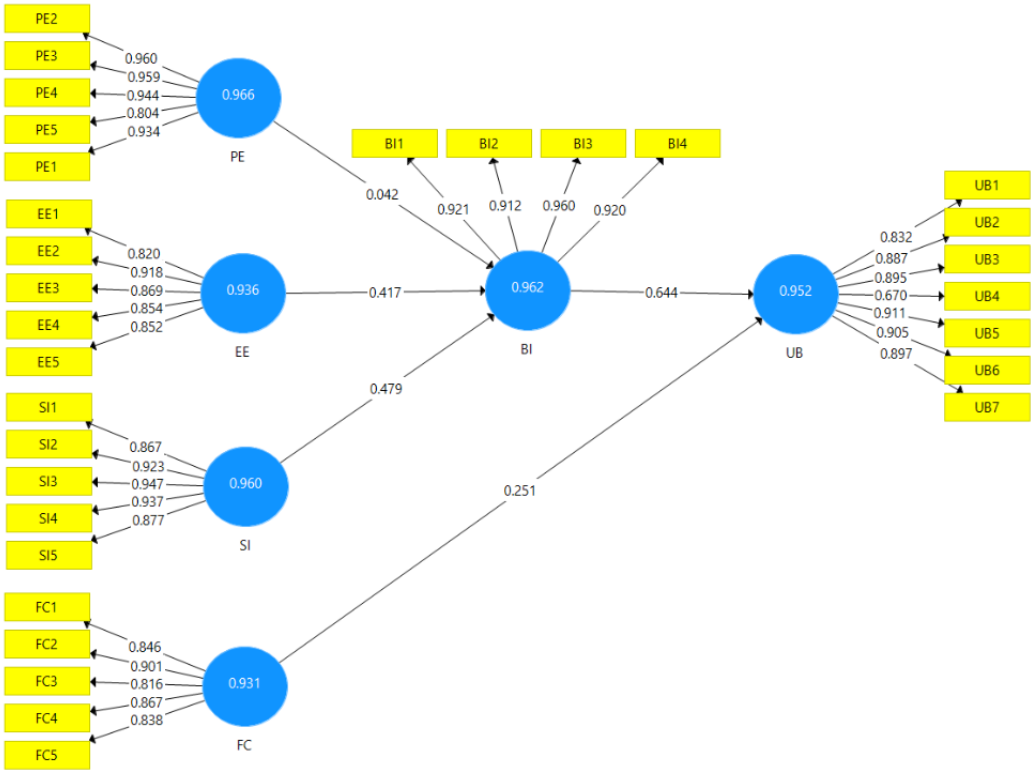

Figure 4.4 Structural Result of Smart PLS Algorithm emphasizing Path Coefficients in the Inner Model, Outer Model loadings, and constructs' Cronbach Alpha.

