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Technology-Enabled Recognition of Prior Learning: Feasibility of an Online Learning Management System for ETEEAP at Pangasinan State University

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ABSTRACT

This study examined the feasibility of developing and utilizing an Online Learning Management System (LMS) for the Expanded Tertiary Education Equivalency and Accreditation Program (ETEEAP) at Pangasinan State University. Specifically, it determined the profile of ETEEAP students, their level of technological literacy, their acceptability of the proposed LMS, the relationship between technological literacy and LMS acceptability, and the perceived challenges and recommendations for implementation. The study employed a descriptive-correlational research design involving 357 ETEEAP students. Data were gathered using a researcher-developed survey questionnaire and analyzed using frequencies, percentages, weighted means, standard deviations, and Pearson product-moment correlations. Results revealed that most respondents were adult learners aged 30–39 years, predominantly employed full-time, and many resided or worked outside Pangasinan or the Philippines. The respondents demonstrated a very high level of technological literacy, with an overall mean of 4.37, and rated the proposed LMS as highly acceptable, with an overall mean of 4.62. A significant positive relationship was found between technological literacy and LMS acceptability ($r = 0.639$, $p < .001$). However, limited or unstable internet connection, time constraints, lack of available devices, technical support needs, and data privacy concerns emerged as serious challenges. The study concludes that an LMS for ETEEAP is feasible, provided that it is mobile-friendly, secure, flexible, user-centered, and supported by orientation, technical assistance, and continuous monitoring.

Keywords: *adult learners, ETEEAP, flexible learning, learning management system, LMS acceptability, technological literacy*

INTRODUCTION

Higher education institutions are increasingly challenged to provide flexible, accessible, and learner-centered academic services for non-traditional students. This is particularly relevant in programs designed for adult learners, working professionals, and geographically dispersed students whose academic engagement is shaped by employment, family obligations, mobility, and limited availability for face-to-face transactions. In the Philippine context, the Expanded Tertiary Education Equivalency and Accreditation Program (ETEEAP) provides an alternative pathway to higher education through the recognition, validation, and accreditation of prior learning, professional experience, and workplace-based competencies.

At Pangasinan State University, ETEEAP serves a diverse population of learners, including full-time workers, self-employed individuals, and Overseas Filipino Workers. These students often require flexible access to modules, academic instructions, announcements, assessment requirements, and feedback. However, when academic materials and communication are delivered through multiple informal or semi-formal channels such as email, social media messaging, printed modules, and individual file-sharing systems, concerns may arise regarding consistency, documentation, monitoring, and timely learner support.

A Learning Management System offers a possible response to these concerns. An LMS may function as a centralized digital platform for organizing modules, distributing learning materials, monitoring submissions, providing feedback, facilitating academic communication, and improving

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documentation. In flexible and distance learning environments, the LMS is not merely a technological tool but an institutional mechanism for improving access, coordination, and quality assurance. Prior literature emphasizes that LMS adoption is shaped by perceived usefulness, ease of use, system accessibility, technological readiness, self-efficacy, and institutional support.

The Technology Acceptance Model provides a useful lens for understanding LMS feasibility. According to Davis (1989), technology adoption is influenced by perceived usefulness and perceived ease of use. In ETEEAP, these constructs are highly relevant because students are expected to engage with online materials, submit academic outputs, communicate with instructors, and manage requirements while balancing work and personal responsibilities. Similarly, the Unified Theory of Acceptance and Use of Technology highlights the importance of facilitating conditions, effort expectancy, performance expectancy, and social influence in technology adoption (Venkatesh et al., 2003).

The need to assess LMS feasibility is also aligned with current legal and policy frameworks. Republic Act No. 12124 institutionalizes ETEEAP as a mechanism to recognize prior learning and expand access to tertiary education. CHED Memorandum Order No. 11, series of 2025, provides the implementing rules and regulations for the program, emphasizing institutional responsibility and quality assurance. Likewise, Republic Act No. 10650, or the Open Distance Learning Act, and CHED Memorandum Order No. 4, series of 2020 on flexible learning, support technology-mediated access to higher education. The Data Privacy Act of 2012 is also relevant because an LMS may handle student records, academic submissions, and personal documents.

