EVALUATING THE USE OF LEARNER'S INFORMATION SYSTEM (LIS) AMONG PUBLIC SECONDARY SCHOOL TEACHERS IN DISTRICT III, DIVISION OF OLONGAPO CITY

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ABSTRACT

The Department of Education (DepEd) has institutionalized the Learner Information System (LIS) to streamline enrollment, recordkeeping, and learner monitoring across public schools in the Philippines. This study assessed the LIS among 235 secondary school teachers in District III, Division of Olongapo City, focusing on perceived usefulness, perceived ease of use, actual use, and behavioral intention to use. Anchored on the modified Technology Acceptance Model (TAM), the research employed a descriptive survey design supported by thematic content analysis to identify system-related challenges. Results revealed that teachers strongly agreed on the usefulness and ease of use of the LIS, particularly in managing learner data and generating reports. However, actual use was hindered by technical issues such as system downtime, slow connectivity, and data management errors. No significant differences were observed in teachers' responses when grouped according to age, sex, teaching experience, or educational attainment. Thematic analysis surfaced recurring challenges, including system unresponsiveness, difficulty in correcting records, and heavy user load during peak periods. Findings highlight the importance of infrastructure enhancement, continuous training, and timely system support. The study recommends a technology enhancement plan to strengthen LIS implementation and improve teacher competency.

Keywords: Learner Information System, Technology Acceptance Model, ICT in education, teacher evaluation, DepEd

INTRODUCTION

The integration of information and communication technology (ICT) into education has become a global imperative, promoting efficiency, transparency, and innovation in school management systems. However, worldwide, the implementation of educational information systems continues to face challenges such as the digital divide, unstable internet connectivity, data privacy concerns, and limited ICT infrastructure issues that are particularly evident in developing countries. In the Philippines, the Department of Education (DepEd) introduced the Learner Information System (LIS) in 2012 as an online platform for enrollment, student recordkeeping, and learner tracking. The LIS provides a centralized database that generates school forms, learner profiles, and statistical reports essential for evidence-based decision-making and policy formulation. Despite its potential, the implementation of LIS has encountered persistent challenges. Teachers, as the primary end-users, report difficulties such as connectivity problems, system downtime, and errors in data management. Davis (1989) emphasized in the Technology Acceptance Model (TAM) that perceived usefulness and ease of use are predictors of technology adoption. Venkatesh and Bala (2008) and Teo (2011) also showed that teachers' intention to adopt ICT depends on these constructs. In the Philippine context, SEAMEO-INNOTECH (2018) highlighted barriers to ICT use, including infrastructure gaps and limited support, which were also noted by DepEd (2020) regarding LIS downtime. Similarly, Rogayan and Dantic (2021) found that teachers face administrative burden from both manual and digital reporting tasks, underscoring the importance of reliable ICT platforms.

The present study focused on 235 secondary school teachers in District III, Division of Olongapo City. It aimed to evaluate the acceptability and challenges of the Department of Education's Learner Information System (LIS) as a basis for a technology enhancement plan. Specifically, it sought to determine the level of teachers' evaluation of the LIS in terms of perceived usefulness, perceived ease of use, actual use, and behavioral intention to use; to identify the challenges encountered by teachers in using the system; and to examine whether significant differences exist in their evaluation of the LIS when grouped according to profile variables such as age, sex, years of teaching, and educational attainment.

The findings will benefit school administrators by serving as a basis for planning ICT-related training and seminars; DepEd by guiding assessments of infrastructure, network improvements, and teacher support; teachers by providing insights to enhance system use and work productivity; MAEd students as a reference on ICT trends and issues; and future researchers as a baseline for further studies on ICT integration in education.

METHODOLOGY

Research Design

The descriptive method of research was employed to obtain a systematic assessment of teachers' evaluation of the LIS. Descriptive research captures perceptions without manipulating variables. The study was complemented with thematic content analysis of open-ended responses to identify recurring challenges.

Participants and Location

The respondents were 235 public secondary school teachers from District III, Division of Olongapo City, ensuring representation of varied teaching backgrounds and profiles.