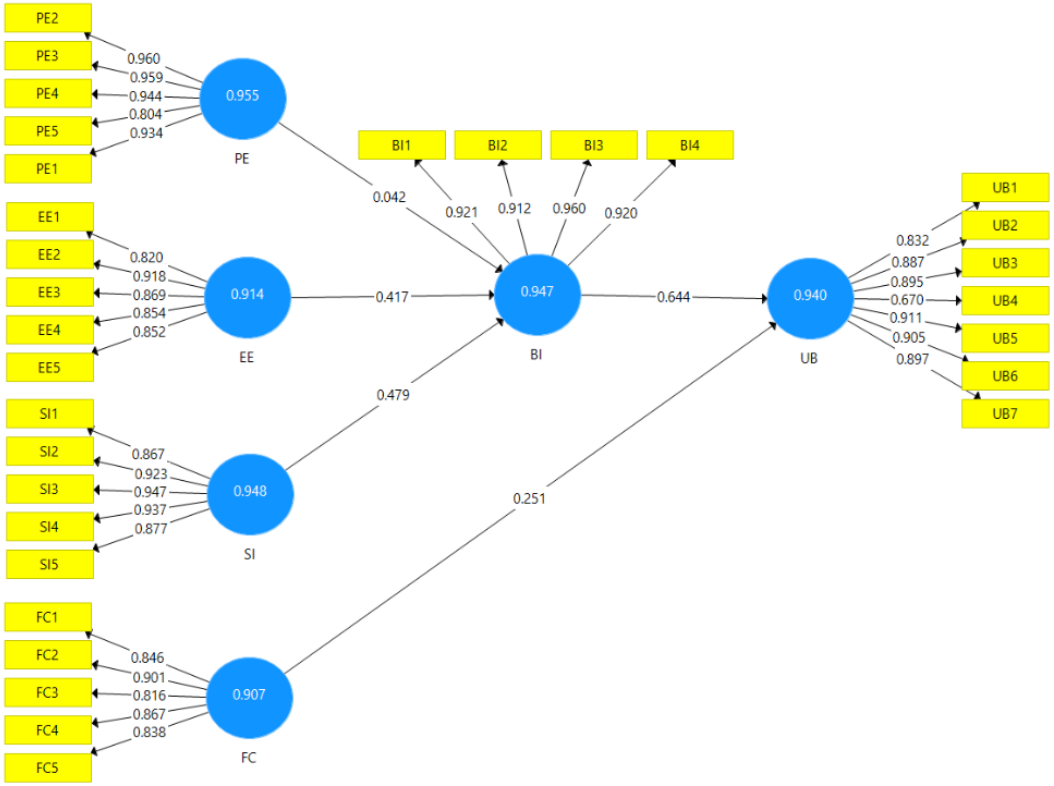

Figure 4.5 Bootstrapping relationships of the constructs with the Path Coefficients and p-values and loading and p-values of each observe variable of the constructs.

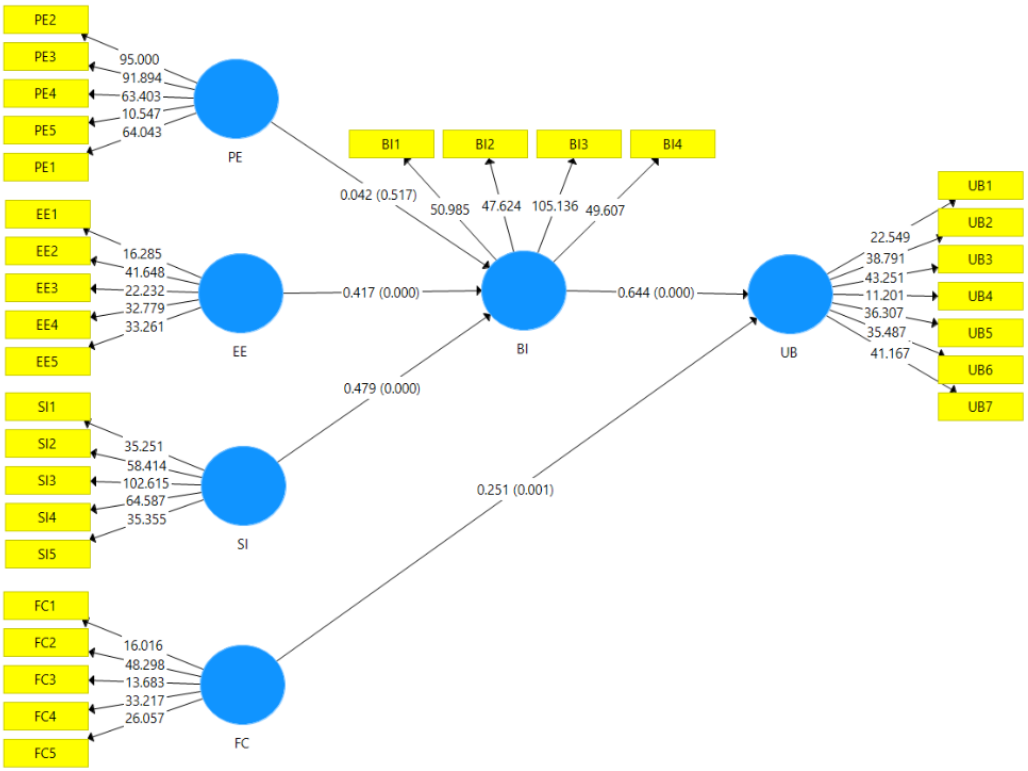

Figure 4.6 Structural Result in Bootstrapping emphasizing p-values and loading and constructs' R-square.

