

Development and Acceptability of Enrollment Data Management System

Jovelyn R. San Juan, MAEd

Graduate Student, Tomas Claudio Colleges, Philippines

Teacher I, Pagkalinawan Elementary School, Jala-jala, Rizal, Philippines

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Email of Corresponding Author: jovelynr.sanjuan@deped.gov.ph

Abstract

This study focused on the development and acceptability of an institutionalized enrollment data management system in public elementary schools in Jala-jala District, Schools Division Office of Rizal during the School Year 2025–2026. The participating schools included Bagumbong, Bayugo, Lubo, Jala-jala, Pagkalinawan, Palaypalay, Punta, and Sipsipin Elementary Schools. The respondents comprised the total population of teachers in the district, consisting of 154 teachers, with 147 completing the survey. Respondents were described in terms of age, sex, civil status, position, length of service, educational attainment, and in-service trainings attended. The study employed developmental research design for the creation of the enrollment data management system and descriptive evaluative research design to determine its acceptability. A researcher-made questionnaire-checklist was used to assess features, accessibility, functionality, reliability, and security. The developed system was created using an Excel macro-enabled workbook and coded in Visual Basic, designed to assist teachers in managing learners' enrollment data during registration. Findings revealed that the system is highly acceptable across all evaluated aspects. Most respondents were female, aged 31 and above, married, pursuing graduate education, and had more than ten years of teaching experience. A significant difference was observed in the evaluation of the system based on educational attainment, while age, sex, length of service, position, and in-service trainings showed no significant effect. The study concluded that educational attainment influences teachers' evaluation of the system's acceptability, while other demographic factors do not. It is recommended that school heads support and monitor the use of the system, disseminate information on enrollment procedures, conduct effectiveness testing, and adopt the system district-wide to ensure uniformity, accuracy, and efficiency.

Keywords: enrollment system, data management, institutionalized system, educational technology, teacher acceptability

1. Introduction

Education is a powerful tool that uplifts individuals and strengthens national development. It equips learners with knowledge, skills, values, and competencies necessary to thrive personally, socially, and economically. A well-educated population enhances workforce productivity, fosters innovation, and ensures global competitiveness (Philippine Constitution, 1987, Article XIV, Section 2). Consequently, education should be practical, aligned with societal, economic, and cultural needs, and accessible to all citizens. The Philippine government has recognized this through policies and legal frameworks aimed at providing inclusive, quality education, including the development of an efficient enrollment system as part of the broader educational infrastructure.

Enrollment in public elementary schools is a critical process that ensures proper registration, resource allocation, and planning. DepEd Order #17 s.2025 ("Revised Basic Education Enrollment Policy") mandates an inclusive and streamlined enrollment process for learners, including out-of-school children, youth, and adult learners. Despite this, public schools often face challenges in managing enrollments manually, which leads to inefficiencies, data inaccuracies, and delays. Teachers and school personnel encounter issues such as low early registration participation, misplaced or incomplete enrollment forms, and difficulties in encoding data into the Learner Information System (LIS). Existing LIS processes during early registration require manual counting and lack automated reporting capabilities, which further complicates administrative tasks. Recent studies highlight the role of technology in optimizing enrollment systems. Liu (2024) emphasized the need for integrated enrollment systems to avoid data silos and enhance data-driven decision-making, while Jariyapoom (2021) demonstrated that recommendation-based registration systems improve efficiency for students, teachers, and staff. Qin (2025) and Chamilco et al. (2023) stressed the importance of digital systems in managing enrollment disruptions caused by socio-political factors or pandemics. Locally, studies by Selpa (2024), Lagman (2024), Arciso (2025), Ahmerzon (2022), Secillano (2024), and Dela Cruz (2020) confirmed the effectiveness, user satisfaction, and high acceptability of digital enrollment systems in tertiary and secondary schools. However, gaps remain in public elementary schools, particularly in developing institutionalized enrollment data management systems that are accessible, reliable, and efficient. Most local studies focus on higher education or high school settings, while foreign studies often target universities

or large institutions, leaving elementary-level implementation underexplored. This study aims to address these gaps by developing and evaluating the acceptability of an enrollment data management system for public elementary schools in Jalajala District, Rizal. By integrating technology into the enrollment process, the system seeks to improve accuracy, reduce administrative burden, and enhance the overall efficiency of student registration, addressing the unmet needs of teachers, parents, and school administrators.