MAP OF THE STUDY AREA

Fig. 1. Map of District III, Division of Olongapo City (Study Area)
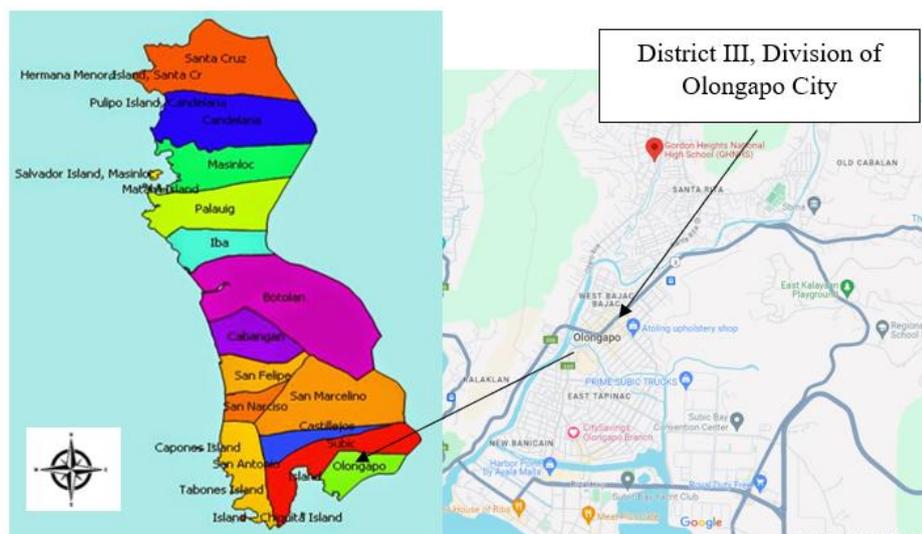
Instrument

The research utilized a researcher-made questionnaire anchored on the Technology Acceptance Model (TAM). The instrument was divided into three parts. The first part gathered the personal profile of the respondents, which included age, sex, years of teaching experience, and highest educational attainment. The second part assessed the evaluation of the Learner Information System (LIS) using four dimensions: perceived usefulness, perceived ease of use, actual use, and behavioral intention to use. Each indicator was measured on a 5-point Likert scale, where 5 corresponded to "Strongly Agree" and 1 to "Strongly Disagree." The third part consisted of open-ended questions designed to capture the

challenges teachers faced in the actual use of the LIS, including system downtime, connectivity issues, and record management problems. Experts in education and ICT validated the instrument, and reliability testing during the pilot study from 20 teachers who are not part of the research population yielded a Cronbach's alpha of 0.89, which indicated high internal consistency.

Data Collection Method

A researcher-made survey questionnaire based on TAM measured perceived usefulness, ease of use, actual use, and behavioral intention on a five-point Likert scale. Open-ended items captured qualitative data. The instrument was validated by ICT and education experts and pilot tested for reliability.

Data Analysis

The data obtained from the respondents were organized, tabulated, and analyzed through the use of SPSS. To facilitate interpretation, statistical tools such as Frequency Counts, Percentage, Weighted Mean, and Analysis of Variance (ANOVA) were employed. The Likert Scale was applied to interpret the survey responses, while Thematic Content Analysis (TCA) was used to examine the qualitative data gathered from teacher-respondents.

RESULTS AND DISCUSSION

This study evaluated the teachers' use of the Learner's Information System (LIS) in District III, Division of Olongapo City, with a focus on their demographic profile, evaluation of LIS, and comparison of responses across groups.

Table 1. Profile of Teacher-Respondents (N=235)

Variable	Categories	frequency	Percentage (%)
Age	21–26 years	19	8.1
	27–32 years	33	14
	33–38 years	32	13.6
	39–44 years	43	18.3
	45 years and above	108	46
Sex	Male	54	23
	Female	181	77
Educational Attainment	BS/BA Degree	35	14.9

	MA/MS Units	99	42.1
	MA/MS Degree	85	36.2
	PhD/EdD Units	6	2.6
	PhD/EdD Degree	10	4.3
Years in Teaching	1–5 years	35	14.9
	6–10 years	51	21.7
	11–15 years	52	22.1
	16–20 years	24	10.2
	21 years and above	73	31.1
Current Position	Teacher I	112	47.7
	Teacher II	53	22.6
	Teacher III	49	20.9
	Master Teacher I	15	6.4
	Master Teacher II	6	2.6
Grade Level Handled	Grades 1–3	15	6.4
	Grades 4–6	29	12.3
	Grades 7–10	163	69.4
	Senior High School	28	11.9
LIS Training Attended	Yes	46	19.6
	No	189	80.4

Table 1 presents the demographic profile of the 235 teacher-respondents from District III, Division of Olongapo City. The majority were female (77%), consistent with Bacus et al. (2024), who reported that 82% of public-school teachers in the Philippines are women. Most respondents were middle-aged (mean = 40.36 years), aligning with the findings of Alonzo et al. (2022) that many Filipino teachers fall within the 41–50 age range. A large proportion held graduate qualifications (78.3%), similar to Tuble and Nuñez (2023), who found that most teachers in Albay pursued higher education for professional growth. The respondents also had substantial teaching experience (mean = 13.99 years), comparable with national trends of long-serving teachers (Tuble & Nuñez, 2023). However, only 19.6% had attended LIS training, echoing Lopez and Lorejo (2023) and Orquillas and Dela Cruz (2021), who noted limited LIS-related training among educators.