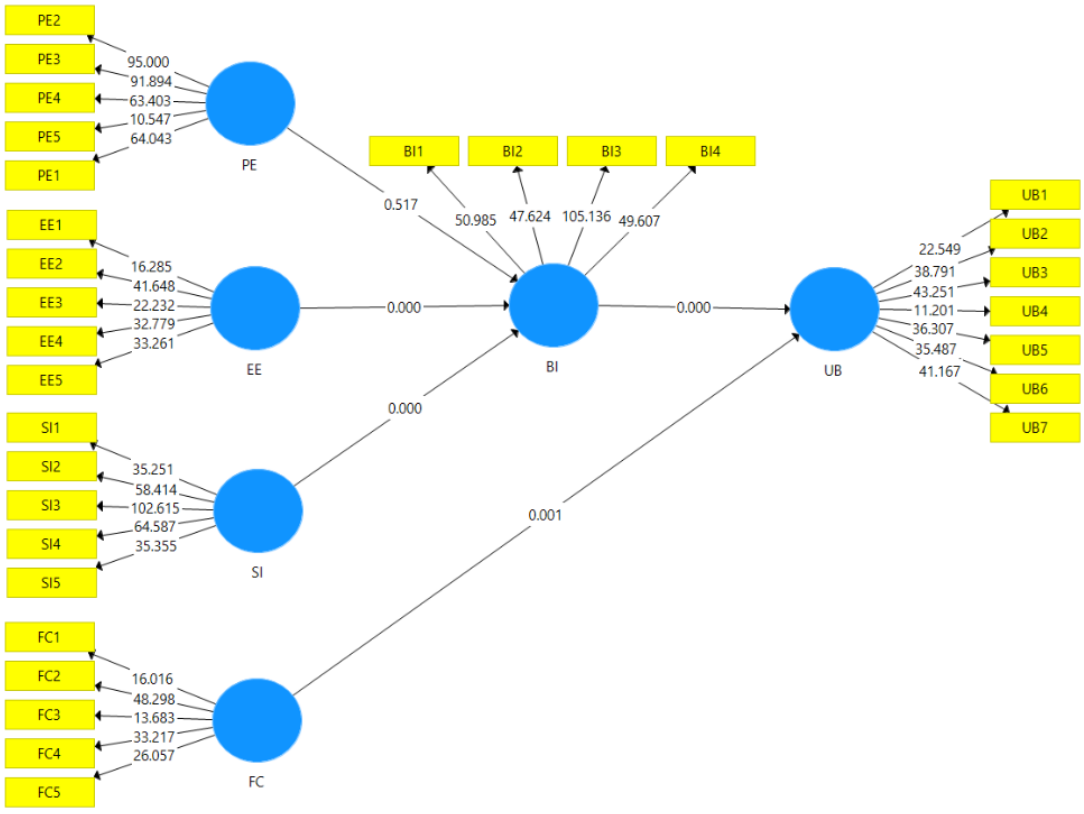

Figure 4.7 Structural Result in Bootstrapping emphasizing p-values and loading and constructs' R-square.