2. Materials and methods

2.1 Research Design

This study employed developmental method of research since the study focused on the development of enrollment data management system in public elementary schools

2.2 Research Setting

This study was conducted in public elementary schools in Jalajala Sub-Office, Schools Division Office of Rizal. This include the Bagumbong Elementary School, Bayugo Elementary School, Lubo Elementary School, Jalajala Elementary School, Pagkalinawan Elementary School, Palaypalay Elementary School, Punta Elementary School, and Sipsipin Elementary School.

2.3 Respondents

The respondents of the study comprised the total enumeration of teachers from public elementary schools in Jalajala District, Schools Division Office of Rizal. This consists of one hundred fifty four (154) teachers or 100% of the total population of teaching personnel. However, only 147 teachers responded due to some avoidable reasons and circumstances. They were described in terms of age, sex, civil status, position title, length of service, educational attainment, and in-service trainings attended.

2.4 Research Instruments

The primary instrument used in this study was a researcher-made questionnaire-checklist, divided into two parts. Part I collected the respondents' profile, including age, sex, civil status, position, length of service, educational attainment, and in-service trainings attended. Part II assessed the level of acceptability of the developed institutionalized enrollment data management system across five aspects: features, accessibility, functionality, reliability, and security, with 10 items per aspect, totaling 50 items. The acceptability scale ranged from 1 to 5, interpreted as follows: 4.50–5.00 (Very Much Acceptable), 3.50–4.49 (Much Acceptable), 2.50–3.49 (Moderately Acceptable), 1.50–2.49 (Less Acceptable), and 1.00–1.49 (Least Acceptable). To ensure clarity and relevance, the questionnaire-checklist underwent content validation. It was reviewed by the thesis adviser, professors, statistician, Dean of Graduate Studies, as well as the LIS Coordinator, ICT Coordinator, and school head. All expert feedback was incorporated into the final instrument.

2.5 Data Collection

The study was guided by a Gantt chart of activities. The researcher developed Chapters 1–3 by conceptualizing the research objectives and statements of the problem and by collating various related literature and studies from books, journals, and master's theses, and was followed by a colloquium. The proposed institutionalized enrollment data management system was developed. Then the questionnaire checklist for the level of acceptability of the developed system was constructed and content validated. Necessary permits for the conduct of the study were sought from the concerned authorities. Upon approval of the permission, the developed institutionalized enrolment data management system was shown to the teachers for the evaluation of its acceptability utilizing the researcher made questionnaire checklist. The researcher is guided by the Data Privacy Act of 2012. The data gathered were consolidated and processed at the statistical center using the Statistical Package for Social Sciences (SPSS). Analysis and interpretation of the data followed, summary of findings, conclusions and recommendations were formulated. Final defense followed. Suggestions and comments given by the oral examination committee were considered in the revision and finalization of the study. The manuscript was also subjected to anti-plagiarism test at the statistical center. Hardbound copies were submitted to the Office of the Dean of the Graduate Studies Program and other concerned offices.

2.6 Data Analysis

The study utilized both qualitative and quantitative methods for data analysis. Qualitative discussion was employed to describe how the institutionalized enrollment data management system was developed. The level of acceptability of the system, as evaluated by teacher-respondents across features, accessibility, functionality, reliability, and security, was analyzed using weighted mean. To determine whether respondents' profiles (age, sex, civil status, position, length of service, educational attainment, and in-service trainings) significantly influenced their evaluation of the system, one-way analysis of variance (ANOVA) was applied.

2.7 Ethical Considerations

The study ensured the protection of the rights and welfare of all respondents. Participation was voluntary, and respondents were informed about the purpose of the study. Confidentiality and anonymity of all information provided were strictly maintained, and data were used solely for research purposes. The researcher ensured that the respondents were treated with respect and that no harm, whether physical, emotional, or psychological, would result from their participation in the study..

3. Results and Discussion

3.1. Development of Enrollment Data Management System

The developed enrollment data management system was created using excel macro – enabled workbook and coded with visual basic. It was designed to help the teachers gather learner’s data during early registration and enrollment. It provides quick count/summary report of enrolled learners, and also automatically generates class program for every grade level. It allows user to enroll learner’s data, search and update learner’s data/information. It has a user-guide for easy reference on how to use the enrollment data management system. To ensure data privacy and security, the system is equipped with a user login feature that restricts access to administrators and authorized teachers only.