Teachers' Evaluation of LIS

Table 2. Summary of Teachers' Evaluation of LIS

Dimension	Weighted Mean	Interpretation	Rank
Perceived Usefulness	3.36	Strongly Agree	1
Perceived Ease of Use	3.34	Strongly Agree	2
Behavioral Intention to Use	3.28	Strongly Agree	3
Actual Use	3.22	Agree	4
Overall Mean	3.3	Strongly Agree	

Teachers strongly agreed that LIS is both useful and easy to use, with a clear intention to continue using it. However, actual use scored slightly lower, reflecting technical barriers such as downtime and connectivity. This supports the Technology Acceptance Model (Davis, 1986; Venkatesh et al., 2003), where adoption is driven by perceived usefulness and ease of use. Similar results were reported by Fitria et al. (2024) and Musa & Deji (2024), highlighting that user-friendly systems facilitate broader adoption.

Table 3. Analysis of Variance on Teachers' Evaluation of LIS by Profile Variables

Profile Variable	Perceived Usefulness	Ease of Use	Actual Use	Behavioral Intention	Decision
Age	p = .630	p = .183	p = .600	p = .184	NS
Sex	p = .376	p = .629	p = .512	p = .954	NS
Educational Attainment	p = .630	p = .270	p = .084	p = .361	NS
Years in Teaching	p = .322	p = .155	p = .466	p = .234	NS
Current Position	p = .994	p = .825	p = .718	p = .602	NS
NS = Not Significant at 0.05 level					

No significant differences were found across all profile variables ($p > .05$). This indicates that teachers, regardless of age, sex, rank, or experience, shared similar evaluations of LIS. These findings echo Teo (2021) and Huang & Liaw (2023), who found demographic factors to have limited influence on technology adoption compared to institutional support and infrastructure.

Table 4

Teachers' Challenges on the Use of LIS

Emergent Theme	Code	Categorized Significant Statements
Unresponsive	System Downtime and Accessibility	… link does not open right away during my first time of use … down system especially during the end of the school year … downtime especially during daytime or if users are "pouring" at the same time I will access it … connection or the amount of account that can encode … difficulty in logging in
Connectivity Issues	User load and High Traffic	… sometimes it is not easy to connect on the site, especially during enrollment … issue I encounter with the LIS is that it often becomes unresponsive or unavailable during enrollment deadlines, likely due to high user traffic … gateway timeout … if too many users are using the LIS, it is hard to encode and retrieve data … server error
Technical Issues	Technical Errors and Glitches	… when it's the season of generating reports, we tend to spend a lot of time waiting since the system keeps on running low, and worst times not working at all … sometimes, the portal cannot access … the system malfunction and internet connectivity … having an error at times when enrolling or finalizing something … 404 error. Need to access in late time/midnight
Data Management Issues	Data and Input Management Challenges	… once I encoded the wrong student, I cannot undo it and I have to file a letter to the SDO unit to reverse my action, it causes me stress … data on the system are not updated

		… for the first timer (with the assistance of Our HT)
		… wrong spelling of names (correction in name)
		… the different features of the system
		… when I drop a student and difficult to retrieve it
		… logging difficulty sometimes, data correction
		… mistakes made in filling pupils' data

The analysis revealed four major themes of challenges in using the LIS: system downtime, connectivity issues, technical errors, and data management difficulties. These findings are consistent with Jo et al. (2024) and Kristian and Nascimento-e-Silva (2024), who emphasized that system overload and maintenance delays significantly hinder user efficiency in educational technology platforms.

Overall Interpretation

Teachers recognized LIS as a useful and user-friendly system, but technical and connectivity issues hinder actual use. The absence of differences across profiles shows that adoption is shaped more by systemic and infrastructural conditions than by demographic attributes. This affirms earlier studies (Amilbahar & Cordero, 2018; Villaber, 2023) that LIS reduces workload and supports decision-making, provided that adequate support systems are in place.

CONCLUSION AND RECOMMENDATIONS

The teacher-respondents are generally knowledgeable and demonstrate a positive evaluation of the use of the Learner's Information System (LIS) in the Department of Education. They agree that the LIS is a helpful tool in managing learner data and supporting school operations, although some challenges in its usage are sometimes encountered. The effectiveness of the LIS is influenced by the teachers' personal profile and their level of familiarity with the system. Overall, the use of LIS contributes to efficiency in school record-keeping and information management.

The Department of Education may provide continuous training for teachers to enhance their skills in utilizing the LIS effectively. Training programs tailored to the specific needs of different schools may be conducted to ensure ease of use and accuracy in handling learner information. It is also recommended to strengthen technical support and provide regular system updates to address technical issues encountered by teachers. Furthermore, seminars and workshops may be conducted to orient teachers on the latest features and functions of the LIS, while user-friendly guides and IEC materials may be developed to serve as reference tools for teachers in their day-to-day tasks.

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