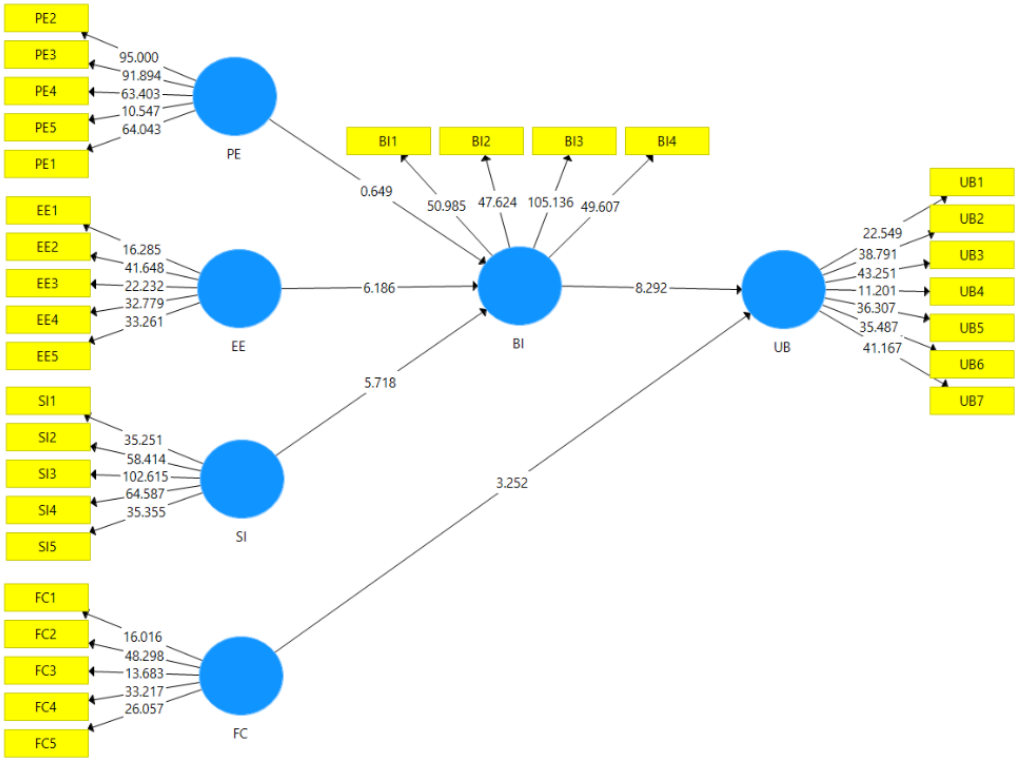

Table 4.6 Relationship of the constructs of UTAUT model.

Hypothesis	Relationships	Path Coefficients	T-Values	P-Values	Interpretation
H1	PE -> BI	0.042	0.649	0.517	Not Significant
H2	EE -> BI	0.417	6.186	0.000	Significant
H3	SI -> BI	0.479	5.718	0.000	Significant
H4	FC -> UB	0.251	3.252	0.001	Significant
H5	BI -> UB	0.644	8.292	0.000	Significant

Table 4.6 summarizes the hypothesized result of the relationships between constructs based on figures 3-9. The results of hypothesis testing reveal the following:

H1: There is no significant influence between performance expectancy and behavioral intention when using LRMDS.

H2: Effort Expectancy (E.E.) significantly influences teachers' v Behavioral Intention (B.I) toward using LRMDS portal.

H3: Social Influence (S.I.) significantly influences teachers' Behavioral Intention (B.I) toward using LRMDS portal.

H4: Facilitating Conditions (F.C.) significantly influence teachers' Use Behavior (U.B.) when using LRMDS.

H5: Behavioral Intention (B.I.) significantly influences teachers' Use behavior (U.B) toward using LRMDS portal.

The study investigated the influence of several factors on teachers' use of the Learning Resource Management and Development Systems (LRMDS) portal. Firstly, it was found that performance expectancy (P.E.) did not significantly impact teachers' behavioral intention (B.I.) to use the portal,

indicating a weak relationship between perceived usefulness of the system and intention to use it. Conversely, effort expectancy (E.E.) exhibited a strong positive influence on teachers' behavioral intention, suggesting that ease of use plays a crucial role in enhancing their willingness to use the LRMDS portal. Nair et al. (2015) and Bhatiasevi (2016) also found that effort expectancy (EE) positively impacts behavioral intention (BI) to utilize technology.