3.2. Profile of the Teacher-Respondents in Terms of the Selected Variables

As shown in the table, out of 147 respondents, 32.7% percent are in the age bracket of 41-50 years old while 27.9% are 31-40 years old. Most of them are females at 87.1%. In terms of civil status, 77.6% are married. In terms of their educational attainment, 34% have MA units, 32.7% are Bachelor’s degree holder, and 27.9 % are Master’ degree holder. As to their position title, 49 % are Teacher I, 27.2% are Teacher III and 16.2 % are Teacher II and the rest are Master Teachers. In terms of their length of service, 33.3% have been in the service for 5-9 years , 23.8% for 15-19 years and 22,4% have been teaching below 5 years. As to in-service trainings attended, 36.1% have attended in the division level, 23.1 % have attended in the national level and the rest have attended in other levels.

Table 2: Profile of the Teacher-Respondents in Terms of the Selected Variables

Age	f	%	Rank
51 – 60 years old	23	15.6	4
41 – 50 years old	48	32.7	1
31 – 40 years old	41	27.9	2
21 - 30 years old	35	23.8	3
Total	147	100	
Sex			
Female	128	87.1	1
Male	19	12.9	2
Total	147	100	
Civil Status			
Single	29	19.7	2
Married	114	77.6	1
Separated	1	.7	4
Widow/er	3	2.0	3
Total	147	100	
Educational Attainment			
Doctorate Degree	6	4.1	4
Master’s Degree with Doctorate units	2	1.4	5
Master’s degree	41	27.9	3
with MA units	50	34.0	1
Baccalaureate Degree	48	32.7	2
Total	147	100	
Position Title			
Master Teacher	11	7.5	4
Teacher III	40	27.2	2
Teacher II	24	16.3	3
Teacher I	72	49.0	1
Total	147	100	
Length of Service			
20-24 years	1	.7	5
15-19 years	35	23.8	2
10-14 years	29	19.7	4
5-9 years	49	33.3	1
Below 5 years	33	22.4	3

Total	147	100	
In-Service Trainings Attended			
National	34	23.1	2
Regional	28	19.0	3
Division	53	36.1	1
District	15	10.2	5
School	17	11.6	4
Total	147	100	

3.3. Level of Acceptability of the Developed Enrollment Data Management System as Evaluated by the Respondents with Respect to the Different Aspects

As shown in the summary table, the composite weighted mean obtained is 4.63 verbally interpreted as Very Much Acceptable First in rank is features with weighted mean of 4.71 interpreted as Very Much Acceptable . All the other aspects are interpreted Very Much Acceptable with last in rank is accessibility with an overall weighted mean of 4.53. It could be deduced from the results that the developed enrollment data management system is very much acceptable with regard to the different criteria of the level of acceptability. This means that teachers believe that the developed system is has good features and design. Likewise, the developed enrolment system is accessible, functional and reliable with secured data.

Findings imply that the acceptability of an enrollment system is determined by its functionality, usability, and efficiency, which can be measured through user feedback and system performance. For a system to be considered acceptable, it must be reliable, secure, and user-friendly for students and staff, while also reducing manual work and errors. A system's effectiveness is influenced by technical aspects, ease of use, and how well it meets the needs of the institution and its users.

This is aligned with the citation of Hayagan (2022) that an enrollment data management system offers numerous benefits, including increased efficiency and accuracy by automating manual tasks, faster enrollment processes for students and staff, and cost savings by reducing the need for manual labor. It improves decision-making through better data access and reporting, and provides greater accessibility for students, especially those with scheduling or geographical constraints.

Table 3: Level of Acceptability of the Developed Enrollment Data Management System as Evaluated by the Respondents with Respect to the Different Aspects

Aspects	WX	VI	Rank
Features	4.71	Very Much Acceptable	1
Accessibility	4.53	Very Much Acceptable	5
Functionality	4.65	Very Much Acceptable	2
Reliability	4.63	Very Much Acceptable	3
Security	4.62	Very Much Acceptable	4
Composite WX	4.63	Very Much Acceptable	

3.4. Significant Difference on the Evaluation of the Respondents on the Level of Acceptability of the Developed Enrolment Data Management System with Respect to the Different Aspects in Terms of their Profile