Despite the promise of an LMS, feasibility must be examined empirically. ETEEAP students vary in age, digital exposure, employment status, location, device access, internet connectivity, and confidence in using online platforms. Therefore, before implementing an LMS, it is important to determine whether students possess the technological literacy required to use the system and whether they perceive the proposed platform as acceptable, useful, and accessible.

This study therefore aimed to determine the feasibility of developing and utilizing an Online Learning Management System for ETEEAP at Pangasinan State University. Specifically, it examined the profile of ETEEAP students, their technological literacy, their acceptability of the proposed LMS, the relationship between technological literacy and LMS acceptability, the challenges affecting LMS utilization, and recommendations to improve LMS implementation. The study was anchored in the need to develop a learner-centered, accessible, secure, and systematic digital platform that is responsive to the realities of adult and working learners.

METHODS

2.1 Research Design

The study employed a **descriptive-correlational research design**. The descriptive component was used to determine the profile of ETEEAP students, their technological literacy, their acceptability of the proposed LMS, perceived challenges, and recommended implementation strategies. The correlational component was used to determine whether a significant relationship existed between technological literacy and LMS acceptability. This design was appropriate because the study did not manipulate variables but examined existing characteristics, perceptions, and readiness conditions among ETEEAP students.

2.2 Research Locale

The study was conducted at **Pangasinan State University, Asingan Campus**, particularly among students enrolled in the Expanded Tertiary Education Equivalency and Accreditation Program. The campus was selected because it implements ETEEAP and caters to adult learners, working

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professionals, and geographically dispersed students who may benefit from flexible access to learning materials and academic support.

2.3 Participants of the Study

The participants were **357 ETEEAP students** of Pangasinan State University. They represented different age groups, degree programs, employment statuses, work assignments, and access conditions. They were considered appropriate respondents because they were the direct potential users of the proposed LMS.

2.4 Sampling Technique

The study used a **total enumeration approach** among available ETEEAP students during the data-gathering period. Where total participation was not possible, participation was guided by purposive criteria: respondents had to be officially enrolled in ETEEAP, currently taking academic modules or requirements, have experience accessing learning materials through online or digital means, and voluntarily agree to participate.

2.5 Research Instrument

The primary instrument was a researcher-developed survey questionnaire aligned with the problem statement. The questionnaire consisted of sections on respondent profile, technological literacy, LMS acceptability, challenges, and recommendations. Technological literacy covered basic device operation, internet browsing and online communication, email and cloud-based storage, downloading and uploading learning materials, online submission of academic requirements, and use of online learning platforms. LMS acceptability covered accessibility, ease of use, usefulness, efficiency, communication and feedback features, learner support, and overall satisfaction.

Responses were measured using a five-point Likert scale. For technological literacy, the scale ranged from Very Low to Very High. For LMS acceptability, the scale ranged from Not Acceptable to Highly Acceptable. For challenges, the scale ranged from Not a Challenge to Very Serious Challenge. Recommendations were rated from Strongly Disagree to Strongly Agree.

2.6 Statistical Treatment of Data

Frequency and percentage were used to describe the profile of the respondents. Weighted mean and standard deviation were used to determine the level of technological literacy, LMS acceptability, seriousness of challenges, and agreement with recommendations. Pearson product-moment correlation coefficient was used to determine the relationship between technological literacy and LMS acceptability. The level of significance was set at **0.05**.

2.7 Ethical Considerations

The study observed ethical research principles. Participation was voluntary, and respondents were informed of the purpose of the study. Confidentiality and anonymity were maintained. No personally identifiable information was disclosed in the analysis and reporting of results. The data were used only for academic and research purposes. Since the study involved digital access and potential online academic records, responsible information handling was emphasized in accordance with data privacy principles.

3. Results and Discussion

3.1 Profile of the ETEEAP Students

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The respondents were predominantly adult learners. The largest group belonged to the **30–39 age bracket** with 179 respondents or **50.1%**, followed by those aged 40–49 years old with 97 respondents or **27.2%**. Respondents aged 20–29 years old accounted for 70 or **19.6%**, while those aged 50 years and above represented a small proportion. In terms of sex, 189 or **52.9%** were male, 167 or **46.8%** were female, and 1 respondent or **0.3%** preferred not to indicate sex.