Moreover, social influence (S.I.) emerged as a significant predictor of teachers' behavioral intention, highlighting the importance of peer recommendations or endorsements from influential individuals in shaping their intentions to use the LRMDS portal. Bhatiasevi (2016) conducted a study among undergraduate and graduate students at two universities in Thailand to explore the acceptance and use of mobile banking. The research revealed that social influence (SI) has a significant impact on behavioral intention (BI). This outcome could be explained by Thailand's deeply ingrained culture of strong interpersonal relationships. Facilitating conditions (F.C.) on the other hand, significantly affect teachers' use behavior (U.B.), implying that receiving support or resources to use the LRMDS portal, teachers necessarily utilize it more frequently. Finally, behavioral intention (B.I.) was found to significantly influence teachers' use behavior (U.B.), indicating that a strong intent to use the LRMDS portal corresponded with more frequent usage. This supports the research involving 210 citizens' intention to use and endorse e-participation, Naranjo-Zolotov et al. (2018) found that behavioral intention (BI) notably influences usage behavior (UB). Overall, these findings underscore the importance of perceived ease of use and social influence in driving teachers' intentions to use educational technology platforms like LRMDS.

4.6 Perception of teachers with the quality and reliability of the contents available in the portal.

Based on the open-ended responses of the teacher-respondents, themes arise when the questions are asked to them in the questionnaire.

Table 4.6.1 Summary of the Teacher's Perception with LRMDS on enhancing the effectiveness of teaching.

Theme	Coded For	Quote
Positive Perception of teachers with LRMDS on enhancing the effectiveness of teaching.	LRMDS as to enhance effectiveness of teaching	***EER7***- *It is relevant because it provides teachers with access to a wide range of teaching materials, including digital resources, lesson plans, and multimedia content.* ***EER10***- *Enables you to plan and manage your lessons well.* ***EER23***- *It serves as a conduit to accessing to quality resources that helps teacher in providing students with more engaging learning experiences.* ***EER37***- *It supports the teacher in a way the teacher won't be looking for other information or learning content anywhere.* ***EER57***- *LRMDS enables teachers to enrich our teaching materials and can cater to the diverse learning needs of our students.* ***EER60***- *It can support teachers on their data searches relevant for their daily lessons.*

		EER72- *Very important. It supports your ideas during taking up a certain lesson / topic.* ***EER101***- *It's really been useful and very informative for us, in the sense of providing applicable references and supplemental learning resource materials.* ***EER119***- *It provides teachers with easy access to a wide array of teaching materials and resources tailored specifically for TLE, allowing for more comprehensive and engaging lesson plans.* ***EER137***- *Since there is no textbook for TLE 6, materials from LRMDS is very helpful to us teachers to teach TLE.*

Table 4.6.1 represents the positive perceptions of teachers towards LRMDS to enhance teaching effectiveness. The teachers' responses reveal that LRMDS can enhance the effectiveness of teaching. Thus, teachers who perceived the portal as valuable and reliable are more likely to have used it effectively. Similarly In Petrie's study, cited by Pokhrel and Chhetri (2021), it was explained that these e-class platforms enable educators to design educational courses, training sessions, and programs for skill development.

Table 4.6.2 Summary of the Teacher's Perception with the relevance and adequacy of the content provided by LRMDS.