The table shows that with respect to the different aspects, in terms of educational attainment, the F-test results reveal probability values less than .05. This rejects the null hypothesis stating that there is no significant difference on the evaluation of the respondents on the level of acceptability of the developed enrolment data management system with respect to the different aspects in terms of educational attainment. On the other hand, in terms of the other variables, the null hypothesis is accepted since all the probability values are greater than .05. Findings reveal that personal variables of teachers except for educational attainment are not significant on the evaluation of teachers on the level of acceptability of the developed enrollment data management system with respect to the different aspects. This means that teachers' educational attainment are significant on their evaluation. Findings imply that age, sex, civil status, position title, length of service and in-service trainings attended have nothing to do with their evaluation on the level of acceptability of the developed enrollment data management system. This relates with the findings of the study of Arciso (2025) which revealed that the level of acceptance was rated a highly accepted towards the use of Electronic Learner Permanent Data Management System as perceived by the respondents regardless of their personal attributes.. The users strongly believe in the system's effectiveness and have a favorable attitude towards its use. Perceived Ease of Use (PEU) indicated that users find it user-friendly. The Intention to Use (IU) reflects a strong willingness and commitment among users to continue utilizing the system.

Table 4: Significant Difference on the Evaluation of the Respondents on the Level of Acceptability of the Developed Enrolment Data Management System with Respect to the Different Aspects in Terms of their Profile

Variables/ Aspects	F-comp	p-values	Ho	VI
Age				
Features	1.291	.279	Accepted	Not Significant
Accessibility	.598	.617	Accepted	Not Significant
Functionality	.868	.459	Accepted	Not Significant
Reliability	.532	.661	Accepted	Not Significant
Security	1.757	.158	Accepted	Not Significant
Sex				
Features	.018	.894	Accepted	Not Significant
Accessibility	.429	.513	Accepted	Not Significant
Functionality	1.244	.267	Accepted	Not Significant
Reliability	.783	.378	Accepted	Not Significant
Security	.225	.636	Accepted	Not Significant
Civil Status				
Features	1.073	.363	Accepted	Not Significant
Accessibility	.300	.826	Accepted	Not Significant
Functionality	.614	.607	Accepted	Not Significant
Reliability	1.514	.213	Accepted	Not Significant
Security	1.675	.175	Accepted	Not Significant
Educational Attainment				
Features	5.125	.001	Rejected	Significant
Accessibility	4.993	.009	Rejected	Significant
Functionality	2.970	.005	Rejected	Significant
Reliability	2.597	.039	Rejected	Significant
Security	2.631	.037	Rejected	Significant
Length of Service				
Features	1.189	.318	Accepted	Not Significant
Accessibility	.745	.563	Accepted	Not Significant
Functionality	.991	.414	Accepted	Not Significant
Reliability	.942	.441	Accepted	Not Significant
Security	.908	.461	Accepted	Not Significant
Position Title				
Features	.641	.590	Accepted	Not Significant
Accessibility	.751	.524	Accepted	Not Significant
Functionality	1.720	.165	Accepted	Not Significant
Reliability	2.041	.111	Accepted	Not Significant
Security	1.457	.229	Accepted	Not Significant
In-Service Trainings Attended				
Features	.349	.845	Accepted	Not Significant
Accessibility	.445	.776	Accepted	Not Significant
Functionality	.456	.768	Accepted	Not Significant
Reliability	.615	.653	Accepted	Not Significant
Security	.218	.928	Accepted	Not Significant

3.5. Comments and Suggestions Given for the Improvement of the Developed Enrollment Data Management System

Comments and suggestions were given by the respondents to improve the developed enrolment data management system as follows:

1. Optimize the database and system performance to handle peak enrollment periods without delays.
2. Must be replicated in other schools.
3. Establish a feedback mechanism so end-users can report issues or suggest further improvements.
4. Conduct regular system audits and feedback surveys for continuous improvement
5. Conduct an orientation on how to use the system

4. Conclusion & Recommendations

The study concluded that teachers' educational attainment significantly influences their evaluation of the acceptability of the developed enrollment data management system in terms of features, accessibility, functionality, reliability, and security. Conversely, other factors such as age, sex, length of service, position, and in-service trainings do not significantly affect their evaluation. Based on these findings, it is recommended that school heads support the continuous use of the system to ensure an efficient enrollment process, conduct regular monitoring and evaluation, and provide information dissemination on enrollment procedures. Furthermore, the system's effectiveness may be formally

tested, and its adoption across the entire district is encouraged to promote uniformity, accuracy, and efficiency in enrollment data management among all public elementary schools.

Compliance with ethical standards

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