In terms of degree program, the largest group was enrolled in **Bachelor of Industrial Technology major in Food Service Management**, with 193 respondents or **54.1%**. Other respondents were enrolled in BIT Electronics Technology, BIT Automotive Technology, BIT Mechanical Technology, BIT Electrical Technology, Bachelor of Elementary Education, BSE English, BTLEd/BSE TLE, BSE Mathematics, and BSE Science.

With respect to employment status, most respondents were **full-time employed**, at 239 (66.9%). Overseas Filipino Workers accounted for 80 or **22.4%**. Others were self-employed, part-time employed, unemployed, or belonged to other categories. In terms of residence or work assignment, 171 (47.9%) were outside Pangasinan but within the Philippines, 113 (31.7%) were outside the Philippines, and 73 (20.4%) were within Pangasinan.

The device profile revealed strong potential for LMS adoption. Almost all respondents (350, 98.0%) had smartphones or cellphones. A substantial number, 228 or **63.9%**, had laptops. Others had tablets, desktop computers, or other digital devices and accessories. Regarding internet connectivity, 219 (61.3%) had stable home Wi-Fi, while 108 (30.3%) relied on mobile data only.

These results suggest that ETEEAP students are largely adult, employed, and geographically dispersed learners. The respondent profile justifies the need for a flexible and accessible learning platform. Since many students are outside Pangasinan or overseas, an LMS may reduce barriers related to distance, time constraints, and fragmented communication. However, because smartphone access is more common than desktop access, the system must be mobile-responsive, low-bandwidth, and simple to navigate.

3.2 Technological Literacy of ETEEAP Students

The respondents demonstrated a **very high level of technological literacy**, with an overall mean of **4.37** and a standard deviation of **0.70**. Among the indicators, **basic computer and mobile device operation** and **downloading and uploading learning materials** both obtained the highest mean of **4.42**, interpreted as Very High. Use of email and cloud-based storage obtained a mean of **4.38**, while internet browsing and online communication obtained a mean of **4.37**. Online submission of academic requirements had a mean of 4.34, and the use of online learning platforms had a mean of 4.30, both interpreted as Very High.

These findings indicate that ETEEAP students generally possess the digital competencies required for LMS-based learning. They are capable of using devices, browsing online resources, communicating through digital platforms, managing files, using cloud storage, downloading materials, uploading outputs, and submitting academic requirements online. The slightly lower mean for use of online learning platforms suggests that although students are digitally capable, they may still benefit from orientation on the specific LMS to be adopted.

The results support the argument that technological literacy is a critical indicator of feasibility in the implementation of online learning. An LMS can only function effectively when learners have the necessary skills to access and use it. In this case, the respondents' high technological literacy indicates that the proposed LMS has favorable learner-readiness conditions.

3.3 Acceptability of the Proposed Online Learning Management System

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The proposed LMS was rated **highly acceptable**, with an overall mean of **4.62** and a standard deviation of **0.57**. The highest-rated indicator was **overall satisfaction**, with a mean of **4.66**, followed by **accessibility**, with a mean of **4.65**. Usefulness and learner support both obtained a mean of **4.62**, while communication and feedback features obtained a mean of **4.61**. Ease of use and efficiency in accessing learning materials both obtained a mean of **4.58**.

These findings show that ETEEAP students strongly support the development and utilization of an LMS. The high acceptability rating indicates that students perceive the LMS as appropriate, useful, accessible, and beneficial to their academic situation. Since the majority of respondents are working adults and many are located outside Pangasinan or outside the country, accessibility and flexibility are central to their acceptance of the system.

The results also imply that students do not view the LMS merely as a storage site for modules. They recognize its potential to improve communication, feedback, learner support, deadline monitoring, and academic submission. These features are important in ETEEAP because students often manage academic requirements alongside employment and professional responsibilities.