Theme	Coded For	Quote
Positive Perception of teachers with the relevance and adequacy of the content provided by LRMDS.	Relevance and adequacy of the content provided by LRMDS	***RAR20***- *It is precise as to the context in accordance to competency requirement.* ***RAR44***- *Adequate information are provided and the content is clear and easy to understand.* ***RAR57***- *The LRMDS offers a comprehensive range of resources covering various topics within the TLE domain, including technology, entrepreneurship, home economics and industrial arts.* ***RAR65***- *As an educator the relevance and adequacy of the content provided by the LRMDS is timely and appropriate since I did not only focus on textbook as resources material. I see to it I can expand further the topic.* ***RAR72***- *It provides a concrete idea when/or during the learning process.* ***RAR98***- *It supports the distribution and*

		access to learning, teaching and professional development of the resources needed for the lesson. ***RAR102****- For example, if the student meets the expected objective of my lesson.* ***RAR104****- The content has an application to ready the evaluation.* ***RAR122****- The adequacy of the LRMDS content is generally satisfactory.* ***RAR137****- The materials provided (in the teaching of TLE) in LRMDS is relevant and adequate because it is aligned with curriculum, or the content of the materials are aligned with the objectives and standards set by DepEd for TLE 6.*

Table 4.6.2 represents the positive perception of teachers towards the adequacy of the content provided by LRMDS. The responses of teachers yield the favorable implication of the content provided by LRMDS, thereby relevant and adequate. In Mahmud et al. 's (2012) study, which focuses on Educational Portal Resources aiming to overcome obstacles and disparities in accessing quality education, the implementation of the LRMDS was rated positively concerning its mission, goals, and objectives.

Table 4.6.3 Summary of the Teacher's Perception with their experience regarding the quality of content resources available in LRMDS.

Theme	Coded For	Quote
Positive Perception of teachers with their experience regarding the quality of content resources available in LRMDS.	Experience with the quality of content available in LRMDS	***EQR13****- My experiences with LRMDS content have been positive overall. I assess the relevance, effectiveness, and appropriateness of resources by evaluating alignment with curriculum standards, student engagement, and impact on learning outcomes.* ***EQR26****- Some resources and well-made and align closely with learning objectives.* ***EQR35****- Some of the content resources available on LRMDS helps me in a lot of major, I assess it through practically and by the available resources in my classroom. I align its content based on the things that are available and through that it helps me enhance my teaching-learning experiences.*

		EQR65- *With the use of LRMDS I was able to improve my educational and learning material.* ***EQR74***- *It is effective and efficient.* ***EQR98***- *I can assess the relevance, effectiveness, and appropriateness of these resources when there is a positive response from the students and showing that they learned something from it.* ***EQR113***- *In my experience, the quality of content resources within learning resource management and development systems can vary widely.* ***EQR123***- *For effectiveness, I observe student engagement and comprehension during lessons that utilize these resources.* ***EQR139***- *Pupils are interested in learning to use LRMDS. They are active in participating during classes.* ***EQR140***- *My students' performance in EPP subject, their grades are the best proof to show the effectiveness of using LRMDS as my resources in teaching.*

Table 4.6.3 shows that teachers have a generally positive experience of the quality of content resources in the Learning Resource Management and Development System (LRMDS). When materials are in line with curricular standards, they are perceived as pertinent, efficient, and suitable, which improves student engagement and learning results. According to Okongo,R.B. et al (2015), learning experiences are fruitful when there are sufficient and suitable physical facilities and their absence could lead to low academic performance.

Table 4.6.4 Summary of the Teacher's Negative Perception with the relevance and adequacy of the content provided by LRMDS.

Theme	Coded For	Quote
Negative Perception of teachers with the relevance and adequacy of the content provided by LRMDS.	Irrelevant and inadequate content in LRMDS	***ICR5***- *Though you can get some resources/ topics, I would say that some of it is not available.* ***ICR11***- *Not all materials are updated especially in TVL.* ***ICR26***- *I find it relevant but sometimes I ask for variety, thus requires supplementation with other resources.*

		ICR46- *There are variety of learning resources found in LDRMS and are found to be relevant & adequate. However, not all lessons/resources in all specializations in TLE are available in LDRMS thus, I would say that the resources of LDRMS in relevant to the context in teaching TLE are limited.* ***ICR66***- *Relevant yet lacking. It won't give you all you're looking for.* ***ICR67***- *LRMDS is not updated so there is no relevance.* ***ICR82***- *There is still an inadequacy of resources.* ***ICR108***- *There are significant gaps in the coverage of key topics, and many of the available resources are too simplistic or outdated.* ***ICR124***- *The materials often do not align well with the curriculum and fail to address the unique requirements of vocational education.* ***ICR125***- *Many resources are too generic and do not cater to the specific needs of TLE courses, resulting in lessons that fail to engage students or improve their practical skills.*

The table 4.6.4 above shows the responses of teachers yield negative implications regarding relevance and adequacy of the content provided by LRMDS, noting that although some resources are relevant, many materials are often inadequate, overly simplistic, and poorly aligned with the curriculum. In connection with this, Chukwunonso and Oguike (2013) acknowledge a lack of digital literacy among educators.

Table 4.6.5 Summary of the Teacher's Negative Perception with their experience regarding the quality of content resources available in LRMDS.

Theme	Coded For	Quote
Negative Perception of teachers with their experience regarding the quality of content resources available in LRMDS.	Teacher's experience with poor quality of content resources available in LRMDS.	***BER5***- *Not all resources are available in LRMDS, and it needs to be improved.* ***BER28***- *In my field of specialization, the LRMDS is not enough so I have to find another reference to add for my topic.* ***BER56***- *There are some LRMDS which are not accessible and friendly-user. But on the other hand, I'll find ways to search another resource wherein the relevance of the topic that I'm going to teach to my students is still accurate, appropriate, and effective.* ***BER58***- *I think it's beneficial but needs to apply and develop it more.* ***BER69***- *My experiences regarding the quality of the content available in LRMDS was not good, aside from my major or specialization is not available some of the learning materials is overlapping. We can assess the relevance, effectiveness, and appropriateness of LRMDS by collaborative effort of educators with the same major or specialization.* ***BER79***- *It is relevant, but I find it difficult to search for some materials since it does not fit the topics available to the lessons in my class.* ***BER93***- *There are lessons that can be found in the site but other topics cannot be found.* ***BER102***- *At start, I find it easy*

		to locate my lessons but as the competencies are getting high, I'm having hard time to locate my desired topic. ***BER129****- At present, the content resources available are not enough. The content resources in the LRMDS are not appropriate as to the skills and language.* ***BER141****- The content resources in the LRMDS are in different formats such as MS Word and PDF. These give a more flexible way of downloading and consuming these materials.*

Table 4.6.5 represents the negative experience of teachers towards the quality content available in the portal. True to the teachers' experience, the resources available in the portal are not up-to-date, particularly in TLE. These challenges may stem from limited access to ready-made resources and adequate learning materials. Engaging in learning and teaching via online platforms or digital environments presents its own set of difficulties (Pokhrel and Chhetri, 2021, pp. 136-137).

4.7 Training Guide Matrix based on the findings of the study.

The findings of this study showed that EE significantly influences BI, and FC and BI also significantly affect UB. However, PE is not significant. Perhaps, most of the teachers have insufficient training or assistance to comprehend and operate it efficiently.

Thus, communication and outreach efforts should be done, hence a training guide matrix will be the output in this study, to raise awareness among teachers about the benefits of using the LRMDS portal and address any misconceptions or concerns they may have. This could involve targeted communication campaigns, workshops, or peer-to-peer sharing sessions to showcase successful usage examples and best practices. Nonetheless, according to Konan, N. (2010), educators must continually enhance and refresh their skills while staying informed about accessing information and actively utilizing it.