3.4 Relationship Between Technological Literacy and LMS Acceptability

The Pearson correlation analysis revealed a statistically significant positive relationship between technological literacy and LMS acceptability, **$r = 0.639$, $p < .001$**. Since the p-value was lower than the 0.05 significance level, the null hypothesis was rejected.

This result indicates that students with higher technological literacy tend to have higher acceptability of the proposed LMS. In practical terms, students who are more confident in using digital devices, online platforms, email, cloud storage, and file submission tools are more likely to perceive the LMS as useful, accessible, and acceptable. The correlation may be interpreted as moderate to strong, suggesting that technological competence is an important factor in LMS adoption.

However, the relationship is not absolute. Other factors may still influence LMS acceptability, including internet access, device availability, time constraints, work responsibilities, platform design, institutional policies, and availability of technical support. Therefore, while technological literacy enhances LMS feasibility, successful implementation still requires institutional support and system design that is responsive to the realities of adult learners.

3.5 Challenges Affecting LMS Development and Utilization

The overall mean for challenges was **3.56**, interpreted as a **Serious Challenge**. The highest-rated challenge was a **limited or unstable internet connection**, with a mean of **3.89**. This was followed by **a lack of time due to work or family responsibilities (mean 3.68) and a lack of available digital devices (mean 3.60)**. Other serious challenges included lack of immediate technical support, limited skills in using online learning platforms, difficulty accessing the LMS while overseas or in remote areas, privacy and security concerns, high cost of internet data, difficulty uploading or submitting academic requirements, and difficulty understanding instructions in an online platform.

These findings show that LMS feasibility cannot be assessed only through acceptability and technological literacy. Although students are digitally literate and supportive of the LMS, external and institutional barriers may affect actual use. Connectivity issues may limit access to materials, submission portals, and communication channels. Time constraints reflect the adult-learner profile of ETEEAP students, many of whom balance academic requirements with employment and family duties. Privacy concerns are also significant because ETEEAP students may submit portfolios, employment documents, academic records, and other sensitive information.

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Thus, LMS implementation must include connectivity-sensitive design, asynchronous access, downloadable materials, user-friendly submission processes, helpdesk support, and strong data privacy safeguards.

3.6 Recommendations for LMS Implementation

The respondents strongly agreed with all proposed recommendations, with an overall mean of **4.61**. The highest-rated recommendation was to **ensure the privacy and security of student records and submitted documents**, with a mean of **4.66**. This was followed by the need to ensure that the LMS is **mobile-friendly and accessible using smartphones** and to allow **flexible access to learning materials for working students and OFWs**, both with a mean of **4.63**. Other highly rated recommendations included providing user guides and video tutorials, organizing modules and announcements on one platform, providing clear submission guidelines, including notification features, providing technical assistance, piloting the LMS, and conducting orientation before implementation.

These recommendations emphasize that LMS implementation must be holistic. A technically available system is insufficient if students lack orientation, support, and confidence in its use. The proposed LMS should therefore be developed as a comprehensive learner-support system integrating modules, announcements, submission portals, feedback mechanisms, reminders, consultation channels, and technical support.

3.7 Overall Discussion

The findings demonstrate that the proposed Online Learning Management System for ETEEAP at Pangasinan State University is feasible. The high level of technological literacy indicates that students generally possess the digital skills necessary to participate in LMSs. The high acceptability rating shows that students recognize the platform's potential to improve access, organization, communication, submission, and learner support. The significant positive relationship between technological literacy and acceptability further confirms that digital competence contributes to readiness for LMS adoption.

Nevertheless, implementation must be approached strategically. The serious challenges identified by the respondents show that feasibility depends not only on student readiness but also on institutional responsiveness. Connectivity, mobile access, technical assistance, workload flexibility, data privacy, and platform usability must be addressed to ensure effective implementation.

The study therefore supports the development or adoption of a mobile-friendly, secure, low-bandwidth, and learner-centered LMS for ETEEAP. Such a platform can strengthen the delivery of flexible learning, improve academic documentation, support geographically dispersed learners, and enhance the overall quality assurance of ETEEAP implementation at Pangasinan State University.

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