Figure 4.7.1 Formulated Training Guide Matrix

Republic of the Philippines
Department of Education
Region X - Northern Mindanao
Division of Iligan City

Seminar-Workshop on Quality Assurance of Learning Resources and Management Development System
Revisitng Framework of LRMDS
TRAINING MATRIX

1st Day

Time	**Activity**
Morning (Plenary)	
7:30-8:00 AM	Registration
8:00 AM- 8:30 AM	**Opening Ceremony** -Philippine National Anthem -Prayer -Roll Call -Opening Remarks: Principal -Statement of Objectives: 1. Recall the framework of LRMDS; 2. Understand how to develop and download learning resource materials; 3. Apply the resources in the portal on your lesson.
8:30 AM- 10:30 AM	**Framework of LRMDS** (GUIDELINES AND PROCESSES FOR LRMDS DEVELOPMENT AND PRODUCTION SYSTEM) https://lrmds.deped.gov.ph/docs/LRMDSProduction.pdf
10:30 AM- 10:45 AM	Health Break
10:45 AM – 12:00 NN	**How to develop and download learning resource materials in the portal?** Speaker: ICT Coordinator
12:00 NN- 1:00 PM	Lunch Break
AFTERNOON (Break-Out Session)	
1:00 PM – 3:00 PM	*Each teacher will download a material from the portal and prepare for a teaching demonstration on the application part of the lesson.*
3:00 PM – 3:15 PM	**Health Break**
3:15 PM- 5:00 PM	**Demonstration**

2nd Day

Time	**Activity**
Morning	
9:00 AM- 12:00 NN	**Demonstration**
12:00 NN- 1:00 PM	Lunch Break
AFTERNOON	
1:00 PM – 3:00 PM	*Feedbacking*
3:00 PM – 4:00 PM	**Closing Program**

5. Findings

The research aimed to analyze the acceptance and use of Learning Resource Management and Development System among EPP/TLE/TVL teachers in the Division of Iligan City. It was found in the study that;

1. Teachers don't expect their performance in LRMDS to increase their intentions to use it. This indicates a weak relationship between perceived usefulness of the system and intention to use it. But despite that, they find LRMDS relevant in teaching.
2. Teachers expect LRMDS to be easy to use and it can increase their intentions to use it. Effort expectancy (E.E.) exhibited a strong positive influence on teachers' behavioral intention, suggesting that ease of use plays a crucial role in enhancing their willingness to use the LRMDS portal.

3. When teachers' peers or someone important to them suggests that they use LRMDS portal, they increase their intentions to use it.
4. When teachers receive more facilitating conditions in using LRMDS, they use the website frequently. Facilitating conditions (F.C.), significantly affect teachers' use behavior (U.B.), implying that receiving support or resources to use the LRMDS portal, teachers necessarily utilize it more frequently.
5. When teachers have more intent to use LRMDS portal, they use the website more frequently. This indicates that the level of comfort with technology directly affects their intention to use it.
6. There are positive and negative perceptions and experiences of teachers with regards to the quality and reliability of the contents available in the portal.
7. To raise awareness among teachers about the benefits of using the LRMDS portal and address any misconceptions or concerns they may have, a training guide matrix was formulated. This could involve targeted communication campaigns, workshops, or peer-to-peer sharing sessions to showcase successful usage examples and best practices.

The influence of Behavioral Intention showed a positive and significant influence towards the behavior to use LRMDS in getting teaching resources. The results of this study agree with the findings of the UTAUT model (Venkatesh et al., 2003) and with literature related to the study (Nair et al., 2015; Palau-Saumell et al., 2019). The positive and significant influence of BI towards UB could be attributed to the fact that the educators perceived the use of LRMDS portal into their teaching practice as helpful in their teaching job, easy to use, and that they themselves are willing to learn and are intentional to use the technology. This finding is in congruence with the previous study conducted by Phua et al. (2012) which reported that when the BI of the educators is established, it is reflected in the actual use of the technology in the conduct of their teaching practice.

6. Recommendations

Based on the results and conclusions, the following are recommended:

1. Improve knowledge management functions and make user interfaces easier to operate. Furthermore, teachers should be notified that the websites can be supported by facilitating conditions.
2. Public schools in the Division of Iligan City should implement the training guide matrix output from this study. Revisit and relearn the advantage of using LRMDS portal in each school.

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